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Green Securitisation: Developments and Challenges

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> 'Green securitisation growth depends on greater incentives and standardisation globally. Improved reporting and data are required to differentiate relative credit performance of green and non-green assets. Due to the fast pace of technological advancements, grandfathering, reporting and transparency will support maintaining a green label throughout the life of the transaction.'
>
> Daniela Di Filippo, Fitch Ratings

Proportion of Green Securitisation Growing from Low Level

Green securitisation issuance has significantly expanded in the past five years as structured finance investors are increasingly considering sustainability in their investment decisions. However, it only represents a very small part of the overall securitisation market. There was a material increase in volume in China, France, the Netherlands and the US before a pandemic-related slowdown in the first half of 2020.

The green securitisation market includes a wide range of transaction types that vary broadly across region and collateral type. Green asset and notes conditions vary across transactions, but are generally backed by pools of green assets (or debt secured by green assets) or have proceeds that will be invested in green projects. Fitch Ratings presents recent developments at the asset-class level for securitisations defined as green in their local markets in the second part of the report.

Better Incentives and Standards Needed for Faster Growth

Fitch believes that consistent standards to determine what constitutes a green securitisation and better data reporting will support market growth by allowing investors to identify and analyse the transactions. Transparent reporting and grandfathering of standards will allow transactions to maintain the green label throughout their terms.

Green securitisation growth will also benefit from harmonisation of incentives, such as favourable tax and capital treatment, both within and across markets.

Green ABS issuance has primarily been backed by mortgages (agency MBS in the US) but also by loans for energy-efficiency improvements, solar and auto receivables. Fitch has rated several securitisations with green asset or notes features as shown in this report, in particular RMBS and ABS issued in Australia and the Netherlands.

No analytical adjustment has been applied based on the green features of these transactions. Fitch looks for improved and more granular historical data showing differences in cashflow and collateral performance to determine if the rating analysis should be adjusted based on the relative performance of green and non-green assets.

ESG Relevance Scores for Structured Finance and Covered Bonds introduced in 2019 reflect Fitch's monitoring to how sustainable factors are influencing credit ratings which could help investors in their asset allocation decisions.

Related Research

Where ESG Matters for Global SF and CVB Ratings (2021 Update) (March 2021)

EU Green Securitisation Unlikely to See Beneficial Capital Regime Soon (December 2020)

CO2 Emissions Reporting Key to Defining European Green Auto ABS (April 2021)

Electric Vehicles Warrant Additional Attention in China Auto ABS Analysis (April 2021)

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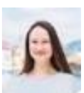

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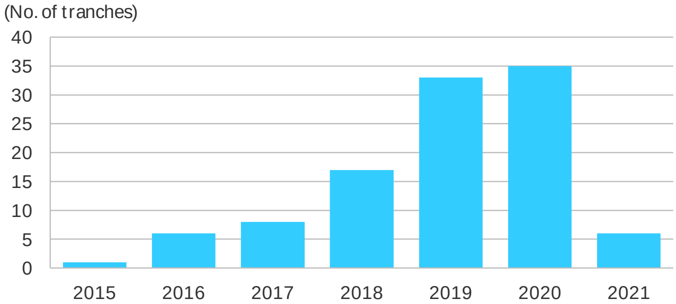
New Incentives Will Support the Market

Investment in green securitisations is still low compared with that for green, social and sustainability bonds as a share of total debt instruments and non-green securitisation. Investment is low in part because many institutional investors are only recently seeking to invest in green assets, including through green securitisations. New and developing regulations that will require investment funds to disclose the extent to which their funds or products invest in sustainable and environmental assets, such as under the EU's Sustainable Finance Disclosure Regulation (SFDR), should support investor demand.

The numbers of rated deals within the market is still very low. Some transactions have both green and non-green tranches. The highest issuance of rated tranches in a year has been less than 40.

Rated Green Securitisations



Source: Fitch Ratings, Bloomberg

Market incentives that could drive green issuance growth include the following:

1. Creating a clear definition and labelling of green assets that can be packaged and securitised;
2. Standardising loan agreements, especially for new asset types such as small-scale, green energy production, that will permit originators to classify loans as green;
3. Allowing investors to avail of tax incentives or capital relief;
4. Supporting financial warehousing of new asset types, particularly of small-scale initiatives, to build transactions of sufficient size; and
5. Guaranteeing junior and mezzanine tranches of green ABS by public entities may lead to higher credit protection for senior tranches, making them more attractive to institutional investors.

Standards Are Key

Green Securitisation Definition

There are two main types of green securitisations: those backed by a portfolio of green assets and those whose notes proceeds are used to invest in green projects. Both types of assets can be aligned to the Green Bond Principles set out by the International Capital Markets Association (ICMA).

However, a widely used standard has not been developed for what can be considered a green securitisation, such as for the minimum percentage of an asset pool that must be considered green. Such standards, in addition to the current International Framework for standards, principle and criteria, would clarify the environmental performance and benefit of the green securitisation.

Green Assets Eligibility Criteria

Environmental assets included in the collateral of a green securitisation should comply with defined criteria during the transaction life. Depending on the nature of the collateral the green assets eligibility criteria will have to be met at closing (static pools) or at transfer date (revolving transactions). No bespoke green triggers or default events should be required if the green aspects of the deal cannot change over time, i.e. a transaction where the relevant energy performance certificates (EPCs) or emissions standard is certified upfront. When the underlying collateral contains green obligations that need to be verified, such as the use of proceeds for green projects, green triggers can alert transaction parties and investors of a breach of any such obligation.

Grandfathering Green Rules

The views of investors, regulators or third-party service providers may also evolve about whether a securitisation is considered green with potential impact on the relevant pricing and liquidity. Any regulatory capital or similar incentives introduced for green securitisations should include grandfathering for securitisations that cease to be considered green as a result of the evolution of green standards to prevent the sudden impact on the deal's pricing and liquidity.

Green Securitisations vs. Green Bonds

Green securitisation notes are debt instruments with the first source of repayment being cash flows from a pool of assets or projects that are either green themselves or proceeds from this pool are earmarked to finance green projects. Typically include covered bonds, asset-backed securities and other structures.

Green bonds (also referred to as climate bonds) are debt instruments issued by companies, municipalities, states, and sovereign governments to finance projects and operations with environmental benefits and that can mitigate risks associated with climate change.

	Green bond	Green securitisation
Recourse	To the issuer or to the project's assets in case of a project bond.	To the collateral or full recourse to the borrower in the case of unsecured loans.
Use of proceeds	Earmarked for green projects: with or without specification of the project.	Refinance portfolios of green assets or projects, or proceeds are earmarked for green projects.

Source: Fitch Ratings, Climate Bond Initiative

Green Securitisations Vary Across Sectors and Regions

Several aspects of green ABS or MBS issuance will depend on the characteristics of the assets that back the transaction. Transactions in some sectors, such as distributed solar ABS, utility-scale solar and wind power project ABS, and Property Assessed Clean Energy (PACE) ABS, have by nature green assets, while those in other sectors can be green depending on specific asset attributes or uses of proceeds, such as in auto ABS, RMBS and CMBS.

The credit impact of green attributes can also vary depending on the sector. The ESG aspects of a transaction may be positive or negative for the ratings. For example, the higher residual value uncertainty of battery electric vehicles (BEVs) may be credit negative for auto lease ABS transactions in which they have a meaningful concentration or comprise the entire pool. Fitch does not have an ex ante expectation of their performance being either systematically better or worse.

Fitch's rating analysis of solar ABS is unrelated to any environmental benefit from the power generation systems that it finances and depends on the type of contracts funding the solar photovoltaic (PV) systems.

Auto ABS

Auto loan and lease ABS can support lower CO2 emissions by including contracts for alternative fuel vehicles (AFVs), which include BEVs, and hybrid electric and plug-in hybrid vehicles. However, it is likely a regulatory treatment will be set to determine whether AFVs are a pure green asset considering the implications of the manufacturing and recycling of batteries and of electricity production.

Green auto ABS issuance growth factors will include carbon emission regulations, restrictions on internal combustion engines (ICEs) in certain locations, and government initiatives to support production. Growth in BEVs has been constrained by higher purchase prices than for comparable ICE vehicles and by their still limited ranges and charging station networks. The delta should shrink over the coming years. Despite a dearth of green collateral, auto ABS sponsors can still issue transactions with green attributes.

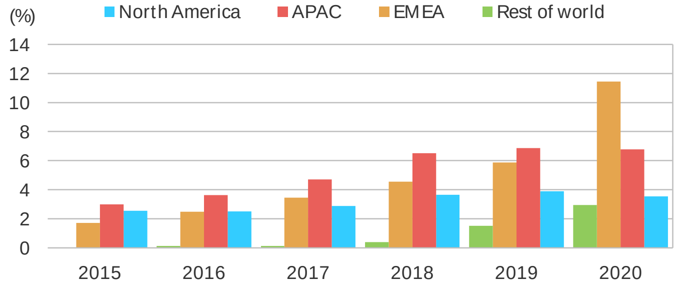
Tesla, Inc., whose entire product offering consists of BEVs, is the only sponsor that issued an ABS transaction backed entirely by contracts for BEVs. It issued its first auto lease securitisation in 2018 and a total of five deals into early 2021.

Crédit Agricole Corporate and Investment Bank (A+/Negative) announced in July 2020 its first green asset-backed commercial paper (ABCP), the industry's first green note that finances BEVs in client auto loan and lease pools.

The market penetration of AFVs is generally too small for most sponsors to issue transactions backed entirely by contracts for electric vehicles.

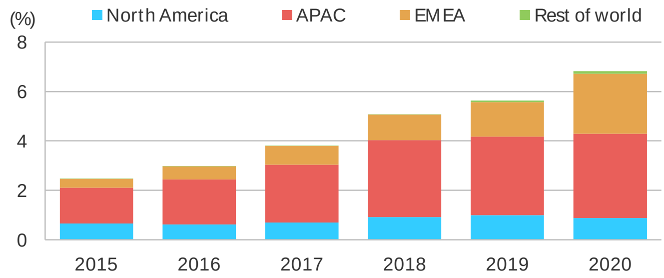
As AFVs make up an increasing proportion of auto purchases, Fitch expects the proportion of AFV contracts, especially electric vehicles (EVs), in auto ABS pools to increase. However, EVs comprise less than 7% of global automobile sales, mainly in APAC and EMEA.

EV Sales Relative to Automobile Sales
(% of car sales relative to each region)



Source: Fitch Ratings, Bloomberg

EV Sales Relative to Automobile Sales
(% of world car sales)



Source: Fitch Ratings, Bloomberg

The proportion of AFVs in China auto lease and loan ABS pools is increasing. Fitch has not yet rated any auto ABS green securitisation in China or the US.

In the US, Toyota Motor Credit Corporation (A+/Stable/F1) has issued multiple securitisations since 2014, backed by loans for conventional vehicles. Proceeds from the bond sales have funded new loan and lease contracts for such vehicles as the Prius Plug-in or Camry Hybrid, which meet specific powertrain, fuel efficiency and emissions criteria set by the California Environmental Protection Agency's Air Resources Board and the California Low-Emission Vehicle II.

In China, sales of BEVs made up 8.6% of total passenger car sales in 4Q20, moving towards the government target of 20% by 2025. The central and local governments offer various supportive policies to achieve this target, including purchase subsidies and favourable licence plate allocation, most of which are set to expire after end-2022. Nearly a quarter of auto ABS transactions issued in 2020 included some EV assets, some as high as 50% of the total portfolio.

A green ABS transaction in China is defined as either:

1. percentage of green industry underlying assets at least 70%; or
2. percentage of proceeds to be used in green projects at least 70%; or
3. originator's green business account for at least 50% of their income; or originator's green business at least 30% of their income/profit and more than 70% of raised funds to be used in green projects.

Most of the green ABS deals in the Chinese market are future receivable types, where the proceeds will be used to fund infrastructure projects, such as new energy power generation, water treatment plants or subway development.

In Europe, ABCP sponsors indicate that developing "green ABCP" is a priority. Most of them, however, are not yet sure what may make their pools green as, like structured finance in general, there are hardly any asset pools that can be considered entirely green.

Other countries, such as Norway, have new vehicle registrations of AFVs and BEVs in double-digit percentages. As a result, ABS backed by Norwegian collateral already has material exposure to loans backed by AFV and BEV collateral. As EU member states roll out incentives for autos to become less polluting and more energy efficient, the concentrations of AFVs in EU auto ABS could also rise.

In February 2020, Germany improved the incentives to purchase AFVs, leading to the share of EVs of new car sales increasing threefold to about 10%, while plug-in hybrid cars account for a further 12%. Percentages of EV and plug-in hybrid vehicles in recent auto ABS are typically lower than in new car sales, as for instance analysed for Globaldrive Auto Receivables 2021-A B.V., a transaction originated and serviced by Ford Bank GmbH when it was rated by Fitch in March 2021. We estimated that the initial pool comprised about 1% of plug-in hybrid cars and no EV.

Solar ABS

Solar ABS are securities collateralised or backed by consumer receivables (i.e. residential solar) originated by specialised lenders, generally solar energy companies. Each solar securitisation comprises loans, leases, or power purchase agreements (PPAs) used to finance PV systems. Solar loans allow consumers to finance the purchase of a PV system from a solar installer, while solar leases and PPAs involve renting the equipment.

Under a PPA, the consumer purchases system-generated electricity at an agreed-upon rate subject to annual increases (so-called escalators). Payments are typically fixed with a solar lease. The periodic payments from these consumers for their PV systems are the cash flows used to repay solar ABS. While still an emerging sector, solar ABS issuance grew to over USD2 billion worldwide in 2018, with seven active issuers.

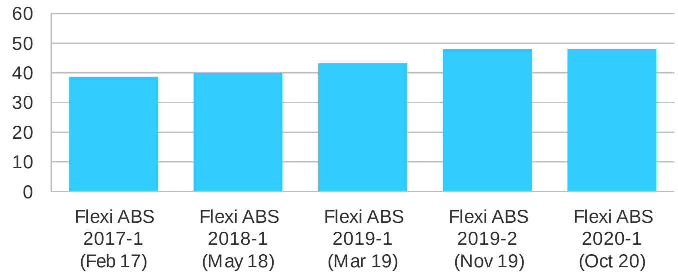
In the US, the only transaction Fitch rated with similar asset features was Renew Fund Receivables Trust 2015-1. The portfolio collateralising the 2015-1 notes entirely comprised of loans originated by AFC First Financial Corporation in accordance with the WHEEL and Keystone HELP loan origination programmes. WHEEL (available in Kentucky, Ohio and Pennsylvania) and HELP (available in Pennsylvania) loans, originated under materially similar criteria, offer low-rate loans for energy-efficiency home improvements.

The credit analysis of solar ABS is unrelated to any environmental benefit from the power generation systems that it finances and depends on the type of contracts funding the PV systems. Solar customers can also finance the purchase of PV systems under loan or lease contracts with no ties to power production, with the main asset-related risk being a default risk tied to the credit quality of the obligors (typically home owners). Secondary risks include the maintenance needs and the incentives related to savings on utility bills.

These loans typically have long tenors of 20 to 25 years, while significant originations started no earlier than 2015 in the US. This limited data history means that Fitch would be likely to apply a cap in the 'Asf' category. The primary asset-related risks for production-dependent contracts (such as PPAs and certain leases) are the variability in solar power production and in payments resulting from the impact of regulatory, technological, or other factors that affect the savings from solar contracts compared with utility prices.

In Australia, Flexi Group Limited, which is a consumer lender rather than a specialised energy lender, has sponsored a series of Fitch-rated consumer ABS transactions (see chart below). These are collateralised by pools containing a portion of receivables backed by solar leases to homeowners that increased over time.

Solar Issuance Is Increasing
(% of collateral pools as solar)



Source: Fitch Ratings

PACE ABS

The US PACE model is a tool for financing energy-efficiency and renewable energy improvements. PACE loans fund the upfront cost of energy improvements on residential and commercial properties, and are paid back over time through property tax bills. The PACE lien stays with the property through possibly changing ownership. Sponsoring states implement legislation to collect loan repayments through property tax bills and redistribute them to lending agencies. The funding and credit risk are passed on to ABS investors through the securitisation of the loans. Each ABS frees up lending capacity for new loans.

A consortium of European countries, companies and organisations called Euro PACE is studying the feasibility of introducing PACE programmes in Europe, starting with Spain.

PACE standards typically do not consider credit score or debt/income ratio and instead focus on equity and lien enforceability. These borrowers may be subject to higher risk of default should the pandemic and recession continue.

RMBS

Green RMBS generally include transactions backed by mortgage loans for properties with energy-efficient features. There is still a lack of standardisation in requirements and reporting standards for energy efficiency of residential property within and across jurisdictions.

Fitch expects green and social securitisations to become more frequent in the European market given the substantial effort that European policymakers commit to develop a standardised framework.

Non-agency green RMBS may be more difficult to develop in the US because of a lack of standards over what constitutes an energy-efficient home. However, the ESG focus is expected to expand further in the US as the Biden administration takes a stronger stance on these issues.

United States

The US is likely to see growth through Fannie Mae's green securitisation bond programme as the GSEs are likely candidates to be at the forefront of emerging technologies/programmes. Fannie Mae is the largest issuer of green bonds at about USD120 billion as of February 2021.

Fannie Mae does not provide green loans itself but supports the secondary residential mortgage market by purchasing pools of mortgages, which it aggregates and uses as collateral in green RMBS, before selling them to investors. It has issued USD47 billion to refinance mortgages secured on buildings with a green building certification or improvements to reduce energy and/or water consumption by at least 25%.

The New York State Housing Finance Agency has issued USD812 million in 10 Certified Climate Bonds to fund affordable housing with low-carbon impact across the state. Eligible projects are compliant with the Climate Bonds Standards for low-carbon buildings and meet local building codes.

European Union

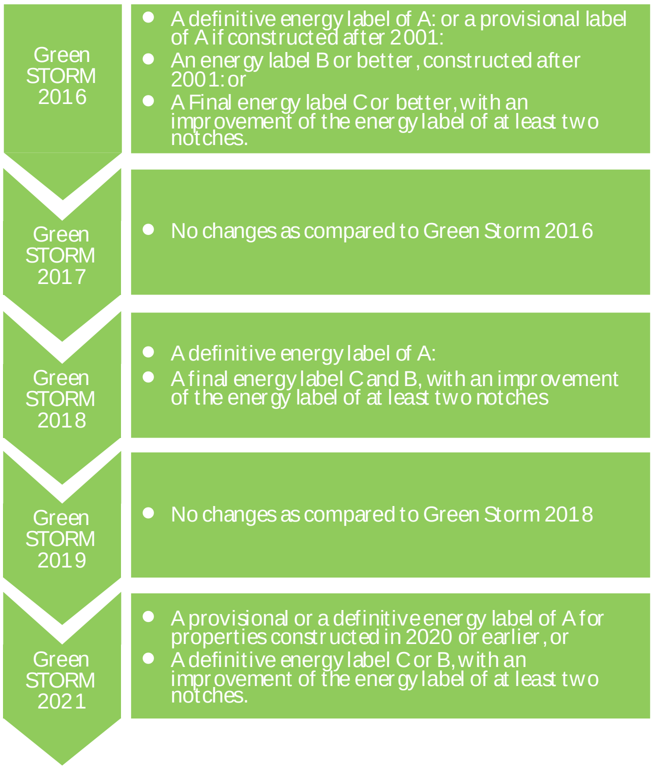
In Europe, there is a higher degree of standardisation in energy-efficiency ratings for buildings than in US as there is a stated goal for a complete decarbonisation of the EU's building stock by 2050. However, energy-efficiency rating scales may vary by jurisdiction. EPCs are mandatory when a building is sold or rented across the EU and allow policy makers to create regulations that provide incentives for investments that place the EU's building stock into higher-rated EPC bands. The UK is more advanced in this space than the countries in the EU.

The Netherlands

Dutch mortgage originator Obvion N.V., fully owned by Cooperatieve Rabobank U.A. (A+/Negative/F1), has sponsored several green RMBS issuances under its Green STORM banner, which is also rated by Fitch.

The portfolios consist of residential mortgages backed by buildings that qualify as energy efficient under the Green Bond Principles and the more rigorous Climate Bond Standard for residential buildings and energy-efficiency upgrades in residential buildings. The eligibility criteria within the transactions' documents have become more restrictive reflecting the increasing focus on sustainable factors in bankers and investors' decisions.

Green Securitisation – Green Storm



Source: Fitch Ratings

Fitch does not differentiate between mortgages secured on energy-efficient and non-energy-efficient homes when rating these transactions, mainly due to the lack of historical and loan-by-loan data related to green aspects of the assets. The first evidence from the surveillance data for Green STORM and STORM series shows that transactions of the same vintage perform similarly (as measured by 3m+ arrears and cumulative repossessions), regardless of whether the property is energy efficient.

United Kingdom

As mentioned earlier, there is growing interest in sustainable investment products, which also include social bonds. Fitch has rated two of these this year, both RMBS transactions

Gemgarto 2021-1 plc, securitising mortgages originated by Kensington Mortgage Company Limited (KMC), and Brass No. 10 PLC securitising loans originated by Yorkshire Building Society (YBS; A-/Negative/F1).

While Gemgarto 2021 and Brass No. 10 are the first transactions to comply with the Social Bond Principles, assets backing previous Fitch-rated KMC and YBS securitisations have been similar in terms of assets credit risk. Fitch has not changed its analysis in light of the social labelling of these deals.

Portugal

Unión de Créditos Inmobiliarios S.A. E.F.C. – Sucursal em Portugal (UCI)[1] has sponsored RMBS Green Belém No.1. That was awarded the green label based on UCI Portugal's commitment to use the class A proceeds to fund mortgages for properties that satisfy the Climate Bond Initiative's sector-specific criteria for low-carbon building. The eligibility criteria outlined in the transaction documentation include residential buildings with an EPC label A and B, and mortgages for the purchase and refurbishment with at least a 30% improvement in energy performance. The green label also had no impact on Fitch's analysis as the securitised receivables are of a similar standard to other Portuguese RMBS transactions.

Australia

National Australia Bank Limited (A+/Negative/F1) issued the country's first green bond RMBS in 2018. The green bond was carved out of a transaction that also issued non-green bond tranches. The loan pool includes 15% of mortgages on residential properties that meet low carbon emission standards. There has been no further issuance in Australia from the same originator, which highlights the challenges for the green securitisation market to develop.

Green- and Social-Labelled RMBS

Transaction name	Year	Country	Green labelling	Issuance amount
Green STORM 2016	2016	Netherlands	Compliant with green bond principles and climate bond standard	EUR526.2m
Green STORM 2017	2017	Netherlands		EUR594.2m
Green STORM 2018	2018	Netherlands		EUR581.9m
Green STORM 2019	2019	Netherlands		EUR641.3m
Green STORM 2021	2021	Netherlands		EUR526.4m
Gemgarto 2021-1 PLC	2021	UK	Compliant with the social bond principles	GBP505.04m
Brass No. 10	2021	UK	Compliant with the Social Bond Principles	GBP1,724.3m
RMBS Green Belém No.1	2020	Portugal	One class compliant with the green bond principles: class A	Total: EUR392m Class A: EUR331.3m
National RMBS Trust 2018-1	2018	Australia	One class compliant with the green bond principles: class A1-G	Total: AUD750m Class A1-G: AUD112.5m

Source: Fitch Ratings

[1] The Portuguese branch of UCI S.A., a Spanish specialist lender fully owned by BNP Paribas S.A. and Banco Santander, S.A.

CMBS

CMBS are generally labelled as green when backed by energy-efficient buildings. Private-label green CMBS issuance has been low despite well-established commercial building classification systems of energy efficiency. Green CMBS has been mostly issued only in the US, and most of that issuance has been sponsored by Fannie Mae for multifamily properties. Eligible properties in the Fannie Mae programme must possess a nationally recognised and current green building certification or undergo property improvements that target reductions in energy or water use.

Fitch expects green issuance to become more visible in EMEA CMBS particularly in office transactions where property certification is more applicable.

The commercial property market is certainly paying a lot of attention to environmental concerns, mainly in energy efficiency, but also in construction methods and water conservation. There is an expectation that retrofitting properties for energy efficiency will be a very significant phase in commercial real estate, as the built environment contributes to a large amount of carbon emissions.

Fitch does not expect major impact on CMBS ratings in both the US and Europe from potentially expensive retrofitting and capital expenditures to make properties greener. However, in Europe, these capital and repair expenses may have a greater impact on older properties, which may be required to upgrade and maintain green standards. Stricter environmental regulations may highlight differences in property values; the older properties' long-term value may be reduced by increasing need for repairs and upgrades to meet the regulations

Fitch sees some green building features as credit positive for CMBS owing to the help of maintaining the occupancy and value over time, which would increase the likelihood of debt repayment during the loan term and at maturity.

Green CMBS Case Studies

US

In 2017, Fannie Mae launched its first green multifamily deal, FNA 2017-M10. The transaction was backed by 20 seven-year loans originated under the Fannie Mae Green Financing Business. The 20 loans are secured by multifamily properties that have either achieved a Green Building Certification such as LEED, ENERGY STAR® or Green Globes or were properties that were targeting a 20% or greater reduction in energy or water consumption. All classes in the transaction were guaranteed by Fannie Mae with respect to the full and timely payment of interest and principal. Fannie Mae's green programme has issued nearly USD11 billion in bonds.

Europe

Goldman Sachs' River Green Finance is a CMBS transaction issued in February 2020, with a maturity date in 2032. It is a true sale transaction backed by a single loan secured with a single property. This transaction was structured with a EUR196.2 million loan to buy an office in an energy-efficient building in Paris. The building received a third-party certification in 2017 for its energy efficiency that it must keep while the bonds are outstanding.

CLO

In recent years, progress in global CLOs has evolved around issuance of CLOs with some form of ESG stipulations, effectively representing negative screening. Managers of ESG-labelled CLOs exclude loan issuers either of predefined industries or based on certain thresholds around share of revenue derived from business lines viewed as having an adverse ESG impact. The CLO industry consensus is that these exclusions have a limited impact in narrowing down the loan universe, as many excluded industries represent a small share of outstanding institutional loans and/or thresholds are fairly lenient.

Nevertheless, the growing trend of ESG-labelled CLO issuance in Europe and US attests to the increasing focus on the topic by CLO investors. In recognition of investors' priorities and regulatory push in different regions, many CLO managers have been developing their ESG integration practices. In 2021, Fitch surveyed US CLO managers with questions on their ESG policies and processes, specifically in the context of CLOs, and will publish the results of the survey in 2Q21. Based on the responses received to date, 47% of 88 CLO managers that were surveyed stated that they have internal ESG scores or ratings in place.

To Fitch's knowledge, there has been no mainstream "green CLO" issued to date, where the green credentials are interpreted to mean that CLO issuance proceeds ultimately finance (1) green loans whose proceeds fund green projects and/or (2) sustainability linked loans (SLL) or bonds (SLB) (when a bond bucket is allowed in a CLO), SLL or SLB, respectively, whereby debt margin ratchets up or down based on performance against sustainability linked KPIs.

Growing trends in SLL and SLB issuance may pave a way for emergence of "green CLOs", if the universe of green loans, SSLs and SSBs expands. However, such CLOs can be attractive to a limited investor base that prioritises ESG objectives. This is because lower cost of debt for SSL issuers (assuming successful execution on their KPI) means lower spreads for loan investors. Another potential hurdle is that KPIs could vary from industry to industry and issuer to issuer, therefore making monitoring more labour- and skill-intensive, and more expensive. That aspect can also limit asset managers specialising in managing "green CLOs".

Appendix 1

Challenges Facing the Development of the Green Securitisation Market

Defining green securitisation	• Needs to be clear, flexible and applicable to the wide range of potential deals. • Investors tend to favour a scale that represents how green a security is. • The definition and measurement need to be able to adopt to technological changes over time.
Information and reporting	• Originators may collect some green data. • There is no standardised approach to data collection. • Needs development to enable the green aspects of the deals to be reported.
Taking security	• For green assets, such as solar panels and battery storage, it is difficult for the investors to take security due to the equipment being highly bespoke or being integral to the land where it is established. • The customer may also change so having legal requirements to attach the green receivables to the property would ease this challenge.
Advances in technology	• The fast pace of technological advancement will mean certain assets can become obsolete on the green scale in a short period of time. • The solution would be to consider making financial and regulatory incentives continuing rather than upfront.
Green credentials	• The market will need to consider actions for transactions that are falsely labelled green. • Consider how much originators should rely on third parties to verify the green credentials.

Source: Fitch Ratings

Appendix 2: International Framework for Standards, Principle and Criteria

Relevant Parties and their Frameworks Related to Assessing Green Securities

Climate Bond Initiative	**Climate Bonds Standard & Certification Scheme** • Improve confidence in the green credentials to create a more sustainable market. • Certification available for assets that meet the Climate Bond Standard.
International Capital Markets Association	**Green Bond Principles** • Designed to promote the transparency and integrity needed to increase capital allocation to green projects. **Social Bond Principles** • Designed to drive the provision of information needed to increase capital allocation to social projects
ASEAN Capital Markets Forum	**ASEAN Green Bond Standards** • Recommends transparency and disclosure, and promotes integrity in the development of the green bond market.
EU	**European Green Deal (2019)** • Boost the efficient use of resources by moving to a clean, circular economy. • Restore biodiversity and cut pollution. **EU Green Bond Standard (TEG, Ongoing)** • On 18 June 2019, the TEG published its report on EU Green Bond Standard. • The report proposes the enhancement of the credibility and comparability of the green bond market. • It aims to encourage market participants to issue and invest in EU green bonds. **European Banking Authority (EBA) action plan on sustainable finance** • The EBA's plan on sustainable finance will focus first on key metrics and disclosure to support banks' green strategies and then look into evidence for any adjustments to risk-weights. **European Mortgage Federation's energy-efficient mortgage label (2021)** • The energy-efficient mortgage label: a guiding light for a greener European housing market.
Fitch	**Fitch ESG Relevance Scores** • Show how ESG factors impact individual credit rating decisions.

Source: Fitch Ratings

Appendix 3

Key Green Initiatives

Region	Initiative	Institution/facilitator
Global	Climate Bond Standard	Climate Bond Initiative
Global	Green Bond Principles	International Capital Markets Association
Global	Sustainability Bond Guidelines	International Capital Markets Association
Global	Sustainability-Linked Bond Principles	International Capital Markets Association
Global	Social Bond Principles	International Capital Markets Association
Europe	EU taxonomy for sustainable activities	European Commission
Europe	EU Green Bond Standard	European Commission
Europe	A European Green Deal	European Commission
Europe	Sustainable Europe Investment Plan	European Commission
US	Single-Family and Multifamily Green MBS	Fannie Mae
US	Green Guaranteed MBS	Fannie Mae
US	Property Assessed Clean Energy Programs	Local governments

Source: Fitch Ratings