Brown Brothers Harriman

Securitized Fixed Income

A potent shield against ESG risk

EXECUTIVE SUMMARY

- Securitized assets are a commonly overlooked opportunity to manage environmental, social and governance (ESG) exposure in a fixed income portfolio.
- ESG assessment for securitized products requires a specialized multi-pillar framework to allow managers and investors to properly analyze the unique features of this asset type.
- Our team has published a comprehensive ESG assessment framework for securitizations in our new study, *ESG Considerations for Securitized Fixed Income Notes*.
- Expanding on our corporate ESG analysis, this study introduces a framework with three pillars for analyzing any securitization:
  - What is the linkage to corporate risks at the collateral originator or servicer?
  - What are the ESG risks that relate specifically to underlying loan or lease collateral?
  - What is the governance risk related to any legal or structural weakness in the securitization trust?
- The study also presents compelling empirical evidence that features of securitized assets shield investors from ESG risks. During severe ESG incidents, securitizations insulate investors from material price declines that impact a company's corporate bonds (median -3%) and equities (median -16%).
- Using our ESG framework, the study undertakes a survey of more than 30 securitized sectors. We find that ESG risks for securitizations are generally low relative to the corporate bond universe (with a few conspicuous exceptions).
- However, we find that a few securitization asset types, including whole business securitizations and RMBS, can still bear substantial ESG risk. A specialized framework for securitizations is needed when making an assessment.

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In this report, we summarize these notable findings of our new study. This full study can be viewed here.

Introduction and key findings

Securitized assets offer an often-overlooked opportunity to manage ESG exposures in a fixed income portfolio, while boosting risk-adjusted yield. A securitization is structurally quite different from a typical unsecured corporate bond. Principal and interest payments to securitization noteholders are covered by the cashflows from dedicated pools of loan and lease assets. These are held in a separate trust structure that is isolated from the financial performance or potential bankruptcy of the company that makes the loans. Not surprisingly, this independent legal structure and the additional noteholder protections also help to shield investors against ESG risks to which the lending company (and its corporate debt) are directly exposed. This is no minor distinction. Securitized assets make up over a quarter of the U.S. fixed income markets,[1] yet ESG risks related to this sizable segment of the bond market are often lower than in other credit sectors.

Most research within the responsible investing universe focuses on ESG risks and opportunities of corporations. To properly assess ESG considerations in the securitized market though, an analyst must go a couple of steps deeper. The linkages to conventional ESG exposures at the lender or leasing company of course need to be recognized. But it's just as important to analyze the collateral and legal entity of any securitization, as well as account for structural features that may mitigate ESG exposures.

Building on decades of experience with securitized notes and a long-standing presence in these markets, our team has published a comprehensive ESG assessment framework for securitizations, measuring and weighing their relevant ESG exposures. Our study, *ESG Considerations for Securitized Fixed Income Notes*, describes the three-pillar framework, provides examples of its use, and surveys more than 30 sectors of the securitized markets.

- **We find direct empirical evidence that securitizations insulate investors from ESG event risk, strongly underscoring the need for a specialized ESG approach to securitized fixed income.** Examining nine U.S. corporations during severe ESG incidents (as identified and classified by the third-party research provider Sustainalytics), the securitized notes of these companies show zero or small price declines. By contrast, these same corporations' equity and bond pricing fell by a median 16% and median 3%, respectively, during these same incidents.

- **By employing this specialized framework, we conduct a detailed survey of ESG risk across the entire landscape of securitization sectors.** Our proprietary *BBH ESG Risk Assessment Heat Map* details the extent of ESG exposures and their mitigants across more than 30 individual segments of the securitized markets. We find that ESG risks in securitized segments are often lower than for unsecured corporate notes.

- **However, we find that certain segments of the securitization market, such as whole-business securitizations and RMBS, can bear substantial corporate ESG risks. A specialized framework is needed for this assessment.**

- **This comprehensive approach now provides fixed income investors a complete framework to support responsible investing objectives for the securitized component of their portfolio.**

- **An ESG assessment approach that identifies the risk mitigation potential of a dedicated collateral pool and of structural protections is also relevant for the analysis of secured corporate and municipal revenue bonds.**

[1] SIFMA, Outstanding Bond Market Debt, 12/31/2018

- **Beyond an ESG assessment, the securitization market – particularly ABS and CMBS – also offers abundant impact investing opportunities.** These include solar ABS, conservation loan ABS, electrical vehicle ABS, and ABS for consumer loans to low income borrowers.

- **The proportion of "sin" industries within securitizations is de minimis.** There is negligible firearm, liquor, adult, or defense concentrations in collateral pools, and practically no casino exposure in CMBS.

- **An ESG assessment approach that identifies the risk mitigation potential of a dedicated collateral pool and structural protections is also relevant for the analysis of secured corporate and municipal revenue bonds.**

Our analysis leads to notable conclusions for fixed income investors:

- Securitizations, by their nature, possess features designed to insulate investors from associated corporate risks, including severe ESG incidents at the originating company.

- These features and benefits are often overlooked or misunderstood by market participants.

- Adding securitized notes to a fixed income portfolio can significantly mitigate ESG risk.

This report summarizes the key considerations for assessing ESG in the securitized market that we explore in depth in the broader study. Fixed income investors should apply a unique lens to the securitized component of their portfolio, whether for ESG integration purposes or to achieve specific responsible investing objectives. This complements securitizations' favorable investment attributes – enhancing yield, reducing exposure to rate and spread movements, and lowering correlation to the broad credit market.

Designed to protect investors, securitization features also limit and mitigate ESG exposure

To date, securitization has been decidedly overlooked in ESG integration, owing partly to the variety of securitization types, their structural complexities and a lack of knowledge and data on the sector. Managers often exclude, simplify or overlook the securitized components of their portfolio during ESG assessment. As a result, key protections offered by these structures are often missed.

Securitized bonds are issued by standalone legal entities whose sole objectives are to purchase loan and lease collateral pools, issue debt, and distribute interest and principal cashflows to bondholders. They often have little or no practical linkage to the originating companies.

A securitization's senior security interest in its underlying collateral, its ring-fenced legal structure, and other structural protections – all limit any linkage to the lending company. Together these features both insulate bondholders from ESG-related events at the lending company and mitigate their impact on bondholder returns. We see a major opportunity here for investors to both recognize these protective features and take advantage of their favorable ESG risk profiles.

Beyond corporate ESG analysis: A framework for ESG assessment of securitized notes

Unlike equities or corporate bonds, there is little ESG-focused research in the securitized space. Our framework seeks to fill this void. Corporate linkages to the securitization are identified and assessed, but are supplemented by equally important factors that can heighten or mitigate exposures – legal separation, strength of collateral security, independent administration, and structural enhancements.

The ESG evaluation framework recognizes these features of securitizations. We can properly analyze environmental, social, and governance exposures, and how these features mitigate the exposures. The framework has three pillars:

Pillars of the BBH ESG Evaluation Framework for Securitizations

PILLAR 1

Identify and assess the nature and strength of all corporate linkages

Identify and assess linkages to a securitization (whether originator, servicer, or guarantor). For each corporate entity with a significant linkage to the trust, a separate corporate ESG evaluation should be performed.

PILLAR 2

Analyze the underlying loan or lease pool of the securitization from an ESG perspective

Any sizable concentration in the pool to a single loan borrower with elevated ESG exposure may add further risk to a security. Such loan-related exposure may be mitigated, however, by a large issuer equity position beneath the securitized note or by structural protections in the transaction that accelerate repayment to noteholders if performance weakens.

PILLAR 3

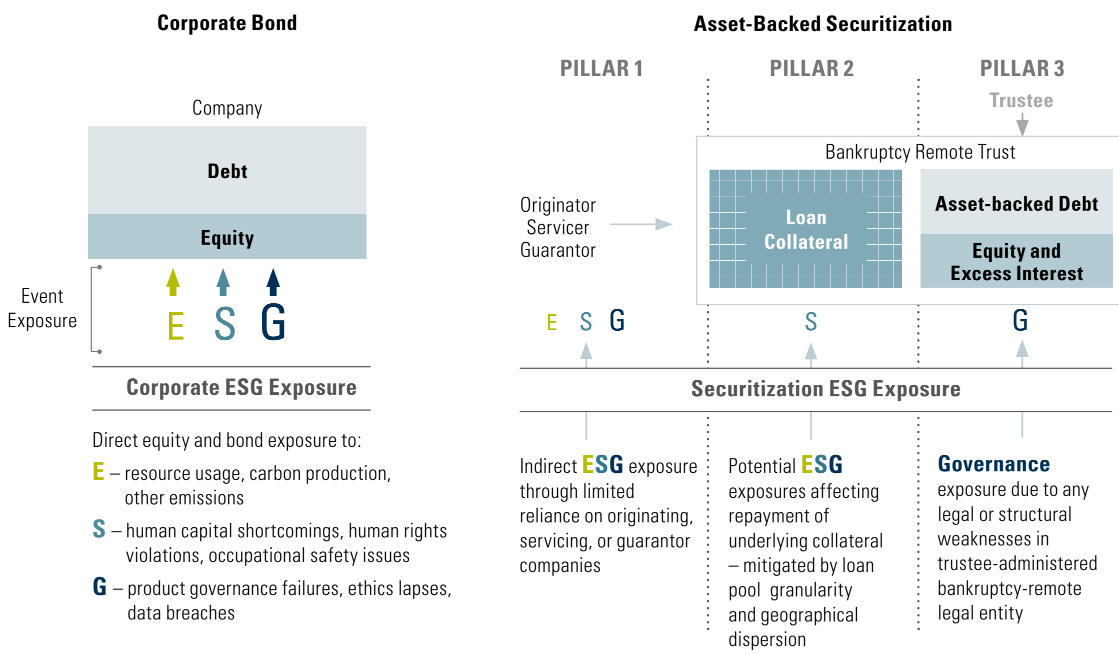
Analyze the governance integrity of the securitization trust

Analyze the securitization trust (including the strength of its standalone legal structure, the clarity of cashflow rules, the identity and role of the independent trustee) from an ESG perspective.

Once the risk exposure from each of these three pillars has been assessed, they can be aggregated into a single ESG risk measure for the entire trust.

As an illustration, our study provides a detailed example of the application of this framework to a securitization of equipment leases. Exhibit 1 differentiates the ESG risk profile of the lease securitization on the one hand from the ESG profile of the private leasing company on the other. Aggregating risks over the three pillars for the securitization, we find the overall environmental risk to be negligible, social risk to be very low, and governance risk to be low. In contrast, we assess a higher ESG risk level (particularly on governance) at the private leasing company itself. We often find this result. A bottom-up analysis of a securitization culminates in a lesser overall ESG risk profile than we would assign to the originating company's debt.

EXHIBIT 1: BBH ESG Risk Assessment – Corporate Bonds vs. ABS



The size of E, S, and G symbols represents relative ESG risk exposure from that category. For illustrative purposes only

Empirical analysis of severe ESG incidents at global corporations shows that securitizations shelter investors

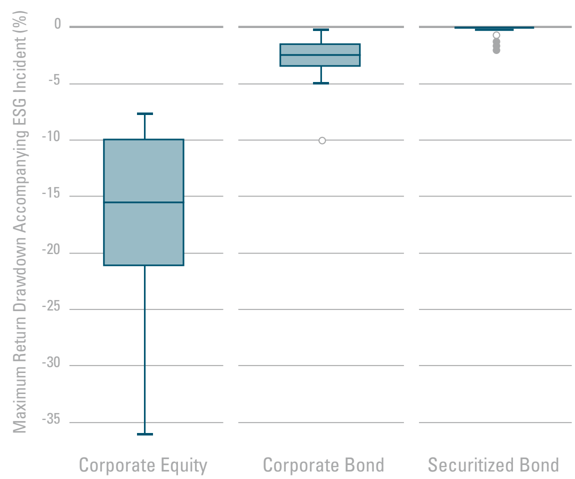
A common presumption, in the absence of a standard approach, is that securitizations are at best neutral, and possibly even detract, from an ESG risk viewpoint. To the contrary, a quantitative look instead suggests that the independent structures, dedicated collateral, and structural mitigants help insulate securitized notes from the fallout of severe corporate ESG events at their originator or servicer.

The study finds strong empirical evidence of a protective effect in a dataset of severe ESG incidents at global corporations over the last decade. Our methodology is to compare the daily returns of the company's securitized notes through the course of a severe ESG incident with the returns on their corporate bonds and equities.

For the analysis, the study focuses on time periods surrounding the more severe ESG incidents, as assessed and classified by Sustainalytics, at nine global corporations, from 2010 to the present. (See Exhibit 2.) We find median price declines for equity of those companies of

16%, and 3% median declines for their corporate bonds. (The better performance of corporate bonds versus equities during ESG incidents illustrates the mitigating effect of their more senior position.) Yet, the median price decline for securitized notes during these periods is 0%. Securitized notes are as likely to climb in price as they are to fall in price, through these incidents. This should not be surprising – securitizations are designed to insulate investors from corporate distress. They have a senior security interest in collateral, ring-fenced legal structures and further structural protections – all of which limit their linkage to the originating company.

EXHIBIT 2: Securitizations Show Least Return Drawdowns in Severe ESG Incidents



Sources: Sustainalytics and BBH Analysis

A heat map of ESG risks across the securitization landscape based on the framework

In the study, our structured fixed income team also applies the ESG assessment framework broadly across securitized sectors and issuers, obtaining a map of exposure levels across the structured universe.

This ESG risk assessment heat map (Exhibit 3) illustrates the degree and nature of ESG exposure across more than 30 individual segments of the securitized markets.

Among our notable findings: Certain securitization sectors – those with the strongest linkages to their corporate sponsors – show more elevated social and governance risk exposure. These include whole business ABS, rental fleet ABS, FFELP student loan ABS, timeshare ABS, and collateralized loan obligations (CLOs). For a different reason, we find that residential mortgage-backed securities (RMBS) also have more elevated social and governance risk. Small surprise perhaps for the mortgage issuance that preceded the Financial Crisis (RMBS sectors such as legacy subprime, Alt-A, jumbo and modified loans). These loans are performing more poorly than underwritten, involve heavy servicing burdens, and are challenging borrowers' capacity to afford them. We find that Agency MBS – typically regarded as equivalent to U.S. sovereign credit – also has a moderate degree of social and governance risk. Agency MBS pools rely on a full guarantee from the U.S. housing agencies, representing an extreme corporate linkage. So from an ESG standpoint, Agency MBS investors are exposed both to the considerable legislative uncertainty over the future of the agencies and to whatever role they may ultimately play in responsible lending in the U.S. Apart from these noteworthy exceptions though, our conclusion from the heat map is that ESG risk levels across the securitization market are generally low, particularly for Environmental and Governance risk. In contrast, ESG risk exposure for corporate bonds can range from low to severe.

If one is diligent and careful in navigating the few problem sectors and issuers, investing in securitized notes can deliver a meaningful improvement in ESG risk profile relative to the profile of a broad credit index.

EXHIBIT 3: BBH ESG Risk Assessment Heat Map Across Securitized Product Sectors

MBS	ENVIRONMENTAL RISK	SOCIAL RISK	GOVERNANCE RISK
Agency		Concentrated exposure to U.S. housing agencies	Highly dependent on shape of agency reform
Re-performing		Exclusively non-performing loans to troubled borrowers	Elevated servicing requirements for modified loans
Jumbo Prime	Predominantly larger footprint homes	Some gentrification and rental impact concerns	
CRT		Concentrated, junior exposure to housing agencies	Highly dependent on shape of agency reform
Pre-2008 Legacy		Large component of non-performing loans	Structural failures, unanticipated modifications, servicer volatility
CMBS			
Single Borrower	Possible single site exposure but typically mitigated		
Conduit			
ABS – Consumer			
FFELP Student Loan		Concern over unaffordable student debt load	Some structural shortcomings in face of defaults and extensions
Brick and Mortar		Low debt service burden but to near-prime borrowers	
Marketplace		High balance loans, online origination, no bank license	Concerns over single bank license model
Subprime Auto	Financing for internal combustion autos	Essential use loan but to subprime borrowers	
Credit Card		Primarily prime borrowers	
Prime Auto	Financing for internal combustion autos		
Solar			
Timeshare		Non-essential, sales concerns, ongoing sponsor support	
ABS – Commercial Equipment			
Aircraft	Financing for emission-producing commercial aircraft		Complex security and cashflows but structures steadily improve
Container	Fuel efficient shipping mode, some accident potential	Supply chain concerns	
Large-ticket	Some vehicle financing		
Railcar	Fuel efficient shipping mode, accident potential, oil and coal		
Small Ticket	Some vehicle financing		
Fleet Lease	All vehicle financing		
Rental Fleet	All vehicle financing	Lease concentration to a single rental company	Lease concentration to a single rental company
ABS – Other Commercial			
Cell Tower	Some sight pollution concerns		
Data Center			
Drug Royalty		Some concern over high prescription pricing	
Insurance-linked			
Servicer Advance		Attention focused on mortgage servicing practices	
Small Business Loan			
Tax Lien			
Venture Debt			
Whole Business	High concentration to single underlying business	High concentration to single underlying business	High concentration to single underlying business
ABS – CLO			
Collateralized Loan Obligations	Mix of corporates with low to very high exposure	Mix of corporates with low to very high exposure	Equity-friendly note terms can vary across transactions
Unsecured Corporate Bonds			

Very Low · Low · Moderate · High · Severe

Impact and responsible investing within securitized fixed income

Securitizations, particularly ABS and CMBS, offer an abundant range of impact investing opportunities, including solar ABS, energy conservation ABS (PACE), electrical vehicle lease ABS, and ABS for consumer loans to minorities. Furthermore, the proportion of "sin" industries within securitizations is de minimis, with negligible firearm, liquor, adult, or defense concentrations in pools, and practically no casino exposure in CMBS. As shown in the prior section, there are generally few high ESG risk exposures in securitization markets. Issuers are for the most part financing essential services across a diverse range of U.S. industries and localities.

"Securitizations, particularly ABS and CMBS, offer an abundant range of impact investing opportunities."

Taking the securitization approach presents compelling investing and ESG opportunities

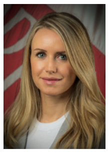
Whether for ESG integration purposes or to achieve specific responsible investing objectives, it is important for fixed income managers to apply a specialized framework to the securitized component of their portfolio.

We show that ESG profiles for securitizations are generally lower risk. But investing haphazardly in securitized assets is no fail-safe strategy. Having an independent legal structure or a green bond label does not assure a low ESG risk or a strong investment outcome. It's an important caveat. Any potential investment should be assessed thoroughly in an appropriate, consistent framework. Partnering with an experienced manager – one with strong securitization experience and a bottom-up, research intensive approach on both credit and ESG grounds – ensures that investors are best positioned to benefit from ESG analysis and opportunities for strong risk-adjusted returns.

To construct a fixed income portfolio that can protect from ESG-related events, and can outperform, we believe that it is important for investors to tailor ESG assessment frameworks to various sectors within their fundamental investment process. A specialized focus on securitizations is particularly valuable today, given their elevated compensation and generally low ESG risk profiles. We invite you to explore with us our ESG securitization framework to help you assess ESG exposures among your existing securitization positions. The BBH ESG risk assessment heat map may help identify less familiar subsectors that may add value. Please refer to the full study *ESG Considerations for Securitized Fixed Income Notes* to learn more about our approach and the results of our analysis.

Asset owners and investment decision-makers already turn to the securitized market for elevated compensation, low return volatility, and low correlation to credit markets. For investors who also prioritize responsible investing, securitized assets can meaningfully advance ESG integration or socially responsible investing objectives. Coupling the low ESG risk profile of securitizations with their impressive investment attributes can present a truly compelling option for an investor's portfolio.

Additional BBH contacts



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Based on decades of experience in assessing securitized notes and our long-standing presence in these markets, BBH actively manages securitized assets across a variety of BBH's Fixed Income Strategies, through various investment vehicles including Separately Managed Accounts (SMAs) and collective investment vehicles. Please contact the team to learn more about the role securitized assets and ESG analysis could play in your portfolio.

Past performance does not guarantee future results.

Risks

The value of some bonds including asset-backed and mortgage-backed securities may be sensitive to changes in prevailing interest rates that can cause a decline in their prices. Mortgage-backed and asset-backed securities have prepayment and extension risks. Although mortgage-backed securities are generally supported by some form of government or private insurance, there is no assurance that private guarantors or insurers will meet their obligations.

For purpose of complying with the GIPS® standards, the firm is defined as Brown Brothers Harriman Investment Management ("IM"). IM is a division of Brown Brothers Harriman & Co. ("BBH"). IM claims compliance with the Global Investment Performance Standards (GIPS®). To receive a list of composite descriptions of IM and/or a presentation that complies with the GIPS standards, contact John W. Ackler at (212) 493-8247, or via email at john.ackler@bbh.com.

One "basis point" or "bp" is 1/100th of a percent (0.01% or 0.0001).

The Sharpe ratio is the average return earned in excess of the risk-free rate.

Return volatility or standard deviation measures the historical volatility of returns. The higher the standard deviation, the greater the volatility.

Traditional ABS include prime auto backed loans, credit cards and student loans (FFELP). Non-traditional ABS include ABS backed by other collateral types.

Issuers with credit ratings of AA or better are considered to be of high credit quality, with little risk of issuer failure. Issuers with credit ratings of BBB or better are considered to be of good credit quality, with adequate capacity to meet financial commitments. Issuers with credit ratings below BBB are considered speculative in nature and are vulnerable to the possibility of issuer failure or business interruption.