Environmental, Social, And Governance:

ESG Credit Factors In Structured Finance

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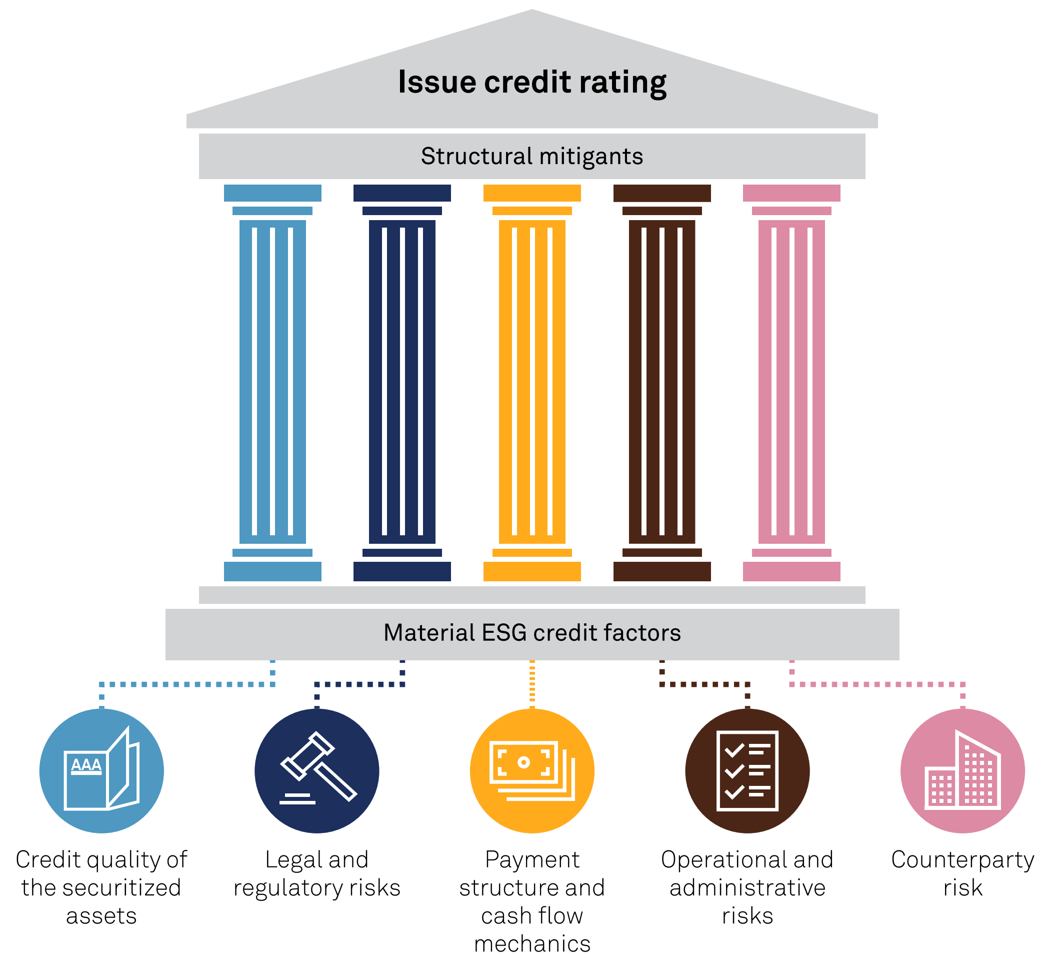
How We Consider ESG Factors In Our Structured Finance Analytical Framework



Source: S&P Global Ratings.

Environmental, social, and governance (ESG) credit factors have long been considered within our structured finance analytical framework. In most cases, ESG credit factors are not key rating drivers and are captured by other aspects of our analysis. Even in cases where, in our opinion, ESG credit factors could be material enough to become direct considerations, most ESG credit factors generally pose indirect benefit or risk to structured finance transactions, and structural features can mitigate risks. Hence, there have been limited cases where ESG credit factors were a primary rating driver in our analysis.

S&P Global Ratings' issue credit ratings on structured finance transactions incorporate an analysis of ESG credit factors when, in its opinion, they could affect the timely payment of interest or ultimate repayment of principal by the legal final maturity date. In our view, material ESG credit factors could have an adverse or positive impact on the credit quality of the securitized assets, and the related operational and administrative risks, legal and regulatory risks, and payment structures in structured finance transactions. ESG credit factors may also have an impact on our counterparty risk analysis if the ratings on dependent counterparties change due to these credit factors, which, in turn, could affect the ratings on the related structured product.

We believe structural and legal mechanics already embedded in structured finance transactions can, to some extent, mitigate potential risks posed by ESG credit factors. These include credit support levels to absorb losses, amortization and deleveraging, concentration limits, eligible collateral requirements, shorter tenor of the rated securities relative to longer-term risks, replacement and performance triggers, and isolation of assets from the bankruptcy of the originator, among others.

How Do Credit Ratings Differ From ESG And Green Evaluations?

S&P Global Ratings' 'Credit Ratings', 'ESG Evaluations', and 'Green Evaluations' are separate types of opinions that apply different analytical frameworks. As a result, something that we view as a strength under an ESG Evaluation or Green Evaluation may not have a significant impact or carry the same strength in our credit rating analysis, or vice versa. Table 1 summarizes what each opinion type addresses.

Table 1

Comparing S&P Global Ratings' Credit Ratings, ESG Evaluations, And Green Evaluations

	Credit ratings	ESG evaluations	Green evaluations
What does it address?	A forward-looking opinion about the capacity and willingness of a borrower to meet its financial commitments on an obligation in accordance with the terms of the obligation.	A cross-sector, relative analysis of an entity's capacity to operate successfully in the future. It is grounded in how ESG factors could affect stakeholders, potentially leading to a material direct or indirect financial impact on the entity. Our analysis also includes our opinion of the entity's long-term preparedness, which reflects our qualitative view of its capacity to anticipate and adapt to a variety of plausible long-term disruptions and therefore support its long-term sustainability.	Provides a relative green impact score on instruments that finance environmentally beneficial projects. It is an asset-level environmental credential leveraging Trucost environmental data, which aims to provide investors with a more comprehensive picture of the environmental impact and climate risk attributes of their assets and portfolios.
How are they related?	Incorporates an analysis of ESG credit factors when, in our opinion, they could impact the likelihood of timely payment of interest or ultimate repayment of principal by the legal final maturity date. However, in most cases, exposure to ESG credit factors in structured finance transactions is indirect or mitigated by legal and structural features already embedded in typical transactions.	Offers a deeper analysis of ESG factors beyond those that are relevant to credit quality. Our ESG evaluation is not part of our credit rating methodology.	Not a credit rating and does not consider credit quality or factor into our credit ratings. Please refer to the Appendix for a summary of the Green Evaluations we've assigned to structured finance transactions.

Table 1

Comparing S&P Global Ratings' Credit Ratings, ESG Evaluations, And Green Evaluations (cont.)

	Credit ratings	ESG evaluations	Green evaluations
Where is more information available?	For further information see "S&P Global Ratings Definitions," published Sept. 18, 2019.	For further information see "Environmental, Social, And Governance: How We Apply Our ESG Evaluation Analytical Approach," published April 10, 2019.	For further information see "Green Evaluation Analytical Approach," published April 26, 2017.

How Relevant Are ESG Credit Factors To Structured Finance Credit Ratings?

When assessing a structured finance transaction, our analytical framework includes five key rating factors (or "five pillars"; see "Principles Of Credit Ratings," published Feb. 16, 2011).

- Credit quality of the securitized assets;
- Legal and regulatory risks;
- Payment structure and cash flow mechanics;
- Operational and administrative risks; and
- Counterparty risk.

When, in our view, an ESG factor can influence an obligor's capacity and willingness to meet its financial commitments when due, it becomes an ESG credit factor. If we believe that an ESG credit factor is material enough to influence our opinion of the risk or benefit to any pillar, the credit factor may be relevant in our credit rating. However, in most cases, ESG credit factors are not key rating drivers. Instead, they are indirect risks captured by other aspects of our analysis. Even in instances where ESG factors are directly relevant to credit quality, structural mitigants such as increased credit enhancement levels or additional structural protections can offset the impact of ESG risks. In these cases, ESG factors will generally not affect the credit rating (see "What Are Some Examples Of ESG Credit Factors In Structured Finance Transactions?" below).

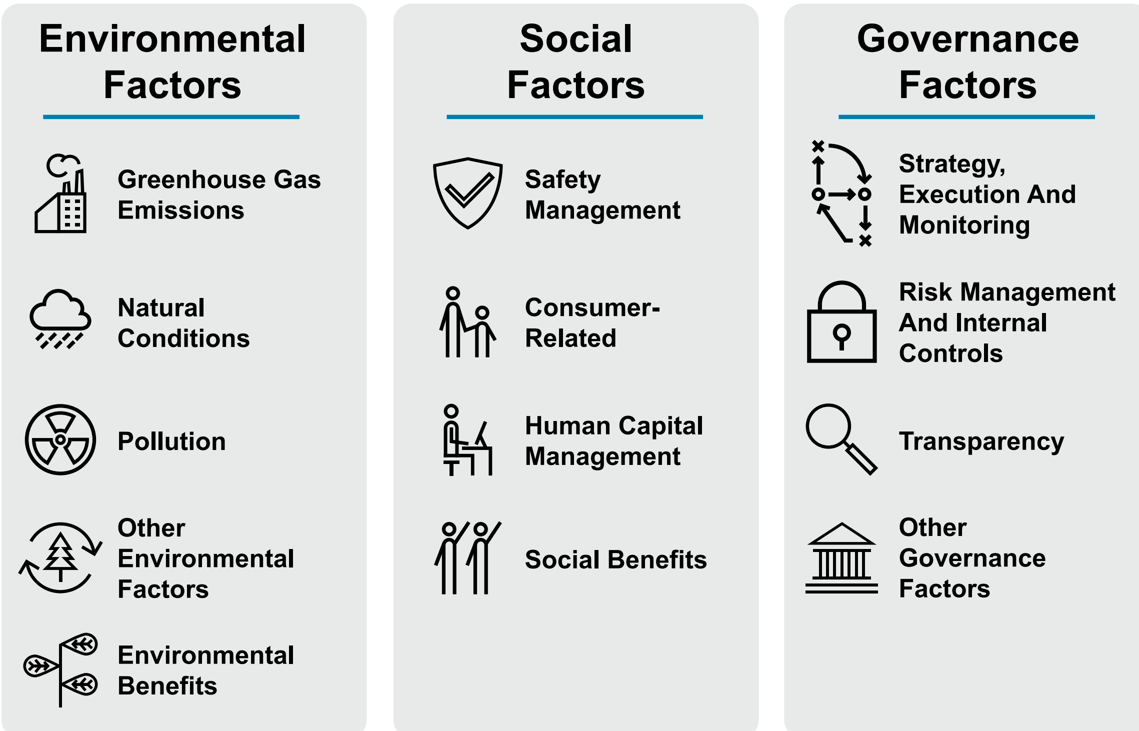
As a result, rating actions on structured finance transactions driven by ESG credit factors have, so far, been limited. In our view, however, structured finance ratings would be susceptible to change due to major ESG event-driven risks.

What Are ESG Credit Factors?

An ESG credit factor is an environmental, social, or governance factor that, in our view, could impact the likelihood of a structured finance transaction making timely payment of interest or ultimate repayment of principal by the legal final maturity date. In structured finance transactions, ESG credit factors are typically indirect risks already captured in other aspects of our analysis.

If we believe material ESG credit factors pose direct risk or benefit to a transaction then we may explicitly address these in our analysis. How and where the factors are precisely incorporated in the rating depends on the analysis of the rating committee, through the application of the relevant criteria.

Examples Of ESG Credit Factors



What Are Some Examples Of ESG Credit Factors In Structured Finance Transactions?

Below we provide some examples of ESG credit factors in structured finance transactions. Even though we categorized these examples by the three ESG factors and the five pillars of our analysis, in practice many of these examples overlap, and the mechanics embedded in typical structures could mitigate more than one of the ESG credit factors. Many of these examples are already captured by other aspects of our analysis, so they are not explicitly considered as primary rating drivers. Even if we believe an ESG credit factor is material, typical mechanics in structured finance transactions means there may not ultimately be a rating impact.

Credit Quality Of The Securitized Assets

Environmental factors

- Exposure to diesel vehicles not meeting the latest emissions standards could result in lower recovery rates or higher residual value losses.
- Unique risks of electric vehicles make their future value less predictable than conventional internal combustion engine vehicles. This could result in lower recovery rates or higher residual value losses.
- Concentrations by obligor or geography may increase exposure to potential natural disasters or other physical climate-related risks, such as hurricanes, earthquakes, and flooding.
- In commercial mortgage-backed securities (CMBS) transactions, we generally consider buildings certified with green building standards, such as Leadership in Energy and Environmental Design (LEED) and Building Research Establishment Environmental Assessment Method (BREEAM) certifications, to be institutional-grade assets that are either newly built or heavily renovated to class-A standards. Such properties generally outperform their peers through a combination of operational efficiencies and by commanding higher rents, ultimately resulting in higher net operating incomes and long-term sustainable values.
- Positive credit factors ESG may offer could include higher recovery values for green buildings due to energy-saving initiatives that reduce costs, increase cash flow, and thereby increase value, such as with better insulation, energy-saving cooling systems, solar panels, etc.
- Any change in corporate ratings, including due to ESG credit factors, can impact pools that are reliant on the affected entities, such as collateralized loan obligations (CLOs), asset-backed commercial paper (ABCP), or other linked ratings.

Social factors

- Interest rates deemed usurious could result in reduced yield or could challenge the validity of the loans in securitized pools.
- To serve underbanked customers, originators may use alternative scoring methods that are generally untested in a stressed performance environment.
- Affordability assessments may limit exposure to highly indebted borrowers.

Governance factors

- Aggressive growth in originations may be accompanied by a weak internal control framework and looser underwriting, resulting in higher defaults.
- High management turnover can lead to material changes in the origination strategy and risk profile of the receivables.
- Lack of transparency in historical performance data (e.g., granularity of performance by different collateral characteristics, length of operating history) could result in more conservative base-case default assumptions or result in a rating cap.

Examples of structural mitigants

- Concentration limits and eligibility criteria can mitigate the types of loans in collateral pools (e.g., limiting loans with interest rates at or below state usury rates; geographic and obligor diversification to mitigate the potential impact from natural disasters).
- The tenor of the assets or securities can mitigate the time exposed to ESG credit factors. In our view, certain ESG credit factors are more likely to materialize over the long term, which will likely not affect a shorter-term transaction.
- Securitization documentation for secured assets, such as mortgages and autos, often provides a representation that the assets are insured against property damage.

Legal And Regulatory Risks

Environmental factors

- The introduction of taxes or other fees for driving higher-polluting vehicles in city centers could affect collateral values in auto asset-backed securities (ABS).
- A reduction in fiscal incentives for electric vehicles could increase volatility in secondary market prices. This could result in higher residual value losses or lower recoveries.

Social factors

- High-pressure sales tactics or mis-selling of products could result in damages awarded to borrowers who are set off against the securitized receivables.

Governance factors

- The introduction of minimum risk retention requirements aims to align the interest of the seller with the noteholders, which we view as credit positive.
- Bankruptcy risk could be heightened for unregulated originators that exhibit lack of governance and control.

Examples of structural mitigants

- Our bankruptcy remoteness analysis focuses on the governance framework of the issuer, including restrictions on objects and powers, debt limitations, independent directors, restrictions on a merger or reorganization, limitations on amendments to organizational documents, separateness, and security interests over assets.
- The isolation of the securitized assets from the originator/seller reduces exposure to ESG risks of these operating entities.
- Priority perfected security interests and representations and warranties can mitigate potential setoff borrowers may have against the securitized assets.
- Transactions may include representations and warranties from the seller that the receivables were originated in accordance with all consumer credit laws. There may also be a repurchase obligation from the seller for breaching the representations.

Operational And Administrative Risks

Environmental factors

- A key transaction party's profitability or net worth may be depleted due to compliance with new environmental regulations or litigations. This could lead to a higher disruption risk assessment under our operational risk criteria, which may cap the rating.
- We assess the servicer's preparedness for natural disasters by reviewing its backup and recovery plan to ensure continuity of collections.

Social factors

- Illegal collection practices could result in setoff against the securitized receivables.
- Higher turnover of collections staff or labor disputes/industrial action could result in a disruption to collections. Our severity and portability risk assessments under our operational risk criteria are typically higher for subprime borrowers.

Governance factors

- A successful cyberattack on the servicer could result in a loss of borrower data that disrupts collections or damages awarded to borrowers, which may be set off against the receivables.
- Key man risk and a lack of succession planning at the servicer may increase our disruption risk assessment.
- Compensation structure and incentives of different transaction parties can result in conflicting interests, which may not have a strong alignment of interest with noteholders.

Examples of structural mitigants

- Transactions include servicer termination events and a replacement framework for other key transaction parties.
- The originator can provide support, for example by providing additional credit enhancement.
- We use our servicer risk assessment criteria, which include lock box provisions, to mitigate against misappropriation for 'AAA' and 'AA' ratings.
- Borrower data held by third parties is encrypted.
- Based on our operational risk criteria, we will likely not issue or maintain any ratings if we believe that a key transaction party has insufficient experience or the transaction parties' roles, responsibilities, and rights are not sufficiently clear.
- We could cap our ratings consistent with our operational risk criteria relating to governance risks, which could include weak controls, limited track record, inconsistent strategy, high management turnover, among others.

Counterparty Risks

Environmental factors

- We reflect environmental risks in the credit rating on the dependent counterparty.
- The rating on the sovereign where the securitized assets are domiciled can cap structured finance transaction ratings. The sovereign rating may be impacted by natural disasters or other climate change-related risks.

Social factors

- We reflect social risks in the credit ratings on the dependent counterparties and sovereign.

Governance factors

- We reflect governance risks in the credit ratings on the dependent counterparties and sovereign.
- The transaction structure includes remedies for counterparties that deteriorate in credit quality.

Examples of structural mitigants

- Replacement frameworks and remedies are in place for dependent counterparties if their credit quality deteriorates due to ESG-related risks.

Payment Structure And Cash Flow Mechanisms

Environmental factors

- Mortgage contracts may contain a reduction in the contractual rate of interest payable by borrowers as the Energy Performance Certificate rating on their property improves. This could result in lower yield to the issuer as properties become more energy efficient.
- Liquidity risk may arise in the event collections are disrupted due to a major ESG event.

Governance factors

- Transaction parties could have conflicting interests and incentives from investors based on the amount and seniority of their payment in the transaction structure.

Examples of structural mitigants

- Typical securitization documentation includes a strong governance framework for the issuer, under which the rights and seniority of each noteholder are clearly defined. Noteholder consents are typically required for amendments to the terms and conditions of the notes or changes in the priority of payments.

How Does S&P Global Ratings Monitor ESG Credit Factors Over A Rated Transaction's Life?

We monitor for any changes in the risk profile of the five key rating pillars as part of our regular surveillance of structured finance transactions. In addition to monitoring the underlying collateral's performance, our surveillance includes event-driven risks and any developments with respect to the sector, country, or transaction participants that could have a material impact on our analysis. As such, the frequency, timing, method, and extent of surveillance are dynamic. At a minimum, we conduct a review of each credit rating at least every 12 months.

A transaction's exposure to ESG credit factors may evolve over time. A risk may become more visible or more certain, or the seller, servicer, or other transaction participant may take action to reduce or eliminate the risk exposure. As a result, the effect of ESG risks and opportunities on a transaction's creditworthiness may change. A major ESG-related event that in our view has a material impact on one of the five key rating factors could prompt a surveillance review.

What Are Some Examples Of ESG-Related Events In Structured Finance?

Environmental

- Credit FAQ: Questions Over Electric Vehicle Residual Values In European Auto ABS, published May 31, 2019

Summary of ESG risks: In our view, an increase in electric vehicles in lease transactions would raise the uncertainty of future residual values, which is the risk that the residual value of the vehicle stated in the lease contract exceeds its market value. This is a result of limited historical performance data, reliance on fiscal incentives, the strong link to the manufacturers and suppliers, and technological factors for electric vehicles. The increased popularity of electric vehicles, particularly in Europe and Asia, could also negatively impact the secondary market values of diesel and petrol vehicles. We believe electric vehicles pose a medium- to long-term risk to the sector, and we may adjust our residual value assumptions and stresses if we believe they affect the ultimate payment of the rated securities.

- German Diesel Ban Brings Bad Air For Carmakers And Auto ABS, published Feb. 28, 2018

Summary of ESG risks: There is a high likelihood that cities with nitrogen dioxide emission levels significantly above the European Commission's threshold will impose bans on diesel vehicles. This could cause used values for diesel cars to deteriorate and impact recovery proceeds and performance on transactions.

- Impact Of Major 2017 Hurricanes On Rated U.S. RMBS: Potential Exposure To Maria Totals $555 Million, published Oct. 4, 2017

Summary of ESG risks: In residential mortgage-backed securities (RMBS), the total exposure across all securitizations to hurricanes Harvey, Irma, and Maria based on the current pool balance was $9 billion out of $147 billion of loans in the affected counties (6.2%). We took no rating actions, but we are monitoring the deals. Geographic diversification in collateral pools mitigates the risk that a natural disaster will affect a significant portion of the collateral.

Social

- Marketplace Lending And The True Lender Conundrum, published Feb. 22, 2019

Summary of ESG risks: Questions have been raised regarding the legality and enforceability of marketplace loan contracts originated through partner banks, along with concerns about breaches of state usury limits. Securitizations could be impacted if collections are delayed from the loans in dispute, yield may be reduced if the interest rates are lowered due to usury limits, or interest and/or principal may be annulled if loans are declared void. We will continue to monitor legal developments as they relate to the sector and, meanwhile, we will maintain a cautious approach to the industry, evaluating each platform on a case-by-case basis and considering the nuances, if any, specific to the platform.

- Credit FAQ: How Will New Persistent Debt Rules Affect U.K. Credit Card ABS?, published Jan. 21, 2019

Summary of ESG risks: Customers considered to be in persistent debt will be encouraged to change payment behaviors via increasing monthly payments or transferring balances to a lower interest loan. We expect this rule to increase the payment rate, positively impact charge-off rates, and reduce yield rates.

Governance

- Marketplace Lending Securitization: Operational Risk Is Declining As The Sector Evolves, published June 3, 2019

Summary of ESG risks: With the rapid increase in marketplace lending, regulations have also increased in most jurisdictions. The regulatory environment as well as the lenders' business strategy and operating history, management, revenue and financial performance, funding, and partner bank relationships and incentives are all key considerations in rating marketplace lending transactions. As the regulatory environment continues to mature, many lenders have adapted by increasing their compliance and control functions, which has often resulted in stronger alignment of interests. Given the diversity of the sector, we assess whether a cap on our ratings is applicable case-by-case, and we may update the cap periodically.

- With A LIBOR Phase-Out Likely After 2021, How Will Structured Finance Ratings Be Affected? published Oct. 19, 2017

Summary of ESG risks: The proposal to phase out the London Interbank Offered Rate (LIBOR) in favor of alternative rate references by 2021 could affect deals with floating-rate assets and liabilities. Transactions including fallback language could experience difficulties implementing new rates, and there would likely be basis risk between existing references and a potential replacement. Those with no fallback language or requiring a majority class approval could be subject to dispute risk since achieving a consensus could be difficult. In the end, we don't currently expect bond cash flow disruptions, and the impact for structured finance products will depend on several factors coming into play.

What Are Some Of The Challenges Related To ESG Credit Factors In Structured Finance?

ESG credit factors in structured finance, while not new, are evolving. We have primarily included this type of risk analysis in our qualitative assessments, including potential impact from an event risk. Because our opinions on creditworthiness are based on relative rankings, we continue to benefit from an increasing volume of case studies, which can help categorize the risks and their potential impact on the securitization. The case studies can also help establish benchmarks that may serve as a base for our discussions about relative rankings.

We've also been approached by issuers proposing securitizations backed by assets viewed as having strong ESG credentials. However, some hurdles need to be overcome in these initial stages, including a lack of capital market standard or market consensus of the definitions of "ESG" and "green", confidentiality, inconsistent disclosures and data reporting, and varying views on how to score and weigh ESG factors. It is also important to note that while certain assets may be viewed as having strong ESG credentials, this does not mean they would have a positive impact in our credit rating analysis. In fact, it is possible that assets with strong ESG credentials may have increased risk characteristics that result in either higher required credit enhancement levels or lower credit ratings. We do not opine on whether a transaction has strong or weak ESG credentials in our credit ratings. Rather, our focus is to identify and increase transparency around those ESG credit factors that in our view are material to credit quality under our five pillars framework.

Appendix

Solar and property assessed clean energy financing (PACE) ABS

In the U.S., we have rated five distributed generation solar ABS securitizations, which we now surveil according to our global solar methodology published in May 2019. In addition, we have rated two PACE securitizations using our principles of credit ratings criteria. For more information, see "Presale: GoodGreen 2019-1" published on Jan. 16, 2019, and the related criteria section below.

Green securitizations and Green Evaluations in structured finance

Green Evaluations can be performed on structured finance transactions, which help to finance technologies within the scope of our Green Evaluation. To date, we have assigned Green Evaluations to three structured finance transactions, which securitized PACE loans on green building, water, and energy improvements to commercial (and some to residential) properties in a variety of U.S. states. All three transactions scored an E1 score, the highest score possible on the E1-E4 quartile scale. The E1 scores were supported by strong governance scores enabled by the defined green project eligibility requirements found in the relevant PACE legislation and through the provisions of the securitization structures (see Ygenre 1, Ygrene 2, Pacewell 2).

There have also been some inroads into green bond securitizations in Europe, the Middle East, and Africa and Asia-Pacific. For example, the Green STORM Dutch RMBS transactions only securitize assets that comply with the "green" eligibility criteria of the originator. These criteria relate to the residential properties having certain energy performance certificates (see "New Issue: Green STORM 2019 B.V.," published July 18, 2019). In Asia-Pacific, certain assets identified as green have been included within a larger pool and a corresponding tranche of "green" notes has been issued.

Other asset classes that may eventually have green credentials include auto ABS collateral pools comprising electric vehicles, ABS and RMBS with underlying solar panel financing, and CMBS, given the established framework regarding energy efficiency. For example, projects driven by political initiatives, such as the Energy Efficient Mortgages Initiative (EeMAP), will likely increase growth in green covered bonds and ABS. EeMAP is a mortgage-financing mechanism that promotes the green tagging of mortgages, incentivizes building owners to improve their building efficiency or acquire new green properties at preferential interest rates, and collects data through a systematic framework.

Related Criteria

- S&P Global Ratings Definitions, July 5, 2019
- Global Methodology For Solar ABS Transactions, May 16, 2019
- Environmental, Social, And Governance: How We Apply Our ESG Evaluation Analytical Approach, April 10, 2019
- Green Evaluation Analytical Approach, April 26, 2017
- Principles Of Credit Ratings, Feb. 16, 2011

Related Research

- The Role Of Environmental, Social, And Governance Credit Factors In Our Ratings Analysis, Sept. 12, 2019
- Credit FAQ: Are Covered Bonds Becoming More Sustainable?, Sept. 6, 2019
- New Issue: Green STORM 2019 B.V., July 18, 2019
- Marketplace Lending Securitization: Operational Risk Is Declining As The Sector Evolves, June 3, 2019
- Credit FAQ: Questions Over Electric Vehicle Residual Values In European Auto ABS, May 31, 2019
- Greenworks Lending LLC's Pacewell 2 LLC Term Notes, 2017-1 Score E1/78 On Green Evaluation, May 3, 2019
- Environmental, Social, And Governance: How We Apply Our ESG Evaluation Analytical Approach, April 10, 2019
- Credit FAQ: How Will New Persistent Debt Rules Affect U.K. Credit Card ABS?, Jan. 21, 2019
- Ygrene Energy Fund Inc.'s GoodGreen Series 2019-1 Notes, Jan. 16, 2019
- Presale: GoodGreen 2019-1, Jan. 16, 2019
- Ygrene Energy Fund Inc.'s GoodGreen Series 2018-1 Notes, April 19, 2018
- German Diesel Ban Brings Bad Air For Carmakers And Auto ABS, Feb. 28, 2018
- How Does S&P Global Ratings Incorporate Environmental, Social, And Governance Risks Into Its Ratings Analysis, Nov. 21, 2017
- With A LIBOR Phase-Out Likely After 2021, How Will Structured Finance Ratings Be Affected?, Oct. 19, 2017
- Impact Of Major 2017 Hurricanes On Rated U.S. RMBS: Potential Exposure To Maria Totals $555 Million, Oct. 4, 2017

This report does not constitute a rating action.

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