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# Green money without inflation

PAUL DE GRAUWE

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Paul De Grauwe, London School of Economics, P.C.De-Grauwe@lse.ac.uk

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**Summary:** The ECB has announced that when government and corporate bonds come to maturity in the context of its QE-program, new bonds will be bought in the market so as to keep the money stock (money base) unchanged. This creates a “window of opportunities” for the ECB. It could replace the old bonds with new “environmental bonds”, i.e. bonds that have been issued to finance environmental projects. In doing so, the ECB would not create new money. Given the existential nature of the degradation of the environment, including climate change, the priority should be to use the ECB’s money creation capacity towards the support of environmental investments. This can be done without creating inflation.

**Zusammenfassung:** Die EZB hat angekündigt, dass bei Fälligkeit von Staats- und Unternehmensanleihen im Rahmen ihres QE-Programms neue Anleihen am Markt gekauft werden, um die Geldmenge (Geldbasis) unverändert zu halten. Dies schafft ein „Fenster der Möglichkeiten“ für die EZB. Sie könnte die alten Anleihen durch neue „Umweltanleihen“ ersetzen, d.h. Anleihen, die zur Finanzierung von Umweltprojekten ausgegeben wurden. Auf diese Weise würde die EZB kein neues Geld schaffen. Angesichts der existenziellen Bedrohung durch zunehmende Umweltschäden, zu denen auch der Klimawandel gehört, sollte die Priorität darin bestehen, die Geldschöpfungskapazität der EZB zur Unterstützung von Umweltinvestitionen zu nutzen. Dies kann ohne Inflation erfolgen.

To what extent can the money created by the central bank be used to finance investments in the environment? This is a question that is often asked today. The green activists respond with enthusiasm that the central bank, and in particular the European Central Bank (ECB), should act and stimulate the financing of environmental investments through the printing of money. The ECB has created 2,600 billion euros of new money since 2015 in the context of its quantitative easing (QE) program. All that money has gone to financial institutions that have done very little with it. Why can’t the ECB, or other central banks, inject the money into environmental investments instead of pouring it into the financial sector?

Most traditional economists react with horror. The ECB should not interfere with the environment, they say. The government should do that. If the ECB jumps on the environmental bandwagon, it will be obliged to print too much money. This will fuel inflation in the long run, with terrible consequences. Ultimately, the environment will not be served.

→ JEL classification: E52, E58, Q50

→ Keywords: QE-program, european central bank, environmental bonds

Who is right in this debate? To answer that question, it is good to recall the basics of money creation by the ECB (or any modern central bank). Money is created by the ECB when that institution buys financial assets in the market. The suppliers of these assets are financial institutions. These then obtain a deposit in euros at the ECB in exchange for relinquishing these financial assets. That is the moment when money is created. This money (deposits) can then be used by the financial institutions as the base to extend loans to companies and households. This is why it is also called “money base”.

There is no limit to the amount of financial assets that the ECB can buy. In principle, the ECB could purchase all existing financial assets (all bonds and shares, for example), but that would increase the money supply in such a way that inflation would increase dramatically. In other words, the value of the money issued by the ECB would fall sharply. To avoid this, the ECB has set a limit: it promises not to let inflation rise above 2 %. That imposes a constraint on the amount of money that the ECB can create. So far, the ECB has been successful in maintaining the 2 % inflation target.

There is also no restriction on what types of assets the ECB can buy. Since 2015 when it started its QE-program, the ECB has mainly bought government bonds, but also corporate bonds from financial institutions<sup>1</sup>. The ECB could, however, also purchase bonds issued to finance environmental investments. The only restriction on these purchases (again) is that they do not endanger the 2 % inflation target.

What are the options for the ECB? The ECB has bought 2,600 billion of government and corporate bonds since 2015. These purchases have not fueled inflation, which has remained below 2 % in the Eurozone. The ECB has announced that when these government and corporate bonds come to maturity, new bonds will be bought in the market so as to keep the money stock (money base) unchanged. This creates a “window of opportunities” for the ECB. It could replace the old bonds with new “environmental bonds”, i.e. bonds that have been issued to finance environmental projects. In doing so, the ECB would not create new money. It would only reorient money flows towards environmental projects. As the total amount of money would remain the same there would be no risk of additional inflation.

A possible objection is the following. If the ECB buys these “environmental bonds”, it will be involved in the decision-making process about which environmental investments should have a priority. For example it would have to answer questions such as: How much public and private investments must be made? Should it be renewable energy or nuclear energy? Should the priority be given to public transport? These are all questions that have to be settled by political authorities, and not by the central bank.

One possible way out: The European authorities give a mandate to the European Investment Bank (EIB) to finance, for example, 1000 billion of environmental investments. These political authorities add guidelines for the EIB about environmental priorities. The EIB issues bonds to obtain the resources necessary to fund these investments. This is the moment the ECB can step in by buying the EIB-bonds at a pace dictated by the expiration of the old bonds on its balance sheet. This way the ECB creates “green money” without fueling inflation. At the same time, as the ECB buys EIB bonds,

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1 For a recent analysis of how this unconventional monetary policy (UMP) affects the economy in the context of a non-linear macro-economic model see Gross, et al. (2019).

it creates the possibility for the EIB to increase its borrowing in the capital markets without endangering its AAA-status.

Some have objected that in buying green bonds the ECB is overstepping its mandate. A careful analysis of the statutes of the ECB shows that this objection is unfounded. According to the statutes of the ECB, “the primary objective of the European System of Central Banks shall be to maintain price stability”. The statutes add, however, that “Without prejudice to the objective of price stability, it shall support the general economic policies in the Union with a view to contributing to the achievement of the objectives of the Union as laid down in Article 3 of the Treaty on European Union”. Article 3 then lists a number of economic policies of the EU that should be supported by the ECB. These include “a high level of protection and improvement of the quality of the environment”. Thus it is clear that the ECB would not overstep its mandate by buying green bonds, provided this does not endanger price stability. If the latter is guaranteed the statutes in fact say that the ECB “*shall support*” the EU economic policies including environmental policies.

In this connection it should be spelled out that in the context of its QE-program the ECB has also bought corporate bonds. At the end of 2018 the total amount of corporate bonds on the Euro-system’s balance sheet was €178 billion. In a recent study Jourdan and Kalinowski, (2019) showed that this portfolio of corporate bonds was heavily weighted (63%) towards corporations operating within the sectors emitting most of the CO<sub>2</sub>. The ECB defended this by invoking “market neutrality”, i. e. it is reproducing the market weights. But surely, given the fact that the Treaty mandates to support EU economic policies, including environmental policies, this is not a very good record.

The bottom line is that it is perfectly possible for the ECB to use the instrument of money creation to favour environmental investments without endangering price stability. Of course, one could also argue that the ECB could use its monetary instrument to favour other worthwhile projects, e. g. poverty reduction. This is certainly true. However allowing a central bank to go in this direction would create the risk that it gets loaded with too many social responsibilities that it cannot handle properly.

A final objection is the following. When the ECB buys green EIB bonds to replace maturing government bonds, national governments will face the fact that a higher share of their outstanding bonds will be in the hands of the private sector. This means that these governments will have to pay interest on these bonds. (As long as government bonds are on the balance sheet of the ECB they carry no interest burden for the government because the interest paid out on these bonds is returned to the government by the ECB). This means that green money creation is in fact equivalent to financing green investment by the issue of new national government bonds. Thus, it is in fact equivalent to a bond-financing of a “Green New Deal” as advocated by Galbraith(2019), Piketty(2018) and Varoufakis(2018).

It would probably be best to use the avenue of bond-financed green investment. Unfortunately, this is made impossible by the EU-mandated fiscal compact which forbids the financing of public investment by the issue of debt. Thus, the proposed creation of green money can be interpreted as a way to circumvent a self-imposed unintelligent fiscal rule. The first best should be to abolish the unintelligent fiscal rule, but given the present political unwillingness to do this, the second best appears to be an ECB financed green investment program.

That's why I conclude that given the existential nature of the degradation of the environment, including climate change, the priority should be to use the ECB's money creation capacity towards the support of environmental investments. This can be done without creating inflation.

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