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Credit FAQ:

Green Mortgages And Green RMBS: What Are The Challenges?

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Green is good. As policymakers increasingly legislate toward long-term climate-neutrality targets, more economic activities are being viewed through a sustainability lens, including residential property ownership and financing. In the EU, several successive initiatives have begun to promote energy-efficient mortgage loans, whose aim is to finance the purchase, construction, and/or renovation of both residential and commercial buildings with specific energy performance targets: the Energy-Efficient Mortgages Action Plan (April 2019), the Energy-Efficient Data Protocol and Portal (August 2020), and the Energy-Efficient Mortgages Market Implementation Plan (started in September 2020). Wider initiatives, such as the EU's Taxonomy Regulation, which we outline below, will also help to define the degree to which different economic activities can be considered environmentally sustainable. These definitions could facilitate the production of more green mortgage loans across all European countries.

Lenders' greater production of self-labeled green mortgage loans could present both opportunities and challenges for the securitization market and the possibility of green residential mortgage-backed securities (RMBS), raising questions for both investors and originators. This article addresses some of these questions.

Frequently Asked Questions

What is a green mortgage?

Green mortgages can take two forms:

- A traditional loan financing the purchase of a "green" property--for now, let's assume that this is an energy-efficient residential property; or
- A further advance to fund eligible energy-efficient home improvements, for example, solar panels, traditional insulation, and boiler upgrades.

In July 2020, the EU Taxonomy Regulation entered into force, providing a classification system, establishing a list of economic activities that contribute to environmental objectives, and seeking to support investments into those activities. The more detailed Technical Screening Criteria for two of these objectives--climate change mitigation and climate change adaptation--were published in April 2021. Under the EU Taxonomy, acquisition and ownership of buildings constructed prior to 2021 are classified as contributing to climate change mitigation if the building has an Energy Performance Certificate (EPC) rating of 'A' or higher, or if it is within the top 15% of the national or regional building stock in terms of energy efficiency. For properties constructed since Jan. 1, 2021, they will have to record a Primary Energy Demand (PED) at least 10% lower than the threshold set at the national level for the nearly zero-energy building (NZEB) requirements.

The U.K. Taxonomy is on hold until the EU Taxonomy is finalized so that it can adopt the EU Taxonomy's technical proposals as its basis. The U.K. government will then establish a green technical advisory group to assess, review, and determine the appropriateness of the technical proposals for the local market, and potential divergences between the two taxonomies may emerge over time.

That said, mortgage lenders are using wider approaches to categorize green mortgages, such as considering properties with lower EPC scores, of 'B', for example, or lending to fund energy-efficiency improvements on residential properties.

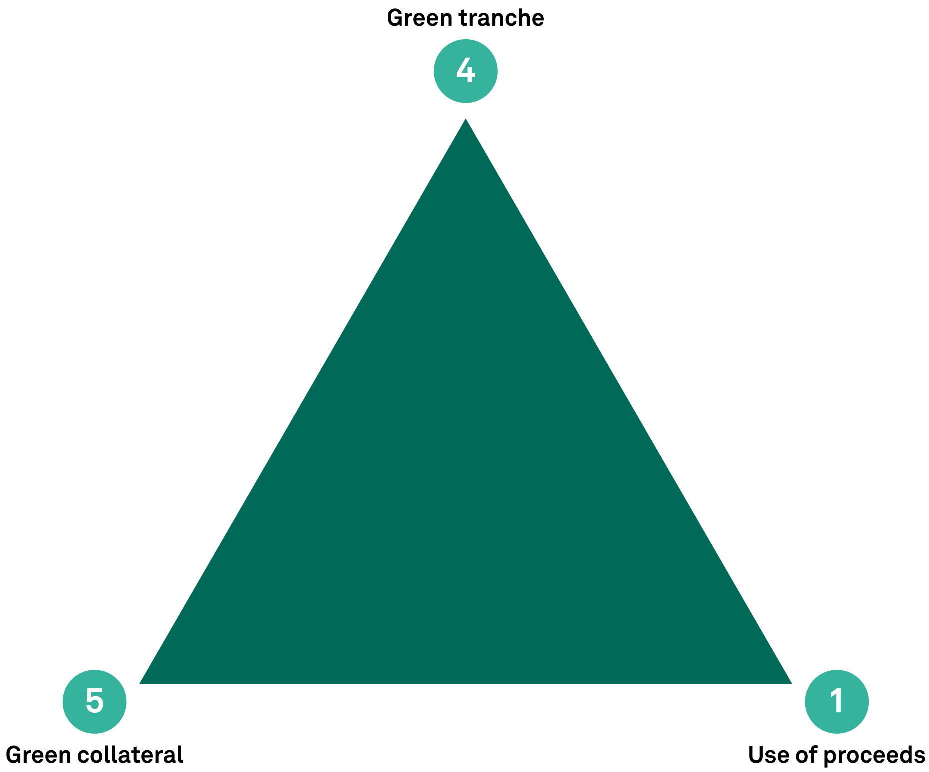
Due to the limited activity on new builds and higher inherent risks, lenders have pivoted beyond the financing of green properties, focusing on green loans for home renovation. According to the delegated act of the EU Taxonomy, to be considered a renovation the property PED has to reduce by at least 30% post-completion. This brings a further degree of complication, since the renovation itself could be green but not the property.

What is a green RMBS transaction?

The Association for Financial Markets in Europe (AFME), in its September 2019 publication about the principles for developing a green securitization market in Europe, makes a distinction between green securitization, which has green collateral, and green bonds.

So far, the market has witnessed different approaches to green RMBS, including securitizations where the collateral comprises green properties exclusively, or energy-efficiency improvements; transactions where the collateral is not green, but there is a commitment to use the proceeds from the senior tranche to originate green mortgages over a period of time; or transactions where a green tranche is issued to fund a proportion of the loan portfolio that meets lender-defined green criteria (see chart 1).

The 'Green Tryptich'
Number of transactions per category



Source: S&P Global Ratings.

While there have been a few self-labeled green RMBS transactions, they represent a small portion of total RMBS issuance volumes. As we mention above, self-labeled green RMBS transactions so far have taken one of three forms:

- Green collateral. There have been five RMBS transactions issued by Obvion N.V., a mainstay of the Dutch RMBS sector, for an aggregate amount of €2.9 billion. These transactions closed between 2016 and 2021. The collateral is located in the Netherlands and comprises properties with an EPC rating of 'A', or 'B' in the first transactions, and/or material energy-efficiency improvements.
- Green tranche. Green tranches are gaining traction as lenders commit to use the proceeds of a particular green tranche to originate green mortgages. Australia has witnessed three green RMBS transactions issued by Pepper Money Ltd. and National Australia Bank between 2018 and 2019 for a total amount close to A$1 billion. These transactions meet the Climate Bonds Standard for Australian low-carbon properties, according to DNV-GL (National RMBS Trust 2018-1), and Sustainalytics (Pepper Residential Security Trust). In 2021, U.K. lender Kensington Mortgages Ltd. announced its first senior green tranche, where it commits to originate self-labeled green mortgages with a minimum EPC rating of 'B' using these proceeds.
- Use of proceeds. Similar to a green tranche, Spain's Union de Creditos Inmobiliarios (UCI) has recently raised funds from the issuance of debt through a securitization vehicle. UCI commits to

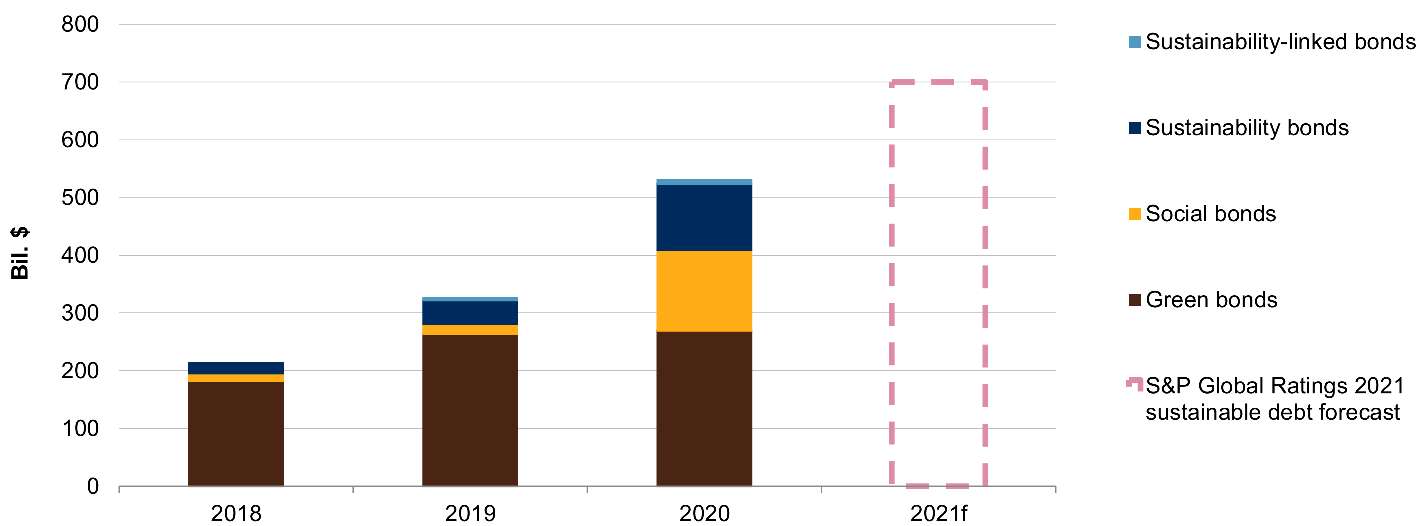
use the proceeds from the senior bond to originate green loans and fund sustainable projects on the Iberian Peninsula.

How big is the European green RMBS market, and what hinders its development?

The green securitization market is still in its infancy, and few originators have sold green RMBS transactions so far. Green RMBS still represents only a small portion of total environmental, social, and governance (ESG) debt issuance, with amounts below €5 billion on an aggregated basis between 2016 and 2021, compared with our expectation of $700 billion of ESG debt issuance in 2021 (see chart 2).

Chart 2

Sustainable Debt Issuance
Annual issuance in sustainable debt by instrument type

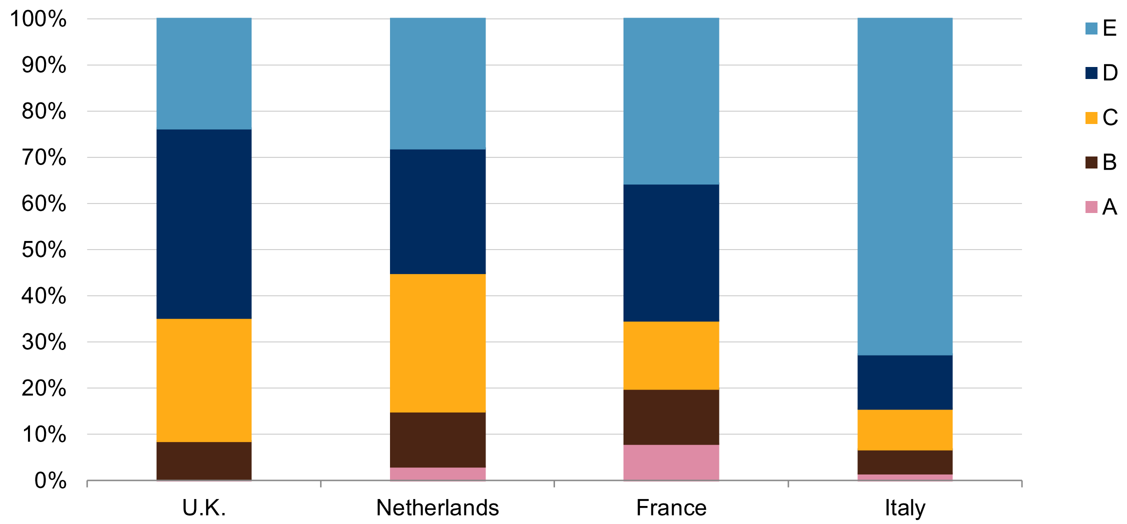


f--Forecast. Source: Environmental Finance and S&P Global Ratings.

If a green RMBS is ultimately defined and composed solely of green mortgage loans as collateral, then collateral availability will be a key challenge. In this respect, the top 15% method of defining an energy-efficient property adds greater scope for green RMBS than would otherwise be the case, given the lack of properties with an EPC rating of 'A' or higher in some jurisdictions. In the U.K., for example, 'A'-labelled properties account for less than 0.50% of registered EPC in 2019, which shows the lack of eligible green collateral (source: Zebra; see chart 3.)

Chart 3

EPC Distribution Of Residential Properties (2015)
By jurisdiction



Source: Zebra/Intelligent Energy Europe Programme of the EU.

Based on an analysis of the building stock by construction year conducted by the European Commission in 2014, most residential buildings were built before thermal standards were introduced. Only 4.6% of buildings across all European countries were constructed after 2010, which could point to an acute lack of collateral for green RMBS when categorizing by construction year.

Furthermore, there is a lack of consistency in EPC labels among countries. There are different criteria to achieve an EPC label of 'A' for a landlord who lives in Amsterdam and one who lives in Barcelona. In a report published by the United Nations Economic Commission For Europe in 2018, the authors recommended, among others, further harmonization of EPC ('recommendation 4').

Historically, this may have been due to the lack of an agreed standard for what constitutes an underlying green mortgage loan, based on the securing property's energy efficiency and/or a perceived lack of sufficiently energy-efficient housing in many European countries. Properties' EPCs could provide a touchpoint in this regard, but most mortgage lenders do not currently record EPC data during the origination process, further reducing the potential pool of green collateral.

Although some countries, such as the U.K., have public and centralized EPC databases, they may not provide an accurate picture. Regulators have tried to make EPC data mandatory, like the new European Securities and Markets Authority (ESMA) templates that incorporate mandatory EPC data for each mortgage loan, but these templates are still not widely available. Backfilling energy-related information on lenders' back books could be a way of expanding the collateral needed to grow the green RMBS market. The possibility of lower capital charges on green mortgages may be accompanied by sweeteners to existing borrowers, in turn incentivizing lenders to backfill the EPC information, in our view. Lenders may increasingly use technology to backfill the EPC information. Mortgage lenders creating a market for new green financial products, such as home purchase or renovation loans, could be another way forward.

Our understanding is that unless a residential property is funded by a green mortgage or topped up by a further green advance, the property will not be considered green, depending on how restrictive the definition of greenness is that the lender chooses to adopt. In other words, if at least one loan part in a collateral pool is not green, it may make a whole transaction non-green. The same logic applies to master trusts, although a green RMBS master trust looks rather unlikely for now, in our view.

While green mortgage production may increase bank RMBS issuance and show leadership in the green space, it will take time before most banks have the critical mass to consider issuing a new green RMBS, and it may not be the cheapest way of financing (see "European RMBS Outlook 2021," published on Jan. 25, 2021). In addition, should a lender decide to issue a single, relatively small, senior green tranche alongside some larger non-green tranches in a new transaction, the former might face some secondary market liquidity concerns. The originator may have to offer a price premium, which may make the overall structure noneconomic.

How does S&P Global Ratings analyze green collateral transactions?

To determine our credit ratings, we apply the same methodology whenever we rate an RMBS transaction, regardless of whether or not the securities are backed by mortgage loans that the originator or other standard-setters consider to be green (see "RMBS: Global Methodology And Assumptions: Assessing Pools Of Residential Loans," published on Jan. 25, 2019).

In our view, it is too early to say whether collateral that may back green RMBS exhibits fundamentally better or worse credit performance than traditional mortgage loan collateral. While the performance of the collateral backing the green RMBS transactions we rate has been good compared with the overall RMBS universe over recent years, we have not yet seen enough evidence to draw any conclusions.

Recently, there has been a growing number of studies exploring whether green mortgage loans have different credit risk characteristics to equivalent non-green loans, controlling for other loan and borrower characteristics. A couple of European studies published in second-quarter 2021 have demonstrated that green mortgages tend to be less risky (that is, have a lower probability of default of their borrowers) than their traditional counterparts. First, Nationwide, the largest U.K. building society, estimated that the default probability was 1.1% for a vanilla mortgage borrower versus 0.9% for a green mortgage borrower based on a sample of 657,000 of its loans. Another study conducted by academics at the University of Venice, this time covering the Dutch mortgage market, established a negative correlation between credit risk and the energy efficiency of a building (see "Buildings' Energy Efficiency and the Probability of Mortgage Default: The Dutch Case", May 2021). While borrowers who acquire green properties tend to have higher disposable incomes, these studies also determined that for lower income households, the higher the energy efficiency of the property, the lower their default rates. Our rating methodology factors borrowers earning high incomes via the loan-to-income multiple.

In our view, banks may use these results showing that green mortgages carry lower credit risk than traditional mortgage loans to lobby for lower capital charges. The European Banking Authority (EBA) is conducting an assessment due by 2025 into whether dedicated prudential treatment, that is, different risk weights, may be warranted for green assets due to their different risk profile. It may publish a discussion paper in 2022-2024.

Which characteristics of green mortgage collateral pools may affect S&P Global Ratings' credit risk analysis of an RMBS transaction?

Green mortgage loans may sometimes allow for a higher debt level and therefore a higher loan-to-value (LTV) ratio, which is a key input to our risk assessment. For instance, in the Netherlands, the original LTV ratio is usually capped at 100%, but borrowers can potentially borrow up to 106% of the property value if the additional debt is used to fund energy-saving measures. ING Bank N.V. lends up to an extra €25,000 for zero-on-the-meter properties, that is, those that generate as much energy as they consume over a year. In addition, a maximum amount of €9,000 could be factored out of the original loan amount in the Netherlands if this is used for some energy-saving measures or granted to finance a property with a very high EPC (for example, 'A+++', issued after Jan. 1, 2021).

A higher debt amount also inflates measures of income leverage, such as the loan-to-income ratio (loan balance over borrower's annual income) and the debt-to-income (DTI) ratio (monthly mortgage payment over borrower's monthly income), which are indicators of higher credit risk.

A borrower could decide to refinance in order to renovate their property and upgrade its EPC label from 'C' to 'A', provided that the PED reduces by at least 30%. Moreover, there is currently no proxy that enables one to map out the equivalence between the EPC, NZEB, and PED. Assuming the renovation is cash-financed, the current LTV ratio may fall after the home improvement thanks to a higher updated valuation and will determine if the lender may incur a lower loss severity in case of borrower default.

That said, the reality is not so simplistic: the bank may not be willing to pay for an updated valuation as it may not be worth the expense. Second, the lender may have to consider how tangible the renovation is; for example, the installation of double-glazed windows may not automatically raise a property value, in our view. Third, not all surveyors may be experienced in factoring certain energy-efficient improvements into a home valuation, given the difficulties in assessing the addition of such enhancements in certain circumstances. Even if they are, they may consider that the increased value is marginal or even non-existent.

While some green mortgage lending may allow a higher loan balance, borrowers may also benefit from a lower interest rate. This would lower the DTI ratio for a given loan amount. For example, lenders in the Netherlands may offer a discount of up to 15 basis points on their interest rate if the mortgage loan is considered green. In the U.K., NatWest Bank PLC currently offers a discount to its two- and five-year fixed rates for mortgage loans backed by property with an EPC rating of 'A' or 'B'. Spanish, Italian, and Irish lenders also offer lower interest rates for green mortgage loans. In an RMBS transaction, lower interest rates on the collateral also mean lower excess spread, assuming unchanged liability pricing.

In general, newer residential developments are more likely to be energy efficient and suitable to secure green mortgage loans than legacy housing stock. However, the clustering of new developments in certain areas, whether it be a local authority district, a postcode, or an apartment block, could present geographical concentration-risk considerations. It may also be compounded by a potential mismatch between local demand and the quality of the new properties. For instance, 23 U.K. local authority districts have seen a rate of new residential property supply over the last two years at more than double the long-term average, according to the Ministry of Housing, Communities and Local Government. Two areas in London are regularly quoted as being the prime clusters for new properties: Nine Elms and Stratford. In case of a housing market correction, these areas could be the first victims of a lack of liquidity, high vacancy rates, and a negative feedback loop between fire sales and a fall in property prices.

One of the issues facing RMBS investors is that the concentration in new build properties by area is rarely disclosed on loan tapes or prospectuses as such data may require a high level of granularity. This is a credit characteristic we would consider while calibrating a specific transaction's originator adjustment (OA).

Some specialist mortgage lenders are financing the acquisition of green or non-green nonstandard construction properties (for example, prefabricated, poured concrete, and timber framed, among others). Typically, these constructions may expose the lender to higher losses due to limited liquidity and marketability of the property. We may assess these risks by reducing the expected recoveries from the sale of these constructions.

In our RMBS analysis, the OA considers, among other factors, our assessment of the relative risk appetite in the originator's underwriting policies when benchmarked against its peers. The category of borrowers may also affect what OA we apply, which usually fluctuates between 0.7x and 1.3x. Lenders whose borrowers for green mortgage loans are prime or very prime (due to a combination of more stable jobs and higher income) may attract a lower OA.

How does S&P Global Ratings factor physical risk into its analysis of RMBS?

The valuation report of a residential property commissioned by some lenders may describe its exposure to any physical risks, such as flooding. Usually physical risk is addressed before the valuer is sent to the property by using physical risk modelling that helps lenders quantify the risk that may arise in a certain location and whether it is within their tolerance range. Lenders may take the view that they won't lend to purchasers of certain properties that may be exposed to physical risks, or when it is uncertain whether insurance policies may cover such risk.

Physical climate risk such as floods, storms, or wildfires could severely damage properties and reduce their value, thereby reducing recoveries if borrowers default. At the same time, RMBS transactions tend to be geographically diversified, which reduces their exposure to extreme weather events.

What does the future of the U.K. green buy-to-let (BTL) market look like?

At the moment, U.K. private landlords can only rent properties with an EPC label of 'E' and above. The government is willing to raise the EPC requirement to 'C' and above in 2025. This requirement, if adopted, will have ramifications. First, in our view, not all landlords are likely to be compliant for cost reasons, as a green renovation may be too costly, or technical reasons, due to the difficulty in some extreme cases of rebuilding the property from the ground up. These properties are likely to generate lower rents, provide less of a cushion for repairs or maintenance, and have a lower valuation over time. Combined with a higher loss on sale, this may increase tail risk in some transactions.

A survey by BTL broker Mortgages for Business last year showed that 62% of U.K. landlords would be interested in mortgages that offer lower rates to borrowers so that they can make their properties more energy efficient. So far, only seven lenders are active in the green BTL market, with six offering purchases or re-mortgages and only one further advances. For instance, Keystone Property Finance Ltd. has launched a range of green mortgages and offers a 15 basis-point reduction on its core range to landlords with properties that are at least five years old and have an EPC rating of 'A' to 'C'. BTL lenders are more likely to have historical EPC data given the 'E' label EPC requirement, so it may be that BTL lenders could be in the driving seat to issue a green BTL transaction.

How transparent is the green collateral information?

Beyond the lack of available green mortgages mentioned above, we believe that data transparency is another primary obstacle to the development of a green RMBS market. Growth in Europe primarily depends on what type of ESG information is available, in our view. Disclosure of ESG factors by issuers will help investors perform their due diligence. In order to achieve this goal, ESG factors must be measurable, reliable, comparable, and objective.

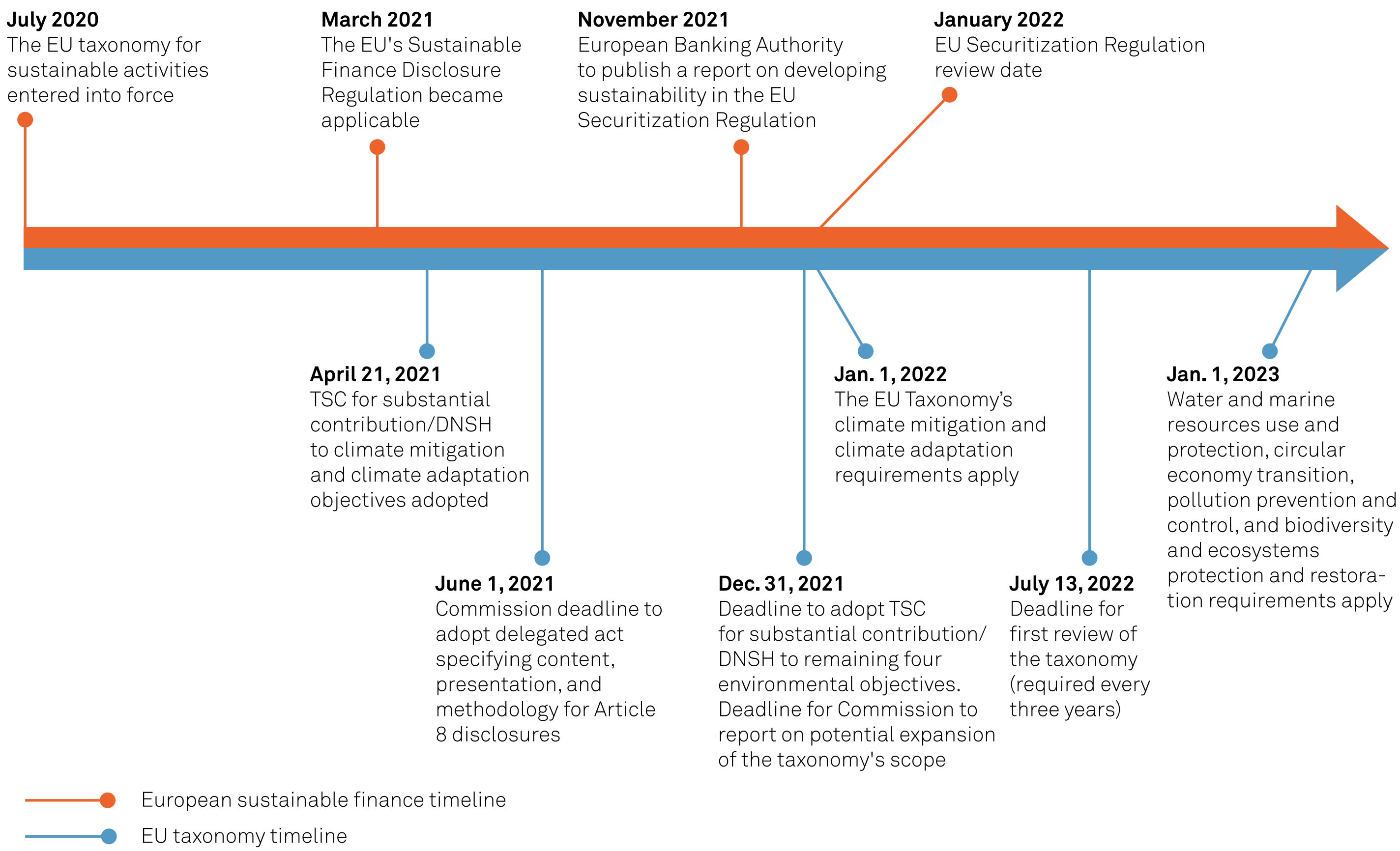
For instance, as of today, mortgage lenders do not usually capture energy performance indicators in the mortgage application as this is not a key measure of credit risk. We expect this to change as investors increasingly request more information in order to assess how green the collateral may be. This will require changes on lenders' internal data systems and governance framework.

Additionally, new European regulation is coming into play that establishes reporting requirements for issuers related to energy-efficiency information for mortgages. ESMA has updated its reporting requirements with the launch of a new RMBS template that includes, among others, two energy-related fields: the EPC label and the EPC provider name. The AFME questionnaire, introduced to provide a suggested framework for market participants' ESG due diligence also includes queries about the S and G of ESG, related to the securitized pool and the servicer, originator, and sponsor. Finally, the EBA is working on developing a report on sustainable disclosure requirements for securitization by November 2021.

The European Securitization Regulation will undergo a review by January 2022 that will present an opportunity for regulators to increase the quantity and quality of ESG disclosure requirements. In addition, the recommendations of the Task Force on Climate-related Financial Disclosures should provide further information to investors.

Chart 4

Sustainable Finance Timelines



TSC--Technical screening criteria. DNSH--Do no significant harm. Source: S&P Global Ratings.

Related Criteria

- RMBS: Global Methodology And Assumptions: Assessing Pools Of Residential Loans, Jan. 25, 2019

Related Research

- Sustainable Debt Markets Surge As Social And Transition Financing Take Root, Jan. 27, 2021
- ESG Industry Report Card: Residential Mortgage-Backed Securities, March 31, 2021
- European RMBS Outlook 2021, Jan. 25, 2021
- Future Flooding Represents A Low Risk For U.K. RMBS Ratings, March 19, 2020

This report does not constitute a rating action.