Climate bonds: mobilizing private financing for carbon management

The failure of the Copenhagen conference in December 2009 to agree on a global framework for limiting greenhouse gas emissions throws open once again the debate over strategies for dealing with global warming. Whatever the consensus may be regarding the industrial contribution to emissions of CO₂, there can be little doubt that what is needed is a revolution in energy supplies – and, in turn, that calls for a revolution in financing the huge investments needed. In the wake of the inconclusive Copenhagen conference, the UN’s Secretary, General Ban Ki-Moon, addressed head on the issue that was circumvented at the conference, namely the financing of the steps needed to combat climate change. While the Copenhagen Accord agreed at the conference called for large-scale funding of climate-related investments in developing countries, amounting to US$100 billion per year by 2020, no details were provided as to how such funds would be transferred from the developed to the developing world. The creation by the UN of a high-level advisory group on mobilizing climate change resources is a clear step in the right direction. What then should this advisory group be proposing?

There is already a proposal on the table, floated by the International Monetary Fund economists Hugh Bredenkamp and Catherine Pattillo [101]. These two economists recognize that US$100 billion per year represents a sum that is beyond the resources of governments on their own and, thus, will need to be backed by interventions from the private sector. They envisage a group of governments (not the IMF, they emphasize) establishing a ‘Green Fund’ that would amount to US$100 billion by 2020, doing so by transferring special drawing rights (SDRs) allocated in 2009 as a means of capitalizing the Fund. This would essentially be a pool of guarantees, allowing the Fund to be set up without making explicit budgetary calls on developed country governments. They envisage that the Green Fund would then issue AAA-rated ‘green bonds,’ which would attract large-scale investors (e.g., pension funds), enabling the Green Fund to ‘mobilize a multiple of its paid-in capital’ [102]. The proceeds from the sale of the bonds could then be used to disburse grants to impoverished countries for climate change mitigation (e.g., improving energy efficiency and building renewable energy infrastructure).

In conclusion, this is our proposal ... giving institutional investors a means of putting their funds into climate-friendly projects that offer greater security than fossil-fuelled projects, while providing finance on the scale required to really make a difference in developing countries’ efforts to build renewable energy infrastructure.”

John A Mathews¹,² & Sean Kidney³

¹Eni Chair of Competitive Dynamics & Global Strategy, LUISS Guido Carli University, Viale Romania 32, 00197 Roma, Italy
²Macquarie Graduate School of Management, Macquarie University, Sydney
³Climate Bonds Initiative, London, UK

†Author for correspondence: Tel.: +39 06 8522 5504; Fax: +39 06 8522 5985; E-mail: jmathews@luiss.it
This is an interesting proposal and one of the more realistic approaches to utilizing SDRs for climate change-related activities, as well as a way of solving the issue of ‘burden sharing’ by developed countries – in that they share the burdens simply in accordance with their SDR allocations. It does of course beg the question as to who will take the initiative to form such a ‘Green Fund’ if not the IMF itself.

“Whatever the consensus may be regarding the industrial contribution to emissions of CO2, there can be little doubt that what is needed is a revolution in energy supplies.”

There is a complementary proposal from the World Bank, advanced in conjunction with the multilateral development banks including the Inter-American Development Bank (IADB), the African Development Bank (AfDB) and the Asian Development Bank (ADB) for the creation of Climate Investment Funds that could attract as much as US$40 billion to be channeled to climate-friendly investments largely in developing countries. Two funds are involved; known as the Clean Technology Fund and the Strategic Climate Fund. After the meeting of the Funds’ governing body in Manila, in March 2010, a statement was issued envisaging investments of up to US$40 billion being attracted by these investment vehicles. However, it is not yet clear whether these Funds would be utilized directly for investments or as a means of floating debt instruments such as bonds.

We have a proposal that we argue is more straightforward than either the IMF-inspired or the World Bank approach, and that could operate in parallel, without cutting across these proposals if they were to actually move forward.

Our proposal is that development banks around the world, particularly regional development banks such as the IADB, the ADB and the AfDB, but also national development banks, issue their own bonds on to the world’s leading bonds markets in London, Tokyo and New York, where the bonds are ‘ring-fenced’ to be used solely for climate change-related activities. The bonds, which we term ‘climate bonds’ (to distinguish them from numerous current proposals for green bonds, including the IMF-inspired proposal), would be backed by governments where renewable energy projects are to be constructed, and would promise returns to investors in the bond markets through the revenues anticipated to flow as renewable energy projects displace traditional fossil fuel-backed energy projects. These anticipated revenues would be based in turn on the firmly based idea that the price at which renewable energy can be generated is rapidly approaching that where fossil fuels are used (‘grid parity’), and that investments in renewable energy projects with such anticipated returns offer more security than energy projects that pump out CO2 and contribute directly to global warming. We see the multilateral institutions playing a critical role in providing guarantees for such new issues of debt related to climate change mitigation – institutions such as the World Bank’s Multilateral Investment Guarantee Agency, which could act as the guarantor for bond issues from ‘credible’ developing countries where most of the world’s significant climate change projects are going to be found.

“...most of the world’s promising renewable energy projects are to be found in developing countries, precisely where investments need to be made to combat climate change.”

The fact is that most of the world’s promising renewable energy projects are to be found in developing countries, precisely where investments need to be made to combat climate change, and that such projects offer greater security for developed country investors than fossil fuel projects. Developing countries thus have a means of breaking the deadlock that prevented them from developing their own economies and catching up with the advanced world, namely the absence of real incentives for developed country investors to finance development projects (e.g., roads, airports or dams). In the past, such projects were viewed (in back rooms of course, not publicly) as fostering unwelcome competition. However, renewable energy projects, and their potential to curb climate change, offer a completely different perspective, and one that will give investments in developing countries a sound rationale – provided they can be fashioned in a way that matches risks to benefits.

This is where ‘climate bonds’ as we propose them promise to make a difference. We see development banks acting in concert with their governments to fashion bond issues in such a way that they are attractive to investors – particularly to institutional investors – while offering audited means of contributing to real climate change mitigation. One approach might be for a development bank (e.g., the BNDES of Brazil, to take a hypothetical example) to forge an agreement with an energy provider in Brazil (say Petrobras, or the electricity distributor Eletrobras) that would commit the energy company to raise the proportion of renewable energy sources in its energy mix (say, raising biofuels’ share for Petrobras, or wind and solar power for Eletrobras) by a specified amount, and that such an agreement provide the credibility for the bond issued. Then BNDES would be able to distribute the funds raised, both to the principal companies concerned (Petrobras or Eletrobras), allowing them to make the investments needed, at no financial penalty to themselves, as well as to numerous...
other smaller companies in the respective value chains. The projects of such small companies would be frustrated by their small scale if taken individually, but when aggregated in a pool for the purposes of the bond issue, such diseconomies of scale are overcome. This is the power of the climate bond idea.

Our proposal builds on a number of current initiatives, from the World Bank and others, all of which are ‘testing the waters’ for the scaling up of green finance to the level envisaged by the Copenhagen Accord. Here is a sampling of such initiatives and proposals, from both developed country banks and from institutional investors such as pension funds.

**US Treasury: green bonds 2009**
The US Treasury in its 2009 stimulus package issued US$2.2 billion of green bonds to generate financing for renewable energy initiatives. These are known as ‘Clean Renewable Energy Bonds’ and the government will pay interest in the form of a tax credit to bondholders. The funds generated by the sale of such bonds are to be used in a range of clean energy investments approved by the Department of Energy, such as moves towards a ‘smart grid’ in the USA.

**European investment bank: climate awareness bonds 2007, 2009 & 2010**
Some €870 million of 5-year bonds have so far been issued by the European Investment Bank (the financial arm of the EU). The EIB enjoys the highest credit rating possible, and offered the Bond to a wide range of investors contact by lead manager Dresdner Kleinwort; the funds raised have been used in EIB renewable energy and energy efficiency projects. A second tranche, also over subscribed, was issued in 2009.

**World Bank/SEB: green bonds 2009–2010**
Over US$1.1 billion of green bonds have now been issued by the World Bank through the Scandinavian bank SEB. Buyers have included Swedish pension funds and the California State Treasury; they have purchased US$300 million of the second issue, as a sign that they wished to contribute tangible to climate solutions and in a way that met their fiduciary obligations. The World Bank’s sister organization the International Finance Corporation has followed suit, issuing nearly US$250 million of green bonds in April 2010.

**UK: proposed green bond issuance**
In the lead up to the 2010 UK general election, all three major parties advocated the issuance of green bonds to help fund climate change mitigation efforts, and the setting up of a ‘Green Investment Bank’ to facilitate that funding. The new UK Government is now planning the implementation of those proposals, and some initial guidelines have already been recommended by the newly established Green Bank Commission.

Meanwhile several large pension funds representing millions of investors have begun to express strong interest in putting their considerable resources into investments that take the economy away from fossil fuels and towards a low-carbon future. Apart from the Swedish pension funds and the California State Treasury investing in the World Bank/SEB green bonds mentioned above, consider the following developments:

- The California State Teachers’ Pension Fund (CalSTERS, with US$176 billion in funds under management) announced in February 2010 that it was instructing its fixed interest and equities asset managers to ‘take climate change into account in all their investment decisions’;
- The Danish ATP Fund (with US$84 billion in funds under management) took a decision in December 2009 to set up a €1 billion ‘climate change investment fund’;
- The Dutch asset manager APG, managing the assets of its four affiliated pension funds (with US$400 billion under management) recently announced that it would henceforth ‘filter’ all investments for their climate change implications.

Likewise, several sovereign wealth funds (SWFs) have expressed strong interest in making climate-friendly investments, as a safer form of investment than putting funds in fossil fuelled activities. Norway’s SWF is a case in point.

These items of financial news from banks, pension funds and sovereign wealth funds and associated proposals carry a clear and distinct message, namely that the financial system is finally being harnessed as a player in this most demanding of challenges. They mirror discussion in the wider press and in papers issued by such bodies as the Organisation for Economic Co-operation and Development and the United Nations Framework Convention on Climate Change (UNFCCC) (for examples see the discussion of climate bonds in parts 71, 72 and 73 of [803]; calls for greater involvement by the financial system in the World Bank [104,105]; the model to mobilize private capital to fund climate change in the form of World Bank green bonds [1]; or the UNFCCC Fact Sheet on ‘Financing climate change action investment and financial flows for a strengthened response to climate change’ [106]). Yet the debt instruments issued so far clearly go nowhere near the scale required. In our proposal we generalize these scattered references to a new kind of financial entity and label the phenomenon as ‘climate bonds’, treating these as new species in the rapid evolution of financial forms.
Our proposal for ‘climate bonds’ is backed by a wide-based group of finance professionals and scholars calling themselves the ‘Climate Bonds Initiative’ [107]. Our proposal has the advantage that initiatives in this spirit can be taken by development banks without waiting for some international body such as the UNFCCC or the IMF to mobilize the funds envisaged by the ‘Green Fund’ or similar ideas. It is a bottom-up proposal in place of the top-down approach that eventually led to the disappointments of the Kyoto process, and now leaves the world looking for an alternative to national level emissions caps. Such emissions caps would still be welcome – but they would have more credibility if they were backed by the issue of climate bonds denominated in substantial terms, to the tune of billions of dollars per bond issue [2,3]. There is no shortage of capital [108]; the issue is to unlock the sources to get credit flowing to the most appropriate climate-friendly projects.

Our proposal differs from those that are still tied to the thinking of the abortive Kyoto–Copenhagen process, which came to an abrupt halt in December 2009. For example, there is a draft proposal from the member companies of the International Emissions Trading Association (IETA), which also envisages the issuance of green ‘sectoral bonds’ that would raise finance for climate-friendly investments. A draft position paper was issued by IETA in May 2010 [109]. The IETA proposal melds the green bonds idea to existing carbon markets and emissions permits ideas, such as through participating countries having to submit their proposals to a specially designated and newly created International Green Bond Body, which would be linked in turn to those countries submitting a national greenhouse gases inventory and having ‘permits’ in the form of Guaranteed Carbon Collateral Units issued. We see such proposals as doomed from the start, overburdened as they are with top-down, heavy bureaucratic structures that in practice are never likely to be established. What is needed is a fresh start that builds on the experience acquired to date, but that is not limited in its thinking to the ideas canvassed under the Kyoto process.

Our proposal depends critically on developing countries that are investing in renewable energy projects submitting to an international audit procedure that would guarantee that funds raised through the issue of the climate bond really are expended in the manner proposed in the prospectus, and really are achieving the carbon reductions anticipated. Initially, we would envisage that such international auditing be carried out by a consortium of the banks themselves or a consortium of institutional investors. Such a consortium already exists in the form of the Institutional Investors Group on Climate Change; this body has already issued policy documents, such as its statement on ‘noncarbon market financing mechanisms for climate change mitigation and adaptation in developing countries’, envisaging privately raised debt finance to supplement any public finances committed [110]. As the scale of issuance of climate bonds builds up, to pass the US$10 billion level each year, we would envisage that such a body be formalized by international agreement, to act as overseer and coordinator of climate bonds issues, with a mandate to protect the integrity of such issues by assuring their accuracy and validity. This passage to some such body, that we tentatively call an International Climate Bonds Authority seems to us to have much more credibility than any body that might eventually be established by the top-down processes of the Kyoto Protocol or its successor.

In conclusion, this is our proposal to the UN advisory group on mobilizing finance for the purposes of climate change activities in developing countries. Mobilize the finances through enrolling the world’s institutional investors by issuing AAA-rated securities on the world’s bond markets – giving institutional investors a means of putting their funds into climate-friendly projects that offer greater security than fossil-fuelled projects, while providing finance on the scale required to really make a difference in developing countries’ efforts to build renewable energy infrastructure. Everybody wins by such an arrangement.

Financial & competing interests disclosure

The authors have no relevant affiliations or financial involvement with any organization or entity with a financial interest in or financial conflict with the subject matter or materials discussed in the manuscript. This includes employment, consultancies, honoraria, stock ownership or options, expert testimony, grants or patents received or pending, or royalties.

No writing assistance was utilized in the production of this manuscript.
Climate bonds: mobilizing private financing for carbon management

Bibliography


Websites


107 Climate bonds initiative. www.climatebonds.net

