Green Bonds Webinar – Q & A

*Please note, questions were omitted where panelists were unavailable to answer.

Q: What types of projects are ideal for bond financing?

A: The short answer is, projects that qualify under the Climate Bonds Taxonomy, or similar public definitions programs.

Green Bonds are apt to fund:

- Renewables of all sorts;
- Green buildings (that have very low emission performance levels);
- Some select bioenergy investments (*not* corn ethanol);
- Green development plans (such as City Green Renovations);
- Water investments focused on adapting to climate changes;
- Plantation forestry;
- Broadband;
- And many more.

Boundary lines in many of these areas will be crucial – there can be debate about what makes a building "green", for example. You can refer to the Climate Bonds Standards.

From a financial perspective, the most appropriate projects for bonds are generally ones with high upfront costs but low, long, and stable running costs. Energy generation projects are particularly suitable, especially those with a Power Purchase Agreement in place that provides a guaranteed revenue stream and therefore payback on the bond. Energy projects without post-construction risk are particularly well suited.

Projects with less stable cash flows are less suitable for bond investors – forest bonds and others where cash flow is less clear can be done, but require more creative structuring and potentially credit enhancement from an external party.

Q: Are current Green Bonds just repackaged traditional bonds with the "green" elements extracted and isolated, or is there more to the story?

A: A new market requires high-grade anchor issuance, and the current wave of Green Bond issuances fill that role. But we expect to see asset-backed issuance in the coming year, which should further expand the reach and impact of Green Bonds beyond what we see now.

Q: Where areas of growth for Green Bonds exist in 2014?

A: We see a number of areas of development underway:

- *Development bank bonds*: Other issuers will join the issuance plans of existing market participants;
- *Green corporate bonds:* This will be the largest area of growth;
- *Green Munis:* We expect to see growth in this sector in 2014;
- *Green revenue bonds*: As per muni bonds, energy efficiency at first, then water related investments;
- *Green property bonds:* We've already seen EUR750m green property bonds out of Europe this month- expect many more;
- *Green portfolio bonds*, backed by a pool of different assets: For example, Hannon Armstrong's Dec 2013 bond backed by a mixture of renewable energy and energy efficiency leasing cash flows.

Q: Are there enough projects to finance with the amount of Green Bonds issuances currently offered?

A: There are certainly more than enough potential investments. The International Energy Agency, for example, estimates that some $1 trillion per year of investments in energy sectors – above business as usual - is needed to avert catastrophic climate change.

A key thing to understand about bonds is that they are primarily a re-financing instrument. Asset-backed securities, for example, have developed assets supporting the cash flows behind the bond in most cases. Moving to a large and more liquid market is essential to broader investor participation. That will be achieved by bonds issued against existing assets that qualify: green buildings, low-carbon transport, and built wind farms. Promises about the allocation of proceeds from such bonds to increasing the asset base becomes an attractor, but not material to the credit risk for an investor.

Q: Is there a typical duration, minimum, and/or fee premium associated with Green Bonds?

A: No. These details are generally comparable to non-Green Bonds.

Q: Will these bonds be available in a variety of durations to encourage laddering?

A: Green Bonds are already available in a variety of durations, between 3 years and 25 years so far.

Q: Where is the most growth in Green Bonds coming from: the muni market, the securitized market, or the supranationals?

A: Supranationals and corporates are leading growth this year, and we expect munis to rapidly grow next year.

Q: Is there any legal risk in issuing Green Bonds?

A: There are always legal risks in making promises in financial markets, but with Green Bonds these risks are easily addressed.

At this stage of market development the risk for issuers are reputational if they renege on the 'promises' made at issuance – e.g. if they say it's for a wind farm but it goes elsewhere, they will suffer negative brand reputation. In the future there may be a move to include a penalty in bond agreements in case of bonds do not meet the issuer's promise. The 'greenness' of bonds may also face regulation in the future.

Q: What, if anything, is holding the Green Bonds market back?

A: A few things:

- Buyer awareness of the opportunity;
- Clear criteria in areas where the label of 'Green Bonds' would be contestable, debatable, or controversial (e.g. green buildings, biofuels, water, natural gas);
- A lack of packaging by investment bank (partly a thematic market skills shortage);
- A lack of clear benefit for issuers to use this market.

With that said, we do expect the market to grow from $11 billion of issuance last year to $30-40 billion this year.

Q: Can individuals participate in Green Bond investments, or are they primarily for institutional investors?

A: As You Sow will be holding a second Green Bonds webinar aimed at investors in late spring. Keep an eye out at asyousow.org/greenbonds for the announcement!

The Green Bonds market originally grew out of Green Bond issuance for the Japanese retail bond market - so individual investors have played an important role so far. More recently bond sizes have gotten bigger and are targeted at institutional investors, but there is still a role for retail investors. In the immediate future, however, we expect these to be small and fragmented. For example, Nedbank in South Africa issued green savings bonds for retail investors. Ecotricity, an electricity utility in the UK, offered 2 year bonds for customers, the proceeds of which go to building wind farms. In the US SolarCity rooftop solar securitization in the US was offered to retail investors.

Q: Is there a role for philanthropy in advancing the Green Bond market?

A: Yes, especially in supporting projects that can connect smaller projects with capital markets - for example, in setting up aggregation platforms in emerging markets. Help is also needed in driving a full connection between climate science and definitions. These are just a few of the ways philanthropy can help advance the Green Bond market.

Q: What kind of reactions to Green Bond issuances have issuers like International Finance Corporation (IFC) or State of Massachusetts seen?

A: Both IFC and Massachusetts have received extensive international press coverage of their issuances, and through their trailblazing success have become leaders in this area of public finance.

Q: To what extent are the ratings agencies on board with Green Bonds? How deeply do they go into the specifics of the issuances?

A: From a ratings perspective, there's no real difference between regular and Green Bonds. The same rules and processes apply. Standard & Poor's are a member of the Climate Bonds Industry Working Group, and they see it as a complementary scheme to their ratings work.

In some of the more innovative areas for climate bonds (e.g. forest bonds), it may take ratings agencies some time to build up the data and capacity to rate these accurately. The first few bonds may receive a conservative rating until there is a more established market.

Q: How can cities and industry use Green Bonds to support smaller and more decentralized climate-friendly systems? It seems like dirtier and capital-intensive projects like incinerators and landfills have an easier time accessing bonds.

A: Aggregation is going to be essential – bond markets typically look for larger scale issuance, out of kilter with the investment scale of decentralized systems. That will mean intermediary vehicles that make loans or investments or buy up existing loans or assets, then issue bonds backed by them. These can come in many shapes, for example:

- State entities like Public Transport Authorities, which issue revenue bonds linked to a range of different public transport assets;

- Renewable energy investment funds (including the recent listed YieldCo phenomena) that then issue bonds backed by cash flows they buy or have developed - these could be a variety of decentralized energy investments;
- Special purpose public purpose "warehouses", like the arms-length entity being set up by the State Government in Pennsylvania to securitize energy efficiency loans coming out of their Keystone Home Energy Loan Program, and also from any other state interested in participating;
- Community energy ventures that act like a fund manager by taking cash flows generated by individual developments, joining them up, and securitizing them - to work this would need a reasonable volume of projects, and some standardization of loan and cash flow arrangements.

Q: Bonds that seek to adapt to climate change seem to be more available than bonds that aim to mitigate the effects. Is this trend likely to continue?

A: We think the reverse is actually true – most Green Bonds are tied to renewable energy or energy efficiency investments, with only a few linked to adaptation. In the long run we would expect the largest portion of Green Bonds to be linked to green property, subject to credible (greenhouse gas linked) inclusion criteria becoming widely accepted.

Q: How can advocates ensure that dirty energy projects are excluded from being considered Green Bonds? For example, waste incinerators are dirtier than coal per unit of energy.

A: Without a common standard about what can and can't be determined as green, greenwashing issues could become a big issue. It's important for responsible investors to critique bonds as they come out – spotlight those issuers who are patently attempting greenwashing, which we will inevitably see.

Please do back Climate Bonds Initiative's broad coalition working to establish robust criteria for what can – and can't – be counted as green. Let us know if you see this and we will also spread the word.

Q: Do these bonds have regular CUSIP numbers, and are they available on most custodial platforms, such as Schwab, Fidelity, TD, Pershing, etc.?

A: Most bonds have CUSIPs like any other bond. You can find "labelled" Green Bonds on Bloomberg already, and you'll be able to find the larger "Bonds and Climate" universe later this year. Indexes are in the works.

Q: Are all of the projects funded by Green Bonds designed to generate revenue? If not, where does the bond investor interest come from?

A: The bulk of Green Bonds to date have been Treasury guaranteed, which means the issuing entity ensures interest is paid come what may, but the proceeds of the bond only go to specified investments. We are beginning to see some asset-backed issuance, where the interest is paid directly from cash flows of projects. As a rule, ratings are lower for these in recognition of the greater risk.

Q: Are Minority-Women Owned Business Enterprises or Broker-Dealers being considered in the issuance of Green Bonds? If so, how would they percolate i.e. criteria, cap requirement, RFP, etc.?

A: The gender or minority characteristics of an issuing entity, while being of great interest for many people for good reason, are not seen as factors in definitions of 'green'. Mechanisms to issue Green Bonds will be no different, although there may be good arguments (but not 'green' arguments) to create special purpose aggregators for those sectors that would issue Green Bonds and channel capital to support them.

Q: Can the proceeds of a Green Bond be used to finance research & development of new technologies, such as energy efficiency or renewable energy?

A: In theory yes, if there is a cash flow to repay the bond, or if a corporate issuer is willing to fund the return from other sources. But we don't foresee R&D being a large area of growth in Green Bonds. Bond finance has traditionally been used to support more established technologies. Private equity and venture capital may be potential financing options for very early stage technology.

Q: Are there other sustainability-themed bonds pertaining to social housing or other ESG issues?

A: Yes, there have been a number of European bonds related to social housing, and some housing will be part of the broader green buildings sector. The French muni bond Il de France was 50% social housing and 50% environmental. A key component of the social housing, however, was that it had to be low-carbon social housing.

Q: How has Detroit's default on GO bonds affected the muni bond market? Will it impact Green Bonds?

A: Green Bonds offer value beyond the value of the bond itself, by the bond's financing a specific type of project that consumers want to invest in. For this reason, Green Bonds may continue to be competitive even if the bond market weakens. Detroit's bankruptcy, along with other major bankruptcies from cities, has resulted in a chilling effect in muni bonds, but Massachusetts' experience seems to suggest that a bond's 'green' attributes result in reliable demand.

Q: What steps are being taken to reduce meat consumption in light of the negative effects of animal agriculture on the world? Are there any bonds that focus on this initiative?

A: Currently there are no bonds focusing on reducing the negative environmental effects of animal agriculture. However, the Climate Bonds Sustainable Agriculture Working Group, starting soon, has this issue on their agenda. A bond to reduce meat consumption is an example of an area where there is not an 'obvious' candidate for bond financing as it isn't clear where cash flows would come from. But that doesn't mean it's not possible.

For more information, visit:

www.asyousow.org | www.climatebonds.net | www.buymassbonds.com | www.ifc.org