

Sustainable Securitisation

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Authors: [Chris McGarry](#), [Debashis Dey](#), [Mindy Hauman](#)

The sustainable finance market has experienced exponential growth in certain product areas in the last 5 years. Annual green bond issuance, for example, passed the US\$100bn mark last year and environmental resilience is playing an increasingly important role in investment decisions worldwide. However, US\$90tn more in sustainable investment is needed to develop global sustainable infrastructure alone in the next 15 years¹.

The current rate of market finance will fall considerably short of requirements both in scale and methodology if the status quo remains. One simple but revolutionary solution is the aggregation and leverage of sustainable assets through sustainable securitisation. To ensure this is a viable option, there needs to be a critical mass of sustainable finance assets of various classes available in the market. Sustainable securitisation will simultaneously present institutional investors with the opportunity to invest in sustainable assets and free up bank balance sheets.

Currently most infrastructure projects are funded by bank loans, though alternative sources of funding are needed as the US\$90tn required to fund global sustainable infrastructure is too much to be supplied solely in this manner. Further, many sustainable investments require long term loans which are at odds with the capital and deposits that make up bank balance sheets. To provide alternative funding and release balance sheet capacity for sustainable assets, illiquid sustainable bank loans can be repackaged into a more liquid format to appeal to sustainable investors in the global capital markets.

What makes securitisation sustainable?

The characteristics differentiating sustainable securitisations from conventional securitisations are: the sustainability of the assets backing the securities; the potential to amalgamate sustainable assets into pools to fund sustainable structures; the sustainable use of proceeds of the securities²; and the constituents of the investor base.

Though the sustainable securitisation market has expanded over the past few years, much of its potential remains latent. This is due to a perceived lack of readily available sustainable assets to collateralise. However, there is now a critical mass of eligible assets such as sustainable corporate loans, sustainable mortgages, and loans for hybrid and electric vehicles to make sustainable securitisations viable and profitable. It is now just a question of market education and re-examining potentially eligible assets for sustainability. The OECD estimates that by 2035, sustainable asset-backed securities (“**ABS**”) issuance could be US\$380bn per year³ and it is the fastest growing product under the sustainable finance umbrella (see Figure 1).

¹ <https://www.un.org/pga/71/w-p-content/uploads/sites/40/2017/02/New-Climate-Economy-Report-2016-Executive-Summary.pdf>

² Under ICMA's [Green Bond Principles](#).

³ <https://www.oecd.org/cgfi/quantitative-framework-bond-contributions-in-a-low-carbon-transition.pdf>

Potential Global Sustainable ABS Issuance in the EU, US, China & Japan (\$bn)

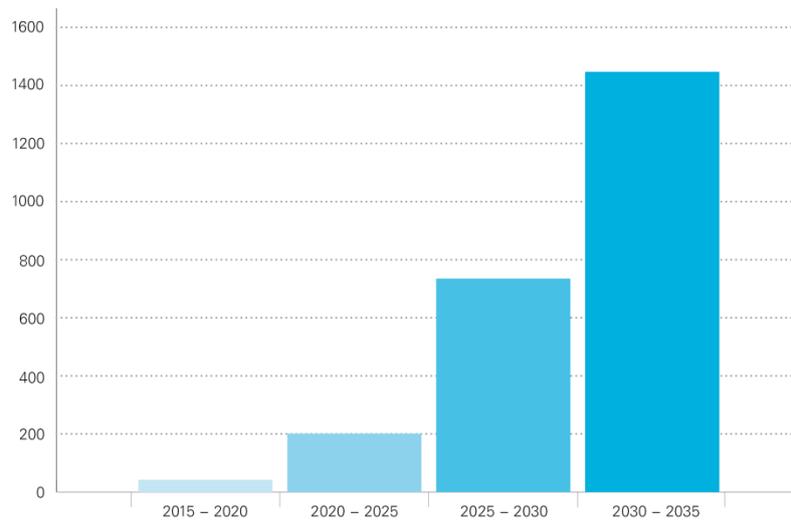


Figure 1. Source: OECD

The types of sustainable assets are growing, with some more readily available than others. It is these assets that will likely form the underlying collateral of sustainable securitisations in the short term. Broadly, these may be divided into sustainable collateralised loan obligations (“**CLOs**”), sustainable ABS made up of sustainable auto loans, solar loans and “PACE” loans; and sustainable mortgage backed securities (“**MBS**”) made up of sustainable residential and commercial mortgages.

Sustainable CLOs

Sustainable CLOs will be a pillar of the sustainable securitisation revolution. The supply of assets for this product is plentiful and given the vast commitments by financial institutions to increase the quantity of sustainable loans on their books⁴, this is set to continue.

Sustainable borrowers are becoming increasingly diverse in terms of profile and use of sustainable use-allocated funds. For example, oil companies are increasingly investing in renewable projects and innovations such as electric aircraft⁵ are on the horizon.

Figure 2: Sustainable Finance Loop.



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⁴ E.g. <https://ftalphaville.ft.com/2017/11/06/2195581/ft-opening-quote-hsbc-pledges-100bn-green-finance/>

⁵ A major British airline says it could be flying electric planes within a decade.

Sustainable CLOs are made up of existing sustainable loans on banks' balance sheets and are a valuable tool to remain within regulatory capital limitations on the amount of loans banks can have on their balance sheets at any given time. A feature of CLO-backed securities is that they are issued by an SPV, which effectively 'buys' the loan obligations off the originating bank. Importantly, this means the loans are moved off the balance sheet of the originating bank into an SPV, freeing up capital and enabling the bank to agree more sustainable loans.

Through CLOs, originating banks can create a "sustainable finance loop" which generates sustainable assets on a rolling basis (see Figure 2 above). The proceeds from the sustainable CLOs form the basis of new loans from the originating bank with its clear balance sheet. The loop is formed as these second generation loans are themselves aggregated and transferred to an SPV to issue more CLO-backed securities and the process may be repeated.

Where loan assets are less readily available, they can be warehoused by the SPV until a critical mass has accumulated to make issuing CLO-backed securities viable. This warehousing feature will also ensure a consistent supply of sustainable loans forming the basis of the CLO in the event that individual assets in the pool cease to meet the sustainability criteria.

White & Case is currently acting as sole legal advisors to the Bank of England in its capacity as chair of the G20 Sustainable Finance Study Group ("SFSG") in their drive to create a global sustainable CLO market. The balance sheet loan CLO market will be used as a template for the development of the sustainable CLO market with the speed and scale needed to connect investor demand with the world's US\$90 trillion green infrastructure financing need over the next 15 years. The private sector is already developing these markets but global regulatory coordination will be needed to ensure the requisite speed and scale. The SFSG will produce the 2018 G20 Sustainable Finance Synthesis Report and submit it to the G20 Finance Ministers and Central Bank Governors Meeting in July and the G20 Leaders' Summit in December.

Sustainable ABS

Auto ABS

Several European countries including the UK, France and Germany have now pledged to phase out the sale of fossil fuel-powered cars in the next 25 years and Norway has pledged to do so by 2025. Given that hybrid and fully electric vehicles currently make up a very small fraction of those on the road, considerable investment is needed to research and develop green vehicles. Sustainable auto ABS will be a vital mechanism to unlock these funds. The potential pools of sustainable auto loans are now sufficiently deep to make sustainable securitisation of these assets viable and profitable. Several high-profile car manufacturers have recently issued auto ABS backed by leases on existing electric vehicles.

Another driver of sustainable ABS may be ride-hailing companies, which are pouring significant research and development resources into electric autonomous taxis for use in cities across the world. Though more expensive to purchase initially, electric vehicles are considerably cheaper to run and are therefore more economical than fossil-fuel powered cars over their lifetimes. The means of financing these new fleets of vehicles would be prime candidates for forming the basis of sustainable auto ABS.

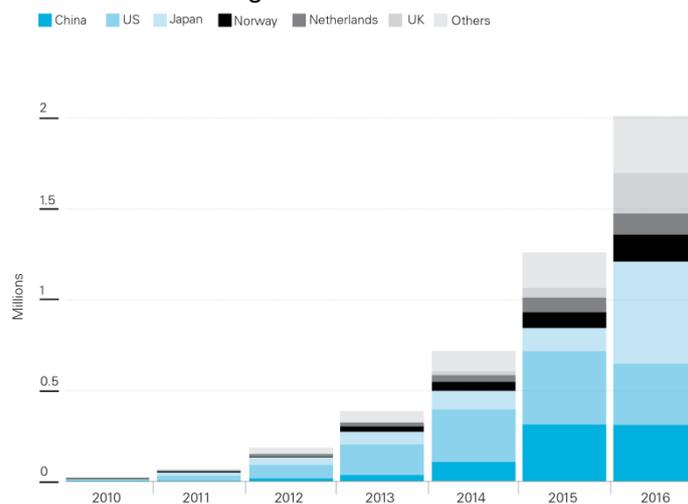


Figure 3: Number of electric vehicles on the road globally.
Source: International Energy Agency

Solar ABS

Solar energy is one of the front running alternatives to fossil fuel as a source of electricity generation both commercially and for residential use. Unlike fossil fuel-generated electricity, solar energy can be generated by anyone and once the technology is installed, the owner effectively produces free energy, surpluses of which can be sold back to national grids. Solar securitisations topped \$1bn in 2017, more than quadrupling issuance from the previous year. In the US, solar installations are often funded through PACE loans, further described below.

As with electric vehicles, significant resources are being pumped into researching and improving solar cell technology. A new material has recently been discovered that is set to convert sunlight into electricity more efficiently than current silicon-based designs and being semi-transparent the new technology will be able to clad buildings and windows⁶.

Innovations such as this may significantly increase demand for solar technology at the residential and commercial level. This demand will be funded by loans which may then in turn be leveraged and made available to a broader range of market participants through solar ABS, following the sustainable finance loop – see Figure 2 and the discussion above. This simultaneously shifts solar loans off the finance provider's balance sheets to allow for more loans to be agreed.

PACE ABS

PACE loans are bespoke mechanisms through which public bodies fund sustainable retrofitting of commercial and residential properties. They incentivise property owners to make upgrades to their homes as the loans are repaid over time through an assessment on the property owner's tax bill. Successful PACE programmes now exist throughout the US, Canada, South Africa and Australia and the concept is now gaining traction in Europe as a solution to the huge investment deficit in sustainable infrastructure.

Like other sustainable loans, PACE loans can be aggregated and securitised, freeing up the originator's balance sheet and facilitating investment in the asset class by institutional investors. Several issuers have taken advantage of the prevalence of the asset class in the US and more debut issuances are expected throughout 2018.

Sustainable MBS

Buildings are responsible for approximately 40% of energy consumption and almost 75% of building stock is categorised as energy inefficient⁷ in the EU, but by 2020 all new buildings must be “nearly zero-energy buildings” and by 2050 all existing buildings must meet the same standard. Sustainable mortgages have captured the interest of governments as they prove popular with property owners and provide a means to streamline one of the worst offending sectors in terms of greenhouse gas emissions.

Sustainable residential mortgages can be offered to homeowners under which the money saved through proposed energy efficiency upgrades in the relevant property is added on to the mortgagor's income for the purposes of calculating the level of funds that may be borrowed.

Through sustainable residential MBS (“**RMBS**”), these mortgages are securitised and tranching according to prospective investors' desired risk-return profile. Sustainable RMBS has the potential to become a substantial source of funding for green mortgages, which could subsequently free up balance sheets to allow financial institutions to agree more sustainable mortgages. This would also simultaneously help relieve some of the housing sector issues currently facing some EU governments while stimulating economic growth and stability in the housing and mortgage sectors. Sustainable RMBS market was propelled into the market's consciousness following Obvion's “Green Storm” RMBS issuances in 2016 and 2017 and other issuers are gearing up to follow suit. This year, the EU will pilot an energy efficient mortgages programme which should

⁶ This material, perovskite, has recently been shown to exhibit strong light-absorbing properties, already as effective as silicon in the laboratory which has been refined and developed for over 60 years. It is also projected to be considerably cheaper to produce than silicon, which requires a considerable amount of energy to process. It may also bypass much of the political strategy surrounding renewables and the rare minerals that some require. Unlike many rare earth minerals, perovskites are abundant throughout the world and therefore less susceptible to quotas and trade embargoes.

⁷ <https://ec.europa.eu/energy/en/topics/energy-efficiency/buildings>

lead to an upsurge in sustainable mortgage origination, which may in turn be used to underlie sustainable RMBS⁸.

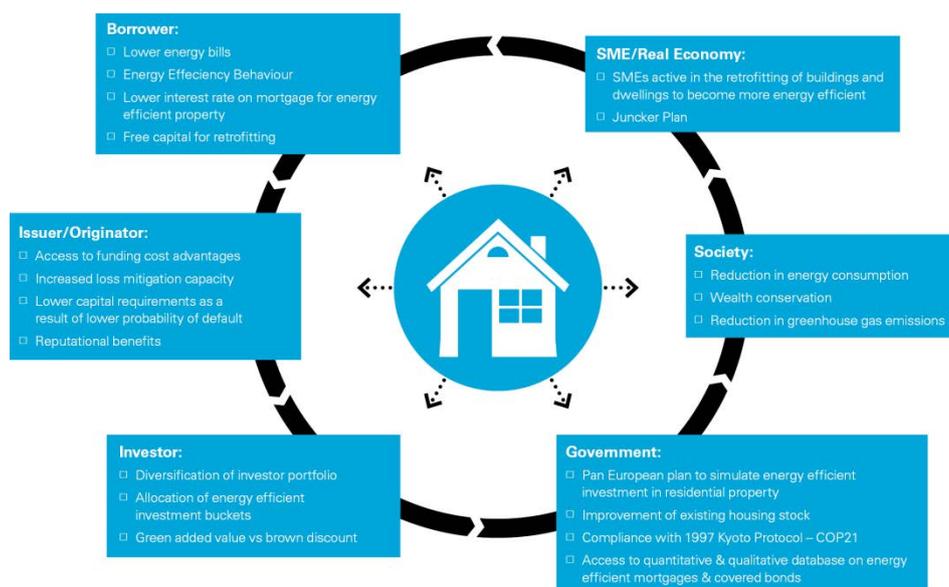


Figure 4: Sustainable mortgages incentive chain.

Source: www.energyefficientmortgages.eu.

The availability of internationally recognised standards of building sustainability: LEED, BREEAM and Energy Star make it possible to determine the eligibility of these assets to form the basis of a sustainable structured product straightforward. It also gives investors comfort that the assets backing MBS meet their own sustainability requirements.

Fannie Mae has rapidly expanded its portfolio of sustainably certified multifamily housing with a more than ten-fold increase in 2016. These portfolios have been a direct conduit to Fannie Mae's numerous forays into the sustainable MBS market which totalled a huge US\$27.6bn in 2017 making it the world's biggest issuer of green bonds. After a surprise explosion in 2017 the sustainable MBS market is expected to continue to be one of the key drivers of the shift to a global sustainable economy.

Ensuring transparency and integrity of collateral

As highlighted, a potential hurdle to overcome is ensuring consistency in standards and continuity in supply of the assets forming the basis of the structured products throughout the life of the portfolio. This may be problematic as even assets which appear similar may have very different sustainability profiles, which may be exacerbated as the transparency and visibility of individual underlying assets generally decreases when collateralised.

This may be resolved through the development of an EU sustainable taxonomy which has the potential to set crucial mutually recognised standards and definitions for sustainable eligibility. The LMA's recently published Green Loan Principles⁹ also provide some much-needed clarity and consistency in defining the assets that can reliably form the basis of sustainable collateral.

Regulatory relief

Certain regulatory measures are being considered to propagate the sustainable finance market. Complementing the creation of new sustainable finance mechanisms, the 'green supporting factor' is one such proposal. This is a multiple applied to banks' capital risk-weightings to reduce the relative weighting of sustainable assets. Discussion to date has focussed on applying the green supporting factor post-securitisation; we believe applying it pre-securitisation would be more effective to promote the faster creation

⁸ www.energyefficientmortgages.eu

⁹ http://www.lma.eu.com/application/files/8415/2162/5092/LMA_Green_Loan_Principles_Bookletpdf.pdf

of sustainable assets and would be welcomed by all stakeholders including non-bank investors in sustainable securitisation. Other proposed measures include a 'brown penalising factor' - higher capital requirements for carbon-intensive assets. Such a provision would avoid the problem of lowering capital requirements, while still giving a political signal in favour of sustainable finance. Any such advantage conferred on sustainable assets would be leveraged through securitisation.

Many existing portfolios could be made green through re-evaluation or taking advantage of certification systems that may not have existed when the portfolios were originally set up. For example Fannie Mae became the world's biggest issuer of green bonds in 2017 through having the buildings underlying its MBS certified as green under LEED and Energy Star. It is estimated that climate-aligned but unlabelled sustainable bonds are treble the value of those which are labelled. Simply having assets correctly labelled could lead to the emergence of new sustainable portfolios for sustainable securitisation.

Closing Thoughts

It is clear that the benefits of holding and developing sustainable assets are manifold, including higher revenue streams, reputational benefits, tax advantages, reduced exposure to fossil fuel-related risk and of course most importantly contributing to the global effort to mitigate climate change. These advantages are demonstrated by the increase in availability and prevalence of sustainable finance products in the market. As so many sustainable activities happen on a micro level, the next steps are for financial institutions to aggregate their sustainable products; sell them into the global capital markets; and clear their balance sheets to make way for the next wave of sustainable loans for businesses and private individuals.

Almost every government has signed up to the Paris Agreement and set national targets for reductions in national greenhouse gas emissions. Sovereigns stand to benefit significantly from sustainable structured products in that they could entail an exponential growth in sustainable development, facilitating their targets being met, and adapting the national economy to a low-carbon future.

Securitisation now has a chance for redemption. MBS in particular is infamous for being the root cause of the global financial crisis. Now, with tighter controls, it has the chance to make a comeback as one of most important tools to save the planet by mobilising and leveraging previously untapped and unavailable funds for sustainable purposes. The innovative and rapidly evolving nature of sustainable technology means that new assets are eligible for sustainable finance funding which expand and diversify the asset portfolios of sustainable ABS. Structured products are set to turbocharge sustainable finance, heralding the next phase of the global green revolution.

White & Case LLP
5 Old Broad Street
London EC2N 1DW
United Kingdom

T +44 (0) 20 7532 1000

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