University of Miami International and Comparative Law Review

Volume 31 | Issue 1 Article 10

1-16-2024

Revamping Green Securitization Frameworks in the EU

Samuel Pinson
University of Miami School of Law

Follow this and additional works at: https://repository.law.miami.edu/umiclr

Part of the Comparative and Foreign Law Commons

Recommended Citation
Samuel Pinson, *Revamping Green Securitization Frameworks in the EU*, 31 U. MIA Int'l & Comp. L. Rev. 201 ()
Available at: https://repository.law.miami.edu/umiclr/vol31/iss1/10

This Note is brought to you for free and open access by the Journals at University of Miami School of Law Institutional Repository. It has been accepted for inclusion in University of Miami International and Comparative Law Review by an authorized editor of University of Miami School of Law Institutional Repository. For more information, please contact mperezm@law.miami.edu, library@law.miami.edu .

REVAMPING GREEN SECURITIZATION FRAMEWORKS IN THE EU

*Samuel Pinson**

Sustainable finance and green investments have grown from a trend to a dominant investment strategy throughout asset classes globally, and the EU is no exception. The EU published its Green New Deal and Sustainable Finance Strategy as roadmaps toward a more sustainable and equitable future. The twin reports contain comprehensive plans and initiatives to make sustainable finance more accessible through effective regulation. Stemming from those initiatives were various regulatory frameworks such as the EU Taxonomy, the Corporate Sustainability Reporting Directive, the Sustainable Finance Disclosure Regulation, and the EU Green Bond Standard. The regulations above are aimed at everything from public company disclosure requirements to a comprehensive categorization system for sustainable financial products in the case of the EU Taxonomy. Also relevant to this Note is the EU Securitization Regulation, which serves as a framework for securitized products, disclosures, reporting, and structuring. However, even in the presence of deliberate regulation, headwinds in the securitization market could dampen sustainable finance initiatives. For example, greenwashing, scaling risk, and a lack of uniform measurement are three issues that underscore the complexities and roadblocks of rolling out sustainable securitization more broadly. However, the existing regulatory backdrop, comprising sustainability regulations in financial services, could regulate many aspects of the securitization process, from identification of collateral, structuring transactions, originator and issuer disclosures, and investor protection. Moreover, the existing frameworks will need to be tailored towards securitization, public-private partnerships will need to be adopted, and ratings and oversight processes will need to be tailored towards green securitized products to encompass the securitization process's complexities adequately.

* J.D. Candidate, Class of 2023. University of Miami School of Law. Member, *University of Miami International and Comparative Law Review*. With particular gratitude to Professor Caroline Bradley for her mentorship and guidance, and to my family for their continued support.

INTRODUCTION 204
I. OVERVIEW OF GREEN LANDSCAPE IN THE EU......204
A. *The ESG Movement Generally* 204
B. *Economic Value of Green Market* 206
C. *The European Green Deal* 206
D. *EU Sustainable Finance Strategy* 208
II. EU GREEN BONDS AND SECURITIZATION: A MACRO VIEW......210
A. *International Securitization Governance* 210
B. *Frameworks for Green Debt* 211
C. *Economic Headwinds to ESG and Sustainable Finance* ...213
D. *Greenwashing Explained* 214
III. THE SUSTAINABILITY QUAD: TAXONOMY REGULATION, CSRD, EU SFDR, EU GBS 215
A. *Overview of the EU Taxonomy Regulation (EU Taxonomy)* 216
B. *Overview of the Corporate Sustainability Reporting Directive (CSRD)* 217
C. *Overview of the Sustainable Finance Disclosure (SFDR) Regulation* 219
IV. EU GREEN BOND STANDARD......219
A. *Overview of the EU Green Bond Standard* 219
B. *EU Green Bond Standard Interplay* 221
V. SUSTAINABLE FINANCE HEADWINDS AND THE EU GREEN BOND STANDARD 225
A. *Greenwashing* 225
B. *Lack of Uniformity in 'Green' Assessments* 226
VI. THE EU'S FRAMEWORK FOR ASSET SECURITIZATION......229
A. *Asset Securitization Explained* 229
B. *Overview of Securitization in Sustainable Finance* 232
1. Macro Landscape of Green Securitizations in the EU 232
2. Examples of Green Securitizations Generally 233
C. *Current Securitization Frameworks* 235
1. EU Securitization Framework Regulation 235
D. *Deficiencies in Green Securitization* 238
VII. TOWARDS UNIFORMITY IN THE GREEN SECURITIZATION MARKET 240
A. *Relevance of the SFDR, CSRD, EU GBS, EU Taxonomy, and Securitization Regulation* 240

B. *European Banking Authority Report on Securitization*....243
C. *Avenues for Effective Regulation* 247
1. Solutions to Greenwashing 248
2. Solutions to Scaling..249
3. Sandbox Program for Piloting Regulation 251
CONCLUSION..252

INTRODUCTION

Part I of this Note introduces an overview of the green landscape in the European Union (EU), covering everything from the Green New Deal to the EU Sustainable Finance Strategy. Part I will also include empirical information regarding the ESG movement and the economic value of the green market in the EU. Part II of this Note will explore EU green bonds and securitization from a macro perspective. The relationship between U.S. and EU frameworks will be mentioned in Part II, as will the current economic prospects of ESG. Further, the Green Bond Principles (GBP) and Green Loan Principles (GLP), voluntary disclosure standards for sustainable financial products, and the drawbacks of those products, greenwashing in particular, will be explored. Part III will explore EU regulatory frameworks in the sustainable finance sphere. Specifically, the EU Taxonomy Regulation, the Corporate Sustainability Reporting Directive (CSRD), the Sustainable Finance Disclosure Regulation (SFDR), and the EU Green Bond Standard (GBS) will be described in detail about green bonds and securitization. Part IV details the mechanics of the EU Green Bond Standard and its relationship to securitization. Part V will describe and incorporate headwinds to sustainable finance, such as greenwashing and a lack of uniformity in measuring ESG. Part VI introduces securitization and provides an overview of securitization in sustainable finance. Also, Part VI will discuss the current securitization frameworks in the EU and the shortfalls of these frameworks. Part VII introduces several solutions to the fragmentation of green securitizations in the EU and explains avenues toward implementation.

I. OVERVIEW OF GREEN LANDSCAPE IN THE EU

A. *The ESG Movement Generally*

ESG (*Environment*, *Social*, and *Governance*) is a principles-based investing approach that focuses on climate change, equity in human capital, and improved management decision-making.[1] ESG investing has transformed from an esoteric pursuit to a behemoth asset class on

---

[1] *ESG Investing and Analysis*, CFA INST., https://www.cfainstitute.org/en/research/esg-investing (last visited Nov. 27, 2022).

a global scale. There are ESG-focused funds spread across virtually every facet of equity and debt markets, ranging from index fund products to green bonds. Within the broader acceleration of ESG across financial markets, a particular region and investment product deserve special attention: the EU and Green Bonds. The EU developed a variety of climate-related legislation, for example, the EU Taxonomy, the Corporate Sustainability Reporting Directive, the Sustainable Finance Disclosure Regulations, and the EU Green Bond Standard.[2] One of the largest hurdles to the effective issuance of ESG and green products is the threat of greenwashing or the near fraudulent overstatement of ESG impacts of a particular investment product.[3] Greenwashing leads to several business, economic, and legal risks. If there is a significant threat of greenwashing it is foreseeable that an issuer may have to pay a higher rate of interest on a green bond to appease investor reluctance to invest therein. This makes the economics of raising green bonds more expensive, potentially displacing them as a viable economic option if greenwashing grows exponentially. Furthermore, based on regulatory definitions of greenwashing, an issuer may be disincentivized to promote a green product with an expansive regulatory breadth of greenwashing enforceability. Even with the breadth of the aforementioned group of frameworks, there are still areas that necessitate more complex and product-oriented regulation. Specifically, the area of green finance, which is an embodiment of financial complexity, is securitization, and of particular relevance is the securitization of EU green bonds. Specifically, there are still gaps within the EU sustainable finance framework more broadly. One complex area of green finance involves the securitization of green bonds. To adequately protect investors and promote the aims of green securitization, a regulatory framework needs to (i) be tailored specifically towards securitized products, (ii) incentivize the private sector to incur increased compliance costs, and (iii) promote the use of technology to foster monitoring and reporting efficiencies.

---

[2] *European Green Bond Standard*, EUR. COMM'N, https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/european-green-bond-standard_en (last visited Nov. 27, 2022).

[3] Kyle Peterdy, *Greenwashing*, CORPORATE FIN. INST., https://corporatefinanceinstitute.com/resources/esg/greenwashing/ (last visited Nov. 27, 2022).

B. *Economic Value of Green Market*

It is essential to unpack the macro backdrop of the ESG market before distilling the legal and economic mechanics of EU green bond securitization and reporting frameworks. Global ESG assets under management (AUM) have ballooned in recent years from roughly $22.8T in 2018 to a projected $41T in 2022 – this AUM is projected to reach $50T in 2025, which is one-third of global AUM.[4] Europe alone accounts for roughly half of global ESG assets.[5] Green bond issuance specifically reached $517.4 billion in 2021.[6] In Europe, $46.5 billion of green bonds were issued in the first quarter of 2021.[7] By 2026, the EU, through its NextGeneration EU program, aims to sell €250 billion of green bonds, making it the largest issuer globally over that span.[8] The sheer value of issuance in economic terms underscores the importance of effective regulation and collaboration between issuers and regulators.

C. *The European Green Deal*

In a display of climate leadership, the EU presented The European Green Deal in December 2019 to provide a roadmap for a sustainable future.[9] The European Green Deal is predicated on the EU

---

[4] *ESG May Surpass $41 Trillion Assets in 2022, But Not Without Challenges, Finds Bloomberg Intelligence*, BLOOMBERG (Jan. 24, 2022), https://www.bloomberg.com/company/press/esg-may-surpass-41-trillion-assets-in-2022-but-not-without-challenges-finds-bloomberg-intelligence.
[5] *Id*.
[6] Liam Jones, *$500bn Green Issuance 2021: Social and Sustainable Acceleration: Annual Green $1tn in Sight: Market Expansion Forecasts for 2022 and 2025*, CLIMATE BONDS INITIATIVE (Jan. 31, 2022), https://www.climatebonds.net/2022/01/500bn-green-issuance-2021-social-and-sustainable-acceleration-annual-green-1tn-sight-market.
[7] Sanne Wass et al., *Europe's Dominance in Green Bond Market Fades Amid Record Growth in China*, S&P GLOBAL (July 27, 2022), https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/europe-s-dominance-in-green-bond-market-fades-amid-record-growth-in-china-71321575.
[8] *NextGenerationEU: European Commission successfully issues first green bond to finance the sustainable recovery*, EUR. COMM'N (Oct. 12, 2021), https://ec.europa.eu/commission/presscorner/detail/en/ip_21_5207.
[9] *The European Green Deal,* EUR. COMM'N, https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en (last visited Nov. 27, 2022).

becoming climate neutral by 2050.[10] The three main aims are "no net emissions of greenhouse gases by 2050," "economic growth decoupled from resource use," and "no person and no place left behind."[11] It is composed of a variety of different elements, including climate action, clean energy, sustainable industry, buildings and renovations, sustainable mobility, eliminating pollution, farm to fork, preserving biodiversity, research and development, and preventing unfair competition from carbon leakage.[12] Aside from the financial services industry, the deal has fostered the European Climate Law, which has made the EU's 55% emissions reduction targets legally binding for member states, and the EU Code of Conduct on Responsible Food Business and Marketing Practices, which was signed by 65 organizations to increase the availability and affordability of healthy and sustainable food options.[13] The European Green Deal highlights the need for an interlinked approach to achieve climate-related goals. To achieve the aims of the European Green Deal, the European Commission embarked on a mission toward sustainable finance by leveraging Technical Expert Groups (TEGs) and tailor-made frameworks such as the EU Taxonomy Regulation.[14]

The funding plan for The European Green Deal is commensurately as detailed as the administrative underpinnings of the endeavor. The European Green Deal Investment Plan (EGDIP) funds the green deal, with the mobilization of at least €1 trillion in sustainable investments over the next decade.[15] €100 billion alone will be used on the Just Transition Mechanism, a framework that ensures climate neutrality works well for everybody through dedicated funds

---

[10] *Id.*
[11] *Id.*
[12] *Id.*
[13] *European Climate Law*, EUR. COMM'N, https://climate.ec.europa.eu/eu-action/european-climate-law_en (last visited Nov. 27, 2022); European Commission Press Release IP/21/3385, Farm to Fork Strategy: 65 companies and associations sign the EU Code of Conduct on Responsible Food Business and Marketing Practices (July 5, 2021), https://ec.europa.eu/commission/presscorner/detail/en/ip_21_3385.
[14] *EU Taxonomy for Sustainable Activities*, EUR. COMM'N, https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en (last visited Nov. 27, 2022).
[15] *The European Green Deal Investment Plan and Just Transition Mechanism Explained*, EUR. COMM'N (Jan. 14, 2020), https://ec.europa.eu/commission/presscorner/detail/en/qanda_20_24.

and loan facilities.[16] The EU Budget provides roughly €500 billion for climate and environment, the EU Emissions Trading System (ETS) funds €25 billion, national co-financing structural funds will provide €114 billion, and lastly, InvestEU (a complementary program to the Green Deal) will provide and mobilize €279 billion.[17] The three main objectives of the EGDIP are to increase funding for the climate transition, to "create an enabling framework for private investors and the public sector to facilitate sustainable investments," and third, to "provide support to public administrations in identifying, structuring, and executing sustainable projects."[18] Overall, the EGDIP provides the financing structure, administration, and guidelines for both private and public sector projects in the sustainability arena throughout the EU.[19] The EGDIP enables critical funding of complex regulatory frameworks and the related administration thereof.

D. *EU Sustainable Finance Strategy*

Parallel to The European Green Deal is the European Commission's Action Plan on Financing Sustainable Growth, which was adopted in March 2018.[20] The European Commission established the high-level expert group on sustainable finance (HLEG) to establish key objectives for the plan.[21] The HLEG comprised 20 senior experts from the finance sector, academia, and observers from European and international institutions.[22] The HLEG advised the Commission on how to steer public and private capital toward sustainable investments, identify steps that institutions should take to protect the financial system from environmental risks, and deploy future policies

---

[16] *Id*.
[17] *Id*.
[18] *Id*.
[19] *Id*.
[20] *Renewed Sustainable Finance Strategy and Implementation of the Action Plan on Financing Sustainable Growth*, EUR. COMM'N, https://finance.ec.europa.eu/publications/renewed-sustainable-finance-strategy-and-implementation-action-plan-financing-sustainable-growth_en (last updated Aug. 5, 2022) [hereinafter *Action Plan on Financing Sustainable Growth*].
[21] *Id*.
[22] *High-Level Expert Group on Sustainable Finance (HLEG)*, EUR. COMM'N, https://finance.ec.europa.eu/publications/high-level-expert-group-sustainable-finance-hleg_en (last updated July 3, 2020).

across Europe.[23] The Action Plan set out a strategy with ten key actions within three general categories.

The first is "Reorienting capital flows towards a more sustainable economy," which includes establishing a clear and detailed EU Taxonomy (a classification system for sustainable activities), creating an EU green bond standard, fostering investment in sustainable projects, incorporating sustainability in financial advice, and developing sustainability benchmarks.[24] The second category is "Mainstreaming sustainability into risk management," which includes integrating sustainability in ratings and market research, clarifying asset managers and institutional duties regarding sustainability, and creating prudential rules for EU banks and insurance companies.[25] The third and final category, "Fostering transparency and long-termism," includes strengthening sustainability disclosure and accounting rule-making and fostering sustainable corporate governance in capital markets.[26] The ten components are set out to connect finance with sustainability.

Implementation of the Action Plan manifests in the form of packages of measures and regulations relating to sustainable finance. Building off of the Action Plan and a separate transition finance report, in June 2021, the EU Commission published an additional communication, the Strategy for *F*inancing the *T*ransition to a *Sustainable E*conomy, which further organized the EU Taxonomy proposal, the CSRD, and the Taxonomy Regulation.[27] The June 2021 communication also provided comprehensive details on transitioning to a sustainable future with an emphasis on the use of technology and public-private partnerships.[28] The European Commission also set up a Technical Expert Group on Sustainable Finance (TEG) to assist in developing the EU Taxonomy, the EU Green Bond Standard, and

---

[23] *Id*.
[24] *Action Plan on Financing Sustainable Growth*, *supra* note 20.
[25] *Id*.
[26] *Id*.
[27] Directorate-General for Financial Stability, Financial Services and Capital Markets Union, *Strategy for Financing the Transition to a Sustainable Economy*, EUR. COMM'N (July 6, 2021), https://finance.ec.europa.eu/publications/strategy-financing-transition-sustainable-economy_en.
[28] *See id*.

guidance on corporate disclosures.[29] It is composed of 35 members from academia and the business and finance sector.[30] The TEG published final reports on the EU Taxonomy and the EU Green Bond Standard and are instrumental pieces of the EU's broader sustainable finance mission.[31]

II. EU GREEN BONDS AND SECURITIZATION: A MACRO VIEW

A. *International Securitization Governance*

To better understand the dynamics of international governance of securitization in finance, it is worth examining the approaches taken by the United States and compared to the European Union. Both the U.S. and the EU have taken deliberate steps towards regulating securitization in traditional finance, a prerequisite step towards effective regulation of green and sustainable finance.[32] Securitization is best described as the process of creating marketable financial instruments by pooling various financial assets, mortgages, loans, etc. and selling the repackaged assets to investors.[33] Before the 2008 financial crisis, the EU imported basic regulatory frameworks from other jurisdictions, such as the U.S.[34] After the 2008 financial crisis, the EU favored stringent regulation of the financial services industry.[35] However, in the case of securitization, the EU sponsored less stringent rules.[36] In the wake of the financial crisis, the Basel

[29] *Id*.; Directorate-General for Financial Stability, Financial Services and Capital Markets Union, *Technical expert group on sustainable finance (TEG)*, EUR. COMM'N (June 13, 2018), https://finance.ec.europa.eu/publications/technical-expert-group-sustainable-finance-teg_en (last updated July 15, 2020).
[30] *Id*.
[31] *Id*.
[32] *See generally* HOGAN LOVELLS, SUMMARY OF KEY U.S. AND EU REGULATORY DEVELOPMENTS RELATING TO SECURITIZATION TRANSACTIONS (2020), https://www.hoganlovells.com/~/media/hogan-lovells/pdf/2020-pdfs/2020_02_21_eu_us_securitization_brochure.pdf?la=en.
[33] Peter Bondarenko, *Securitization*, BRITANNICA MONEY (Sept. 24, 2023), https://www.britannica.com/money/securitization.
[34] Lucia Quaglia, *It Takes Two to Tango: The European Union and the International Governance of Securitization in Finance*, 59 J. OF COMMON MKT. STUD. 1364, 1364 (2021).
[35] *Id*.
[36] *Id*.

Committee on Banking Supervisions (BCBS) revised Basel II, a framework for bank capital requirements.[37] The BCBS proposed stringent measures for securitization, but European actors pushed back on the restrictiveness of the measures.[38] Stringent rules were eventually adopted in 2009 and 2014 via Basel II, although less stringent than proposed.[39] Following these developments, in 2015, the BCBS, in collaboration with the International Organization of Securities Commission (IOSCO), published the Criteria for Identifying Simple, Transparent, and Comparable (STC) Securitization.[40] The BCBS reduced capital requirements for STC securitization in 2018.[41]

In the U.S., the Dodd-Frank Act of 2010 called for more stringent rules on securitization.[42] In 2011, the SEC would also tighten its rules regarding securitization, prescribing greater transparency measures.[43] U.S. regulators were largely supportive of the initially more stringent measures proposed by the BCBS in 2009 and 2014, but again, ultimately, STC securitization received less stringent capital requirements.[44] The move to regulate around the financial crisis demonstrates that regulators often respond to outside economic circumstances. In the EU, regulators favored less restrictive rules to foster economic growth, while in the U.S. regulators opted for a more cautionary and restrictive framework.[45] In the case of green securitization, regulators have introduced several ancillary frameworks regulating underlying assets but not green securitizations themselves.

B. *Frameworks for Green Debt*

There are several voluntary frameworks for principled green economic activities, such as the Green Bond Principles (GBP) and the

[37] *Id*. at 1368.
[38] *Id*. at 1375.
[39] *Id*. at 1372.
[40] Quaglia, *supra* note 34, at 1369.
[41] *Id*.
[42] *Id*. at 1372.
[43] *Id*.
[44] *Id*.
[45] *Id*. at 1364.

Green Loan Principles (GLP).[46] Green bonds enable capital-raising for projects with environmental benefits, such as those fostering net-zero emissions.[47]

The GBP was adopted in June 2021 by the International Capital Market Association (ICMA) and is a set of voluntary process guidelines.[48] The ICMA is a self-regulatory organization and trade association with over 600 member firms.[49] Importantly, voluntary guidelines may push the private sector towards alignment with uniform principles in advance of formal regulation. GBP identifies four types of green bonds: Standard Green Use of Proceeds (unsecured debt obligation), Green Revenue Bond (credit exposure in the bond is to the pledged cash flows of the revenue streams, taxes, etc.), Green Project Bond (a single or multiple projects for which the investor has direct exposure to the risk of the project), and Secured Green Bond (where the net proceeds are applied to finance or refinance a Green Project securing a specific bond, or where Green Projects secure Green Project).[50] The four components for alignment with the GBP are: (i) Use of Proceeds, (ii) Process for Project Evaluation and Selection, (iii) Management of Proceeds, and (iv) Reporting.[51] The GBP recognizes broad categories of eligibility for the Use of Proceeds, such as renewable energy and clean transportation.[52] For Process for Project Evaluation and Selection, under the GBP, an issuer should communicate to investors environmental sustainability objectives and how an issuer selects projects.[53] Management of Proceeds suggests that proceeds by the auditor to verify internal tracking methods and allocation of funds from the Green Bond.[54] Lastly, Reporting

---

[46] THE INT'L CAP. MKT. ASS'N, GREEN BOND PRINCIPLES: VOLUNTARY PROCESS GUIDELINES FOR ISSUING GREEN BONDS 2 (2021), https://www.icmagroup.org/assets/documents/Sustainable-finance/2022-updates/Green-Bond-Principles-June-2022-060623.pdf.

[47] *Id*.

[48] *Id*. at 2-3.

[49] *About ICMA*, ICMA, *https://www.icmagroup.org/About-ICMA/* (last visited Nov. 27, 2022).

[50] THE INT'L CAP. MKT. ASS'N, *supra* note 46, at 8.

[51] *Id*. at 4.

[52] *Id*.

[53] *Id*. at 5.

[54] *Id*. at 6.

requirements include up-to-date information and annual reporting.[55] The GBP provides a model for issuers and originators and, if followed, could protect investors that commit capital towards Green Bonds.[56] Although voluntary, the GBP is well contemplated, and if adopted by a critical mass of the private sector, it could be the model for regulatory measures.

The Green Loan Principles (GLP) were published by the Loan Market Association (LMA) and were developed to promote the integrity of the green loan product.[57] The GLP has the same four core components as the GBP, (i) Use of Proceeds, (ii) Process for Project Evaluation and Selection, (iii) Management of Proceeds, and (iv) Reporting.[58] The underlying definitions of the four components are also similar.[59] The GLP builds on the GBP to promote consistency across financial markets.[60] The relationship between the GLP and GBP underscores that frameworks can be consistent across similar financial products. While the differences between financial products necessitate nuanced regulation, the foundation and aims of regulations can be similar. For example, green bonds and green securitization regulations should mirror one another because green securitization often consists of green bonds. In their totality, the GBP and GLP are examples of trade associations composed of private sector participants developing sensible guidelines for market participants to promote integrity and transparency in the financial system.[61]

C. *Economic Headwinds to ESG and Sustainable Finance*

While not an economic paper, it is worth mentioning the current state of the ESG market to demonstrate that, although a sizable market based on AUM, it is not immune to broader macroeconomic challenges. The green bond market hit $2 trillion in total issuance to date in 2022, but Q3 2022 issuance of $152.3 billion was a 35% decline

---

[55] *Id*.
[56] THE INT'L CAP. MKT. ASS'N, *supra* note 46, at 4.
[57] ASIA PAC. LOAN MKT. ASS'N ET. AL., GREEN LOAN PRINCIPLES 2 (2023), https://www.lsta.org/content/green-loan-principles.
[58] *Id*.; *see* THE INT'L CAP. MKT. ASS'N, *supra* note 46, at 4.
[59] *See id*.
[60] *See id*.
[61] *See id*.

compared to Q2 2022 and a 45% decline compared to Q3 2021.[62] Furthermore, green bond sales reached a 19-month low, falling to approximately $24 billion in July 2022 from $45 billion in June 2022.[63] That number is the lowest since December 2020, in the midst of the COVID-19 pandemic, when governments (and companies) issued $7.7 billion.[64] However, sustainable bonds represented the same percentage (5%) of total issuance in 2022 as in 2021.[65] So, although green bonds are still attracting billions in capital for the development of sustainable projects, the gross volumes are on the decline. As rates climb, financing projects become more expensive as the debt service payments rise.

D. *Greenwashing Explained*

In addition to macroeconomic risks, greenwashing is a material threat to the development of the sustainable finance market. In response, in November 2022, the three European Supervisory Authorities (EBA, EIOPA, and ESMA) published a Call for Evidence (CFE) to gather information regarding greenwashing risks and drivers.[66] The CFE breaks down greenwashing into four main dimensions.[67] The first is the role that market participants play in greenwashing: trigger, spreader, and receiver.[68] It is a creative way of dividing market participants in relation to the abstract problem of greenwashing. The second is "the actual topics on which sustainability-related claims are made."[69] For example, an entity or

---

[62] Liam Jones, *Green Bond Market Hits USD2tn Milestone at End of Q3 2022*, CLIMATE BONDS INITIATIVE (Sept. 11, 2022, 08:00 AM), https://www.climatebonds.net/resources/press-releases/2022/11/green-bond-market-hits-usd2tn-milestone-end-q3-2022.

[63] David Caleb Mutua, *Green Bond Sales Drop to 19-Month Low on Tight Issuance Windows*, BLOOMBERG (Aug. 9, 2022, 11:19 AM), https://www.bloomberg.com/news/articles/2022-08-09/green-bond-sales-drop-to-19-month-low-on-tight-issuance-windows?leadSource=uverify+wall.

[64] *Id.*

[65] Jones, *supra* note 62.

[66] *ESAs Call for Evidence on Better Understanding Greenwashing*, EUR. BANKING AUTH. (Nov. 15, 2022), https://www.eba.europa.eu/publications-and-media/press-releases/esas-launch-joint-call-evidence-greenwashing.

[67] *Id.*

[68] *Id.*

[69] *Id.*

product's structure, an entity's strategy, and claims relating to future environmental targets. The third is the misleading qualities of sustainability-related claims, such as intentional omission or cherry-picking positive data.[70] Lastly, the fourth dimension focuses on the channels through which claims are made, such as ratings, benchmarks, and marketing materials.[71] Dividing greenwashing into these four dimensions makes the broader problem much more digestible and acknowledges the various nuances of greenwashing. Furthermore, it evidences the need for effective regulation to be tailored and nuanced, even if sharing core components with other regulatory frameworks. One of the key problems that greenwashing poses is the lack of a formal definition of a green bond in a contractual arrangement between bondholders and issuers.[72] For example, a bondholder being paid interest on time per the terms of a contract may be hard-pressed to identify a loss or damages in the event of greenwashing.[73]

III. THE SUSTAINABILITY QUAD: TAXONOMY REGULATION, CSRD, EU SFDR, EU GBS

Securitized financial products are often composed of portfolios consisting of complex webs of hundreds of assets and debt instruments.[74] EU regulatory frameworks, such as the EU Securitization Regulation, provide specific disclosure and structuring rules for the securitization space.[75] Ultimately, investors in securitizations, backed by green bonds or otherwise, need to understand the underlying assets of the security in which they are investing. As such, these products necessitate uniform disclosure, reporting, and measurement requirements designed specifically to address the aforementioned complexity. Specifically, given the unique

---

[70] *Id*.
[71] *Id*.
[72] Michael Doran & James Tanner, *Critical Challenges Facing the Green Bond Market*, IFLR (Sept. 23, 2019), https://www.iflr.com/article/2a639yzxejjn11mpf9q80/critical-challenges-facing-the-green-bond-market.
[73] *Id*.
[74] Brian Perry, *Securitized Products: Definition, Examples, Safety Issues*, INVESTOPEDIA, https://www.investopedia.com/articles/bonds/08/securitzed-assets.asp (last updated July 27, 2023).
[75] *Securitisation*, ESMA, https://www.esma.europa.eu/policy-activities/securitisation (last visited Nov 27, 2022).

problems of greenwashing and opaque reporting mechanisms in the sustainable finance ecosystem, a solution toward the securitized products space requires solutions commensurate with the inherent intricacy of securitization. The EU Taxonomy, the EU Sustainable Finance Disclosure Regulation (SFDR), the Corporate Sustainability Reporting Directive (CSRD), and the EU Green Bond Standard are four frameworks that are particularly relevant in fostering effective oversight in EU green debt markets. Specifically, the 'Quad' provides a foundation for future regulatory frameworks needed to regulate green securitized products.

A. *Overview of the EU Taxonomy Regulation (EU Taxonomy)*

As a building block for the EU's sustainable finance framework, the EU Taxonomy provides a robust classification system that allows companies to share a common definition of sustainable activities in an effort to promote uniform disclosures and prevent greenwashing.[76] Ideally, the EU Taxonomy Regulation can help companies become more climate-friendly, and mitigate the market fragmentation associated with diversified green investment approaches.[77] The Taxonomy Regulation applies to financial market participants and all companies that are subject to the Corporate Sustainability Reporting Directive and applied as of January 2022.[78] It establishes six environmental objectives, climate change mitigation, climate change adaptation, the sustainable use and protection of water and marine resources, the transition to a circular economy, pollution prevention and control, and the protection of biodiversity and ecosystems.[79] The European Commission established two delegated acts towards coming up with the actual list used to screen criteria for non-financial reporting by large companies. The first act, published in March of 2021, provided key messages relating to corporate sustainability reporting and preferences.[80] The second act, published in January 2022, included specific content, methodologies, and

---

[76] *EU Taxonomy for Sustainable Activities*, *supra* note 14.
[77] *Id*.
[78] *EU Taxonomy Navigator*, EUR. COMM'N, https://ec.europa.eu/sustainable-finance-taxonomy/ (last visited Nov. 27, 2022).
[79] *EU Taxonomy for Sustainable Activities*, *supra* note 14.
[80] *Id*.

presentation of information relating to sustainable economic activities in business and lending.[81]

In an effort to leverage technology, the Commission created the Taxonomy Compass, an online tool where users can navigate taxonomic requirements and contents.[82] The specifics of screen methodology were prepared by a Technical Expert Group (TEG) on sustainable finance.[83] Specifically, the Taxonomy Regulation uses 'turnover' and a combination of 'CAPEX and 'opex' to identify alignment with the EU Taxonomy.[84] Turnover measures the number of sales derived from the sale of products or services with a given taxonomic item, i.e., manufacturing. CAPEX measures capital expenditures, and OPEX measures operating expenditures.[85] CAPEX and OPEX give investors and regulators a perspective on long-term and short-term expenses pegged to a particular taxonomic item.[86] Additionally, the duo provides a layer of context for the credibility of a company's sustainable strategy through a financial lens.[87] The EU Taxonomy and accompanying regulation thereof provide a scientific approach to measuring sustainable finance at the firm and asset level.

B. *Overview of the Corporate Sustainability Reporting Directive (CSRD)*

EU law requires certain companies to report non-financial data, such as social and environmental challenges, to encourage companies to develop responsible approaches to business.[88] Companies are required to publish information relating to environmental matters, treatment of employees, human rights, anti-

---

[81] *Id*.
[82] *See EU Taxonomy Navigator*, *supra* note 78.
[83] EU TECH. EXPERT GRP. ON SUSTAINABLE FIN., TAXONOMY: FINAL REPORT OF THE TECHNICAL EXPERT GROUP ON SUSTAINABLE FINANCE 3 (2020), https://finance.ec.europa.eu/system/files/2020-03/200309-sustainable-finance-teg-final-report-taxonomy_en.pdf.
[84] *Id*. at 28.
[85] *Id*.
[86] See *id*.
[87] *Id*.
[88] *Corporate Sustainability Reporting*, EUR. COMM'N, https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en (last visited Nov 27, 2022).

corruption, and diversity on company boards.[89] The Non-Financial Reporting Directive (NFRD) laid the groundwork for these disclosures by certain companies.[90] The forthcoming CSRD amends the NFRD to account for more specific and verifiable reporting requirements.[91] Specifically, the CSRD requires an audit and assurance of the reported information and introduces a requirement to report according to the EU sustainability reporting standards, which are predicated on reports authored by the European Financial Reporting Advisory Group (EFRAG).[92] It also requires companies to submit information in a machine-readable way for efficiency and uniformity purposes.[93] The CSRD applies to large EU companies, defined as those exceeding two of three criteria, more than 250 employees; a turnover of more than €40 million; or total assets of €20 million.[94] The first reports are expected to be published in 2025.[95] CSRD general standards include environmental matters and social matters, and entities will disclose information about their business strategy in relation thereof, and sector-specific standards will be developed in relation to risks and sustainability matters of a relevant sector.[96] CSRD will also require companies to report on transition plans, diligence on the impact of value chains, and forward-looking disclosures.[97] Generally speaking, the CSRD significantly expands the scope and content of the EU's non-financial reporting frameworks.

[89] *Id*.
[90] *Id*.
[91] *Id*.
[92] *Id*.
[93] *Id*.
[94] *Corporate Sustainability Reporting*, *supra* note 88; *see also* Greg Norman et al., *Q&A: The EU Corporate Sustainability Reporting Directive – To Whom Does It Apply and What Should EU and Non-EU Companies Consider?*, SKADDEN (Oct. 9, 2023), https://www.skadden.com/insights/publications/2023/10/qa-the-eu-corporate-sustainability-reporting-directive.
[95] *Id*.
[96] *Corporate Sustainability Reporting*, *supra* note 88.
[97] *Id*.

C. *Overview of the Sustainable Finance Disclosure (SFDR) Regulation*

Tracking the general theme of increased transparency in the EU, the European Commission supplemented on April 6, 2022, a technical standard to be used by financial market participants in the form of the Sustainable Finance Disclosure Regulation (SFDR).[98] Also stemming from the proposal on sustainable finance, SFDR lays down sustainability disclosure obligations for manufacturers of financial products and financial advisors.[99] The approach is tied to the objective of various investment processes and financial products.[100] It also adds disclosure obligations with respect to the impacts of sustainability matters at the entity and financial product levels.[101] In this sense, SFDR aims to limit the impact of negative externalities resulting from investment advisors and on the reflection at the product level.[102] In administering SFDR, the European Commission decided to delay the application of the regulatory technical standards until January of 2022.[103] Effective securitization regulation will necessitate components from SFDR, given its twin focus on disclosures and impact forecasting at both the investment process and product level.

IV. EU GREEN BOND STANDARD

A. *Overview of the EU Green Bond Standard*

Intimately related to the subject of future disclosure requirements in green securitized products is the EU Green Bond Standard. Also borne out of the European Green Deal and sustainable financial plan, the EU GBS is a voluntary standard to help scale green bond market ambitions.[104] The regulation lays down uniform

---

[98] *SFDR*, EUROSIF (2021), https://www.eurosif.org/policies/sfdr/ (last visited Nov. 27, 2022).
[99] *See* Regulation (EU) 2019/2088 of Nov. 27, 2019, of the European Parliament and of the Council on sustainability-related disclosures in the financial sector, 2019 O.J. (L 317) 2.
[100] *Id.*
[101] *Id.* at 9, 11.
[102] *See id.*
[103] *Id.*
[104] *European Green Bond Standard*, *supra* note 2.

requirements for issuers of bonds that wish to use the designation of 'European Green Bond' or 'EuGB' for their sustainable bond issuances.[105] Specifically, it seeks to set up a gold standard for how companies and the public sector can commit capital to finance ambitious investments in sustainable finance.[106] The EU GBS also seeks to protect investors in the fast-growing green bond space.[107] The regulation is beneficial for issuers in terms of having access to a tool to demonstrate legitimacy, and investors can more easily compare financial products with a common framework. The four key requirements under the EU GBS are taxonomy alignment, transparency, external review, and supervision by the European Securities Markets Authority (ESMA).[108]

The EU GBS was strengthened by a 2018 Technical Expert Group (TEG) publication, which stressed the need for mandatory reporting of the use of proceeds of a green bond, mandatory verification by an external review, and access to the issuer's proposed sustainable project.[109] Establishing the green bond standard within the EU was included in a 2018 action plan on sustainable growth.[110] Afterward, it was assessed by the Commission's Technical Expert Group on Sustainable Finance, which was provided in 2019, and amended in a March 2020 usability guidance report.[111] The European green deal investment plan of January 14, 2020, announced the formal establishment of the EU Green Bond Standard.[112] The Council agreed to its position on the Green Bond Standard and is moving to the

[105] *Proposal for a Regulation of the European Parliament and of the Council on European Green Bonds*, at 1, COM (2021) 391 final (June 7, 2021).
[106] *Id*.
[107] *Id*.
[108] *Id*. at 2-7.
[109] *See* EU HIGH-LEVEL EXPERT GRP. ON SUSTAINABLE FIN., FINAL REPORT 2018 BY THE HIGH-LEVEL EXPERT GROUP ON SUSTAINABLE FINANCE (2016), https://finance.ec.europa.eu/system/files/2018-01/180131-sustainable-finance-final-report_en.pdf.
[110] *Financing the Climate Transition*, EUR. COUNCIL OF THE EUR. UNION, https://www.consilium.europa.eu/en/policies/climate-finance/ (last updated Dec. 11, 2023).
[111] *Technical Expert Group on Sustainable Finance (TEG),* EUR. COMM'N (June 13, 2018), https://finance.ec.europa.eu/publications/technical-expert-group-sustainable-finance-teg_en (last updated July 15, 2020).
[112] *European Green Bond Standard*, *supra* note 2.

negotiation phase with the European Parliament as of April 2022.[113] After adoption, the regulation will set the standard for companies and public authorities to leverage green bonds to raise capital and finance large-scale sustainable investments, while protecting investors and providing robust tools to issuers. When considering the potential for hundreds, if not thousands, of individual assets, debt securities, bonds, and credit facilities, regulation concerning green securitized products has a great deal to learn from the EU GBS. The EU GBS provides a framework for securitized product disclosures and demonstrates the workability of a future framework designed for the securitization space.

B. *EU Green Bond Standard Interplay*

The EU Green Bond Standard is relevant to the topic of securitization for several reasons. First and foremost, from a comparative standpoint, securitized products are often composed of bonds, so regulatory approaches could be similar from a technical perspective. In order to adequately protect investors and promote sustainable securitized products, legislative approaches should consider what works when regulating the components of said products. It is also worth noting that the EU Green Bond Standard framework is aligned with the EU Taxonomy regulation, which means that the proceeds of the bond need to be allocated under the criteria set forth in the Taxonomy.[114]

Secondly, the EU Green Bond Standard creates a designation specific to the issuer of sustainable bonds, the 'EuGB' designation.[115] With a designation specific to the green bond, issuers will be held to a higher standard compared to issuances of a traditional bond product. The EuGB designation may deter errant issuers attempting to capture

---

[113] Paul Tang, *Establishment of an EU Green Bond Standard: In "An Economy that Works for People*,*"* EUR. PARLIAMENT, https://www.europarl.europa.eu/legislative-train/theme-an-economy-that-works-for-people/file-eu-green-bond-standard (last updated Dec. 15, 2023).

[114] *Financing the Climate Transition,* COUNCIL OF THE EUR. UNION, https://www.consilium.europa.eu/en/policies/climate-finance/ (last updated Sept. 29, 2023).

[115] *Sustainable Finance: Council Agrees Its Position on European Green Bonds*, EUR. COUNCIL (Apr. 13, 2022, 1:35 PM), https://www.consilium.europa.eu/en/press/press-releases/2022/04/13/sustainable-finance-council-agrees-its-position-on-european-green-bonds/.

profits from green bonds while misleading investors. Increased compliance costs may also serve as a deterrent. External review post-issuance can be costly, but it can strengthen the credibility of the issuer and prevent greenwashing. An accreditation standard also serves to preserve quality and assurance throughout the issuance process. The EU GBS is administered by the European Securities and Markets Authority (ESMA), which will require that external reviewers be registered and approved by the ESMA.[116] Issuers will need to adhere to EuGB accreditation requirements or risk penalties because the ESMA is the regulator with authority over green bonds.[117] However, the ESMA has been wary of penalizing institutions in the green finance areas thus far. [118]

Thirdly, although not mentioned explicitly in the Commission's final proposal but included in the Technical Expert Group assessment, the introduction of a Green Bond Framework (GBF) would serve as an avenue for information gathering pre-issuance.[119] The TEG assessment includes six core components of a GBF.[120] The first is the environmental objectives of a green bond and how the issuer's strategy aligns with such objectives.[121] The second is the issuer's rationale for how the proposed green bond aligns with the EU Taxonomy.[122] The third is the description of the proposed projects that the green bond will finance or refinance.[123] Fourth, the issuer should track the allocation of investments from the bond to the projects financed.[124] Fifth, the issuer should include the methodology of impact

[116] *ESMA Responds to EU Green Bond Standard Consultation*, EUR. SEC. & MKTS. AUTH. (Feb. 10, 2020), https://www.esma.europa.eu/press-news/esma-news/esma-responds-eu-green-bond-standard-consultation.

[117] *About ESMA*, EUR. SEC. & MKTS. AUTH., https://www.esma.europa.eu/about-esma (last visited Nov. 27, 2022).

[118] *Sanctions and Enforcement*, EUR. SEC. & MKTS. AUTH., https://www.esma.europa.eu/esmas-activities/supervision-and-convergence/sanctions-and-enforcement#enforcement-actions (last visited Nov. 27, 2022).

[119] EU TECH. EXPERT GRP. ON SUSTAINABLE FIN., USABILITY GUIDE: EU GREEN BOND STANDARD1, 2 (2020), https://finance.ec.europa.eu/system/files/2020-06/200309-sustainable-finance-teg-green-bond-standard-usability-guide_en.pdf [hereinafter USABILITY GUIDE].

[120] *Id*. at 21-24.

[121] *Id*. at 21.

[122] *Id*. at 22.

[123] *Id*.

[124] *Id*. at 23.

metrics for alignment with EU Taxonomy and as otherwise appropriate.[125] Lastly, the GBF should include a description of the reporting, including frequency, content, and metrics post-issuance.[126] Although the six components are only a recommendation, they serve as a workable foundation for issuers to demonstrate the scope and compliance of an EuGB.

Fourth, the Green Bond Standard spawned the development of the Green Bond Principles (GBP), a voluntary standard created by the International Capital Markets Association (ICMA) that supports issuers in financing sustainable projects through green bonds.[127] However, for context, there was work on standards for green bonds dating back to the World Bank's issuance of the first green bond on behalf of Swedish pension funds in collaboration with CICERO, the Centre for International Climate and Environmental Research.[128] "Success ultimately came in November 2008, when the World Bank issued the green bond."[129] The bond "created the blueprint for today's green bond market" by "defin[ing] the criteria for projects eligible for green bond support, include[ing] CICERO as a second opinion provider, and add[ing] impact reporting as an integral part of the process."[130]

The ICMA recommends that issuers appoint an external reviewer to verify alignment with the GBP and to incorporate the GBP into the issuer's Green Bond Framework.[131] The four components for alignment with the GBP are Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds, and Reporting.[132] Use of Proceeds includes an appropriate description of the proceeds

---

[125] USABILITY GUIDE, *supra* note 119, at 23.
[126] *Id*. at 24.
[127] *Green Bond Principles (GBP)*, ICMA, https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/green-bond-principles-gbp/ (last visited Nov. 27, 2022).
[128] *10 Years of Green Bonds: Creating the Blueprint for Sustainability Across Capital Markets*, THE WORLD BANK (Mar. 18, 2019), https://www.worldbank.org/en/news/immersive-story/2019/03/18/10-years-of-green-bonds-creating-the-blueprint-for-sustainability-across-capital-markets.
[129] *Id*.
[130] *Id*.
[131] THE INT'L CAP. MKT. ASS'N, *supra* note 46, at 1, 7.
[132] *Id*. at 4.

used in the green bond.[133] Process for Project Evaluation and Selection includes clear communication to investors about the sustainability objectives of the eligible projects.[134] Management of Proceeds includes tracking net proceeds and adjustments to match allocations towards green projects during the period.[135] Reporting includes up-to-date information about allocation and fund proceeds, and annual reports, including descriptions of current financed projects.[136]

Fifth and finally, the EU Green Bond Standard is aligned with the EU Taxonomy, allowing the EuGB distinction to consider an already established regulatory system for classifying sustainable finance activities.[137] The use of proceeds from green bonds is to relate to economic activities that meet taxonomy requirements.[138] Although issuers often determine additional specificities of capital usage financed by green bonds, the issuer is still required to envisage the criteria and proposed usage of funds.[139] The four fundamental components of taxonomy alignment are: i) substantial contribution to environmental objectives, ii) do no significant harm to environmental objectives, (iii) minimum safeguards, and (iv) technical screening criteria.[140] Collectively, the EU Taxonomy classification system provides a foundation for EuGBs.[141] More importantly, however, is that the EU Taxonomy could serve as a foundation for future sustainable finance products. As relevant to this Note, and as will be discussed shortly, the interplay between the EU GBS and EU Taxonomy could translate to an effective framework for green securitization.[142]

---

[133] *Id*.
[134] *Id*. at 5.
[135] *Id*. at 6.
[136] *Id*.
[137] USABILITY GUIDE, *supra* note 119 at 2-3.
[138] *Id*. at 2.
[139] *Id*. at 36.
[140] *Id*. at 2.
[141] *Id*. at 11.
[142] *See* discussion *infra* Part V.

V. SUSTAINABLE FINANCE HEADWINDS AND THE EU GREEN BOND STANDARD

A. *Greenwashing*

Due to investors' growing interest in environmental, social, and governance issues, investors and governments are increasing pressure on companies and asset managers to disclose environmental and social performance information. For the purposes of this Note, sustainable finance and green investments include discussions of public perceptions, governmental regulations, and the increased investment in socially conscious initiatives. Increased investments in green and sustainable asset classes have led to an increase in marketing of these green efforts to stakeholders and investors. Amidst the rapid movement towards investing in sustainable asset classes, some public companies and asset managers are walking the line between promoting sustainable finance and bloated marketing to stakeholders with whom they may commit capital towards their investments. The phenomenon of greenwashing follows a proliferation in capital market products and services devoted toward green investments.

Greenwashing is defined as the intersection of two firm behaviors: poor environmental performance and positive communication about environmental performance.[143] From the public company perspective, this may manifest in management committing to lowering corporate office emissions while subsequently not acting to make their supply chain more sustainable. A bond issuer may label a security as 'green,' but metrics supporting a sustainable project may be opaque or difficult to discern. Companies may also simplify complex issues and use vague or unquantifiable terms when applying green labels. When assessing something as granular as a global supply chain on the local level, or a green bond used to finance an infrastructure project on the line-item level, it's difficult to compile reliable and verifiable outputs tied to environmental causes. In the EU there are several regulatory initiatives coming out of the European Green Deal that aim to remedy greenwashing and broader

---

[143] Sebastião Vieira de Freitas Netto et al., *Concepts and Forms of Greenwashing: A Systematic Review*, 32 ENV'T SCI. EUR. 1, 2 (2020), https://enveurope.springeropen.com/articles/10.1186/s12302-020-0300-3.

transparency shortfalls in sustainable finance.[144] However, even though there are frameworks in line for bonds, securities, and company-level disclosures, there is little in the way of regulation for securitized products. Entities composed of dozens, hundreds, or thousands of individual securities makes the challenge of preventing greenwashing even more tedious in the case of a securitized product.

For example, a loan or specific green bond is less complex than a securitization of a group of loans. A green bond may be used to fund a particular infrastructure project, the success of which is tied to the performance of the project using the proceeds of the bond. "The World Bank is a major issuer of green bonds and issued $14.4 billion of green bonds from 2008 through 2020.[145] These funds have been used to support 111 projects around the world, largely in renewable energy and efficiency (33%), clean transportation (27%), and agriculture and land use (15%).[146] One of the bank's first green issuances financed the Rampur Hydropower Project, which aimed to provide low-carbon hydroelectric power to northern India's electricity grid.[147] Financed by issuances of green bonds, it produces nearly 2 megawatts per year, preventing 1.4 million tons of carbon emissions."[148]

B. *Lack of Uniformity in 'Green' Assessments*

In addition to the problems posed by greenwashing, the approaches to quantifying and demonstrating sustainable finance are fragmented. This fragmentation leads to a lack of uniformity in understanding what is 'green' and how different stakeholders, issuers, and companies should measure their environmental footprint.[149] As more capital is committed to green bonds and ESG, the need for reliable and auditable ESG data has never been greater. This need largely stems from the fact that data inputs are fundamentally less structured, less complete, and of lower quality than financial data,

---

[144] *See* discussion *infra* Part II.
[145] Troy Segal, *Green Bond: Types, How to Buy, and FAQs*, INVESTOPEDIA (Sep. 21, 2022), https://www.investopedia.com/terms/g/green-bond.asp.
[146] *Id.*
[147] *Id.*
[148] *Id.*
[149] Simon MacMahon, *The Challenge of Rating ESG Performance*, HARV. BUS. REV. (Sept.-Oct., 2020), https://hbr.org/2020/09/the-challenge-of-rating-esg-performance.

which companies are required to present in a standardized form in many jurisdictions.[150] Some ESG data is available. However, it is still unclear or at least underdeveloped. Furthermore, creating ESG ratings usually is composed of identifying risks and assessing how well a given company manages its exposure.[151] In the case of green bond issuance, there is a further level of detail needed, and that is to assess future impacts. Achieving consistency across metrics and performance indicators is critical; without uniformity, ongoing monitoring is less likely. The EU Taxonomy system demonstrates a good illustration of the level and detail of verification that will be required to comply with reporting obligations.[152]

In addition to regulatory frameworks that present a government-led approach to unify environmental reporting, various private-sector research firms have emerged over the last decade to independently score firms on their environmental, social, and governance objectives. The ESG rating environment is largely unregulated, although credit ratings agencies are regulated, and there are dozens of different private players, ranging from traditional credit agencies to firms focused specifically on ESG.[153] However, the ESMA published a letter to the European Commission on June 27, 2022, relating to the market structure of ESG rating providers in the European Union.[154] ESMA concluded that the "most common shortcomings identified by the users were a lack of coverage of a specific industry or a type of entity, insufficient granularity of data, and a lack of transparency around methodologies used by ESG rating providers."[155] However, "the provision of ESG ratings on an issuer-pays basis was also evidenced and more prevalent than

[150] TIMOTHY DOYLE, RATINGS THAT DON'T RATE: THE SUBJECTIVE WORLD OF ESG RATINGS AGENCIES 5-9 (2018), https://accfcorpgov.org/wp-content/uploads/2018/07/ACCF_RatingsESGReport.pdf.
[151] *Id*. at 15-17.
[152] *See EU Taxonomy for Sustainable Activities*, *supra* note 14.
[153] *ESG Ratings: Measuring a Company's Resilience to Long-Term, Financially Relevant ESG Risks*, MSCI, https://www.msci.com/our-solutions/esg-investing/esg-ratings (last visited Nov 27, 2022).
[154] *ESMA Publishes Results of its Call for Evidence on ESG Ratings*, ESMA (June 27, 2022), https://www.esma.europa.eu/press-news/esma-news/esma-publishes-results-its-call-evidence-esg-ratings.
[155] *Id*.

anticipated."[156] The ESMA further concluded that most respondents, based on their responses, "highlighted some degree of shortcomings in their interactions with the rating providers, most notably on the level of transparency as to the basis for the rating, the timing of feedback, or the correction of errors."[157] Even the scales used by different rating agencies vary greatly. For example, MSCI, an experienced financial research firm introduced ESG Ratings offerings with a rating scale of AAA to CCC. On the other hand, ISS Environmental & Social Quality Score has a rating scale of 10 to 1.[158] Relatedly, many private companies do not disclose non-financial data, and self-reported and unaudited reports invariably present a validity problem.

Once a company or issuer discloses environmental data, it must be prepared to substantiate the environmental data, either for an auditor or a regulatory agency in the EU. Traditional financial disclosure by bond issuers and public companies is often accompanied by an assurance and audit function performed by an accounting firm.[159] The accounting firm provides an in-depth analysis designed to highlight inconsistencies, errors, and omissions in a client's self-reported financials.[160] The driving force behind this audit and assurance are strict requirements by government regulators relating to financial reporting for the benefit of shareholders of those companies. The Green Bond Standard could drive many of the same audit and assurance functions faced by public companies and accounting firms.

With an overarching EU Taxonomy and more product-specific requirements such as the Green Bond Standard, issuers will need to involve outside ratings and consulting firms when issuing new green bonds. Without a third-party auditor specialized in evaluating EU sustainable finance frameworks, there is too much reliance on self-reported metrics on behalf of issuers. While compliance costs will likely increase when retaining a third-party auditor, it will give

---

[156] *Id.*
[157] *Id.*
[158] *ESG Corporate Rating*, INST. S'HOLDER SERV., https://www.issgovernance.com/esg/ratings/corporate-rating/ (last visited Nov. 27, 2022).
[159] *See* Alicia Tuovila, *Generally Accepted Auditing Standards: Definition, GAAS vs. GAAP*, INVESTOPEDIA, https://www.investopedia.com/terms/g/gaas.asp (last updated July 31, 2023).
[160] *Id.*

shareholders, regulators, and stakeholders more assurance that a green product is, in fact, focused on an environmentally conscious objective or benefit. For example, the Big 4 Accounting firms, EY, Deloitte, PwC, and KPMG, developed a set of metrics for companies to use for environmental, social, and governance reporting internationally.[161] The International Business Council led the move "under the auspices of the World Economic Forum."[162]

The aforementioned tension between applying a uniform framework for environmental ratings and the subsequent audit and verification of those ratings only becomes amplified in the case of securitized products. An investor in a green securitized bond is essentially relying on each asset or investment in the securitized pool to follow the EU Taxonomy, the Green Bond Standard, and to have its green claims independently verified. As will be discussed in the next section in this Note, the Green Bond Standard will be instrumental to a framework tailored towards securitization.[163]

VI. THE EU'S FRAMEWORK FOR ASSET SECURITIZATION

A. *Asset Securitization Explained*

Securitized products are made up of pools of financial assets that are consolidated into a singular security that is then sold to individual investors. Each securitized asset is priced according to the financial performance of the underlying financial assets, making the investment difficult to analyze, but they have their benefits.[164] Anything from a residential or commercial mortgage backed securities (RMBS and CMBS) to student loans and credit card receivables can be pooled to create a new securitized product.[165] Technically speaking, the assets underlying a securitization are placed into a special purpose vehicle (SPV), which is a separate legal entity.[166] Further, the

---

[161] Gillian Tett, *Big Four Accounting Firms Unveil ESG Reporting Standards*, FIN. TIMES (Sept. 22, 2020), https://www.ft.com/content/16644cb2-f0c1-4b32-b44c-647eb0ab938d.
[162] *Id.*
[163] *See* discussion *infra* Part IV.
[164] *Id.*
[165] *Id.*
[166] *Id.*

securitized product itself is "usually split and sold in separate tranches," each tranche can have different characteristics, usually associated with a risk profile, appealing to different types of investor appetites.[167] Securitization most often occurs with different types of consumer or commercial debt by pooling contractual debts into one tradeable security.[168] Largely the focus of this Note is bonds backed by mortgages, mortgage-backed securities (MBS), and bonds backed by non-mortgage-related financial assets called asset-backed securities (ABS).[169]

The usual creation of a securitized bond starts with a financial institution selling assets to an SPV, where the SPV exists only to purchase the institution's assets.[170] The financial institution receives cash for the assets, therefore removing the assets from its balance sheet in an exercise that leaves the institution with greater financial flexibility.[171] The SPV issues bonds to finance the asset purchase, which are traded in a marketplace under the designation of "securitized products." [172] The products are then issued in tranches, smaller pieces of the larger deal, to appeal to investors seeking different yields, cash flows, and safety.[173] Tranches can have special credit enhancement safeguards such as subordination, cash flow distribution according to rating of tranche, and over-collateralization, where "the amount of bonds issued by the SPV is less than the asset value backing the deal."[174]

In the CMBS context, the mortgage loans that form a single CMBS act as collateral in the event of default, with principal and interest passed on to investors.[175] The loans are usually held within a trust and can be highly diversified in their terms, property types, and amounts.[176] The underlying loans could include loans for apartment

---

[167] *Id.*
[168] *Id.*
[169] *See* discussion *infra* Part V.
[170] *See* Perry, *supra* note 74.
[171] *Id.*
[172] *Id.*
[173] *Id.*
[174] *Id.*
[175] Carol M. Kopp, *What is a Commercial Mortgage-Backed Security (CMBS)?*, INVESTOPEDIA, https://www.investopedia.com/terms/c/cmbs.asp (last updated Oct. 25, 2022).
[176] *Id.*

buildings, factories, hotels, office buildings, shopping malls, etc.[177] CMBS are extraordinarily complex, and "they require a wide range of market participants" such as "investors, a primary servicer, a master servicer, a special servicer, a directing certificate holder, trustees, and rating agencies."[178] Generally, CMBS "can provide liquidity to real estate investors and commercial lenders alike."[179]

In the ABS context, the securitized product is collateralized by assets "that generate a cash flow from debt, such as loans, leases, credit card balances, or receivables."[180] The security takes the form of a bond or note which pays at a fixed rate until maturity.[181] The underlying assets can range from home equity and automobile loans to credit card receivables and student loans.[182] Buying an ABS affords an investor the opportunity of a revenue stream in "a wide variety of income-generating assets" that are not available in other investment vehicles.[183] For example, an automobile loan financier would give a borrower the cash requisite to the borrower to purchase the car.[184] The borrower is obligated to repay the loan with a certain interest.[185] If the loan financier makes enough loans that it starts to deteriorate its cash base, it can package its current loans in exchange for cash to an investment firm.[186] As a result, the financier can continue to lend to more borrowers, and so on and so forth.[187] The investment firm would then divide the loans, establish tranches, and issue securities on each tranche it creates for the eventual sale to investors, which receive cash flows from the underlying pool of auto loans.[188]

---

[177] *Id.*
[178] *Id.*
[179] *Id.*
[180] James Chen, *Asset-Backed Security (ABS): What It Is, How Different Types Work*, INVESTOPEDIA, https://www.investopedia.com/terms/a/asset-backedsecurity.asp (last updated Feb. 17, 2023).
[181] *Id.*
[182] *Id.*
[183] *Id.*
[184] *Id.*
[185] *Id.*
[186] Chen, *supra* note 180.
[187] *Id.*
[188] *Id.*

B. *Overview of Securitization in Sustainable Finance*

1. Macro Landscape of Green Securitizations in the EU

The European Union has introduced various initiatives to facilitate the green transition in financial markets. Several types of green securitizations can be identified. The first is a securitization with green collateral. For example, where asset-backed securities are backed by portfolios of green assets, such as electric vehicle loans, solar leases, or mortgages to finance energy-efficient homes. Another type of green securitization is when the proceeds of the asset-backed securities are used for investment in subsequent green projects, such as an infrastructure project. Another type is where an originator of asset-backed security uses the freed-up capital to invest in green projects.

The main differences between conventional securitizations and green securitizations are that the assets backing the securities are sustainable, the fund structures of future securitizations are sustainable, the use of proceeds can fund sustainable projects, and the investor base is generally concerned with the potential of sustainability.[189] One of the main roadblocks to the green securitization market is that in the past, there simply weren't enough sustainable assets, such as consumer loans and mortgages, commercial mortgages, or corporate bonds.[190] However, the OECD estimates that by 2035, sustainable asset-backed securities issuance could rise to $380 billion per year, leapfrogging the scarcity hurdle.[191] There will likely be three main types of green securitizations: asset-backed securities (ABS), mortgage-backed securities (MBS), and collateralized loan obligations (CLO).[192]

Sustainable CLOs come from "existing sustainable loans on a bank's balance sheet."[193] The loans are made to public or private companies to finance capital-intensive projects, such as an acquisition

---

[189] *See* Chris McGarry et al., *Sustainable Securitisation*, WHITE & CASE (May 18, 2018), https://www.whitecase.com/insight-alert/sustainable-securitisation.
[190] *See id.*
[191] *Id.*
[192] *Id.*
[193] *Id.*

or an infrastructure project.[194] The loans are effectively purchased by an SPV, moving the loans off the banks' balance sheet, which frees up more capital for the bank for more sustainable loans, and the SPV can maintain these loans until a large enough volume is reached for purchase by investors.[195] With over $90 trillion needed for infrastructure financing over the next fifteen years, sustainable CLOs will be vital to the green financing transition.[196] From the automobile ABS standpoint, several large auto manufacturers have issued green ABS products "backed by leases on electric vehicles."[197] Furthermore, auto rental companies and ride-share providers are exploring the use of green fleets, emphasizing the likelihood of green auto ABS products.[198] Solar ABS follows a similar trajectory to green auto ABS, whether residential solar panel loans or on the commercial level.[199] Lastly, sustainable MBS will grow in connection with net-zero building development on the commercial and residential levels.[200] The "availability of recognized standards" such as LEED and Energy Star makes it possible to form the basis of securitized MBS products.[201]

2. Examples of Green Securitizations Generally

To illustrate securitization playing a role in the broader ESG movement, in the CMBS context, Goldman Sachs marketed the first-ever European green CMBS in January 2020, structured around a €196.2 million loan to acquire an office property near Paris.[202] The loan facilitated the acquisition of a campus-style property by a group of investors, and the property was awarded a Building Research Establishment Environmental score of "very good," the third-highest ever at the time.[203] Further, an independent analytics firm,

---

[194] *Id.*
[195] *Id.*
[196] McGarry, *supra* note 189.
[197] *Id.*
[198] *Id.*
[199] *Id.*
[200] *See id.*
[201] McGarry, *supra* note 189.
[202] Jake Mooney, *Goldman Sachs Markets 1st European Green CMBS Deal*, S&P GLOB. MKT. INTEL. (Jan. 4, 2020), https://www.spglobal.com/marketintelligence/en/news-insights/trending/mrwetzfa-yq02e_nmxpcoa2.
[203] *Id.*

Sustainalytics, reviewed the transaction and concluded that it is aligned with the ICMA principles.[204] By doing so, sustainability-conscious real estate investors can invest in the CMBS bond and its cash flows without having to invest in the hard real estate asset itself. Thus far, the green CMBS market has been largely limited to single-asset and single-borrower structured transactions.

In the ABS context, Toyota introduced the first-ever asset-backed green bond in the automotive industry in 2014.[205] Toyota has issued six green bonds totaling $7.6 billion as of December 2021, all of which were, again, reviewed by Sustainalytics.[206] The securitized products provided by Toyota's bond criteria are the vehicle possessing a hybrid or alternative fuel powertrain or electric vehicle, having a minimum MPG, and having a satisfactory smog rating under Environmental Protection Agency (EPA) standards.[207] In this example, Toyota aggregates loan balances on several thousand vehicles and issues securitized products that distribute payments on the unpaid principal balances held by Toyota Finance Corporation. In doing so, Toyota is offering investors the opportunity to invest in future cash flows provided by borrowers that own sustainable vehicles or electric vehicles.

In an example of a green securitization vehicle applied to the data center space, in December 2021, Flexential, a leading provider of data center connectivity, completed the largest single asset ABS issuance in the data center space.[208] The company issued the green notes under its own Green Finance Framework, which creates a new standard for green eligibility in the data center industry.[209] The framework offers stringent requirements for data center infrastructure, such as water cooling and ongoing reporting of the operational performance of the assets.[210] In total, "a wholly owned

---

[204] *Id.*
[205] *Green Bond Program*, TOYOTA FIN., https://www.toyotafinancial.com/us/en/investor_relations/green-bond-programs.html (last visited Nov 27, 2022).
[206] *Id.*
[207] *Id.*
[208] *Flexential® Completes $2.1 Billion Inaugural Securitization Financing, the Largest-Ever Data Center and Green Bond ABS Issuance*, FLEXENTIAL (Dec. 2, 2021), https://www.flexential.com/resources/press-release/flexentialr-completes-21-billion-inaugural-securitization-financing-largest.
[209] *Id.*
[210] *Id.*

subsidiary of Flexential issued $1.6 billion green ABS notes as part of a debut $2.1 billion entrance into the U.S. ABS market" with 90% of the notes rated investment grade, and further, the Green Finance Framework "aligns to the core components of the International Capital Market Association (ICMA)'s Green Bond Principles."[211] Renewable energy is yet another area where securitization can expand the horizon of sustainable finance. For example, in April 2022, Mosaic, a leading financing platform for U.S. residential solar, announced a milestone of $7 billion in loans funded.[212] The company also completed a $382.7 million securitization, it's twelfth over the course of six years.[213] The EU has yet to gain traction in the solar ABS market.[214] However, Spanish company Perfecta is looking to deploy €50 million in the form of a securitization fund aimed at residential solar.[215]

C. *Current Securitization Frameworks*

1. EU Securitization Framework Regulation

In January 2019, the Securitization Framework came into force, setting common standards for all securitizations and defining criteria for a more workable regulatory framework.[216] The regulation lays down a framework for simple, transparent, and standardized

---

[211] *Id.*
[212] *Mosaic Surpasses $7 Billion in Loans Funded for Residential Solar and Sustainable Home Improvements*, MOSAIC (Apr. 21, 2022), https://joinmosaic.com/2022/04/21/mosaic-surpasses-7-billion-in-loans-funded-for-residential-solar-and-sustainable-home-improvements/.
[213] *Id.*
[214] Richard Metcalf, *Sunshine-Backed Bonds Tipped for Take-Off in Europe*, INT'L FIN. REV. (June 15, 2022, 11:20 AM), https://www.ifre.com/story/3407176/sunshine-backed-bonds-tipped-for-take-off-in-europe-x8j9g1qs4c.
[215] Zbigniew Chechliński, *Perfecta Launches Spain's First Solar Securitization*, GLOBALCAPITAL (July 28, 2022), https://www.globalcapital.com/securitization/article/2af35ka0xkrusyt8qv75s/securitization/abs/perfecta-launches-spains-first-solar-securitization.
[216] Regulation (EU) 2017/2402 of the European Parliament and of the Council of 12 December 2017 laying down a general framework for securitisation and creating a specific framework for simple, transparent and standardised securitisation, and amending Directives 2009/65/EC, 2009/138/EC and 2011/61/EU and Regulations (EC) No 1060/2009 and (EU) No 648/2012, art. 48, 2017 O.J. (L 347) 35, 43 [herinafter Regulation 2017/2402].

securitization (STS standards).[217] The EU Securitization Regulation contains a number of principal measures relating to securitized transactions: Due Diligence (Article 5), Risk Retention (Article 6), Transparency (Article 7), Credit Granting (Article 9), STS Qualification (Articles 18 to 27), Third Party Verifiers (Article 28), and Supervision for Breach.[218]

Due Diligence in Article 5 imposes the requirement that institutions verify credit granting standards, exposure reviews, risk retention requirements, and originator transparency compliance requirements under Article 7 of the regulation.[219] An institution also must consider the contractual priorities of payment and transaction-specific definitions of default. After a due diligence assessment, an institution must establish ongoing monitoring procedures and compliance protocols, including stress tests and internal maintenance of risk management policies.[220] The institution may also delegate due diligence requirements to another investor authority.[221]

Risk Retention requirements under Article 6 require that originators, sponsors, and original lenders retain a net economic interest in the securitization of not less than 5%.[222] This includes retention of not less than 5% of the nominal value of each tranche, securitizations of revolving exposures, randomly selected exposures, and first loss tranches, if less than 5%, not less than 5% in similar risk profile tranches.[223] Originators cannot securitize assets intentionally to move high-risk assets off of the balance sheet.[224] Article 6 also required that the European Banking Authority (EBA) technical standards of greater detail specify risk retention requirements, the sole purpose sets for comparable assets, and resecuritizations (which is generally prohibited under Article 8: Ban on Resecuritization).[225]

Transparency requirements under Article 7 require that information on underlying exposures is published quarterly,

[217] *Id*. at art. 1.
[218] *Id*. at arts. 5, 6, 7, 9, 18-27, & 28.
[219] *Id*. at arts. 5 & 7.
[220] *Id*. at art. 5.
[221] *Id*.
[222] Regulation 2017/2402, *supra* note 216.
[223] *Id*. at art. 6.
[224] *Id*.
[225] *Id*.

including final offering document and prospectus, asset sale or transfer agreement, derivatives and guarantee agreements, servicing agreements, deeds, and inter-creditor agreements.[226] If no prospectus is provided, then a transaction summary is required, including structure details and diagrams, exposure characteristics such as cash flows, loss waterfalls, and the ownership structure, and details regarding voting rights. Article 7 also require quarterly investor report equipped with performance of underlying exposure, change of payment rules, and risk retention information.[227]

Credit Granting, under Article 9, includes the general premise that originators, sponsors, and original lenders apply the same sound credit-granting criteria to securitizations that are applied to non-securitized exposures.[228] Originators, sponsors, and original lenders are also required to have systems in place that ensure the creditworthiness of obligors.[229] STS securitization, under Articles 18-26, sets out general principles relating to simplicity, standardization, and transparency.[230] The EU Securitization Regulation required ESMA to draft a technical standard specifying what information is required for an STS designation.[231] An STS designation demonstrates that an originator reports underlying exposures, restrictions on derivative positions, and historical loss and default data covering a period of at least 5 years.[232] The ESMA published a template form containing what information is required for the notification and designation.[233] Article 28 enables originators and sponsors to use the services of an authorized third-party verified to assess compliance with the STS criteria.[234] However, the originator and sponsor are still liable for incorrect information and this does not remove the obligation that institutional investors assess whether an STS label actually satisfied the criteria.[235]

---

[226] *Id*. at art. 7.
[227] *Id*.
[228] Regulation 2017/2402, *supra* note 216, at art. 9.
[229] *Id*.
[230] *Id*. at arts. 18-26.
[231] *Securitisation*, *supra* note 75.
[232] Regulation 2017/2402, *supra* note 216, at art. 24.
[233] *Securitisation*, *supra* note 75.
[234] *Id*.
[235] *Id*.

Articles 29-37 provide for the designation of competent authorities, powers of competent authorities, macroprudential oversight of the securitization market, administrative sanctions and remedial measures, criminal sanctions, and notification requirements. Generally, institutions are to be supervised by their respective competent authorities, depending on the type of institutions, for example, the ESMA for alternative fund managers.[236] The relevant authorities are contained in more foundational regulations that govern relationships between EU regulators and financial services companies more broadly, similar to how the Securities and Exchange Commission (SEC) and the Commodities Futures Trading Commission (CFTC) independently regulate equities and commodities, respectively. In addition to the EU Securitization Regulations, the EU Green Bond Standard lays out some relevant provisions to the securitized products space. The framework is also intended to be usable for issuers of securitizations, where the underlying securities are issued by an SPV.[237]

D. *Deficiencies in Green Securitization*

There are a few core considerations across Environmental, Social, and Governance in securitized assets. Although Social and Governance considerations are not paramount to this Note, unpacking them sheds light on the complexities of the broader sustainability movement. In the Social context, it's important to understand where a loan serves the needs of the borrower, in addition to the lender and securitization investors. From a Governance perspective, it's important that the relevant documentation and structure of the securitized transaction provide adequate investor protection. In the Environmental context, the underlying assets of a securitization should assess whether there are first- or second-order exposures to climate change or pollution risks.

Three core headwinds in the green securitization space are greenwashing, scalability problems, and overestimating the prospect of de-risking. As discussed in the broader sustainable finance context, greenwashing encompasses the range of intentionally misleading acts of overstating the degree to which a particular product is green. In the

[236] *Id.*
[237] *Id.*

securitization context, widespread greenwashing could undermine the classification of securitized products as green. Considering that securitized products are often composed of dozens, hundreds, or even thousands of underlying obligations, whether leases or loans, the risk of greenwashing is magnified. Furthermore, given the relative opacity of securitized assets, tracking and verifying sustainability could be increasingly costly and difficult for investors to accomplish. For example, in the case of a multi-property CMBS transaction, it would be difficult to ensure consistency across the underlying portfolio of commercial loans. Specifically, the delta in LEED scores, energy efficiency, or otherwise, could vary greatly between loans in a single securitized product. Greenwashing could become even greater of an issue if bonds underlying a securitized product are used to finance future projects instead of existing performing loans or leases. Relatedly, given the relative difficulty in quantifying some sustainability metrics, overstatements or misstatements of how 'green' a securitized product are likely to be an ongoing symptom of green securitization. In other words, the metrics used to verify the green status of a securitized product are likely to vary across a pool of underlying securities and between asset classes.

The second major headwind is scalability, or the potential for securitized products to accumulate investment capital in the short term. In the automobile and solar ABS context, scalability is less of an issue, given large automobile finance corporations and residential solar panel financiers have thousands of individual loans to pool into the underlying basis of an ABS. However, in the CMBS context, there is simply less in the way of existing green loans to establish large-scale pools for securitization. For example, as of this writing, the only green CMBS transactions in the EU were single property single borrower transactions, meaning only one green building was involved. For scalability to break through to CMBS and large-scale infrastructure projects, there has to be a sufficient amount of financing transaction volume to support securitization. Large-scale efforts by the largest economies in the EU may drive more volume toward green commercial real estate and infrastructure projects. Toyota Finance Corporation provides an example of underlying green loans reaching a sufficient volume for securitization.[238] Toyota Motors manufactures

[238] *Green Bond Program*, *supra* note 205.

thousands of electric vehicles and alternative powertrain vehicles. After Toyota Finance Corporation financed a sufficient number of loans after customers purchased vehicles from Toyota Motors, investors were able to commit capital towards green automobile ABSs issued by Toyota Finance Corporation.[239] However, there is still a relatively low volume of green ABS compared to the broader conventional ABS market in Europe.

The third headwind facing the green securitization market is de-risking; pooling together loans from similar borrowers, with the result being a securitized product, reduces risk to an investor. Securitization is premised on the time-tested market acceptance that, economically and financially speaking, a pool of debts is less risky to an investor than a single debt. However, there isn't much legal, regulatory, or private sector infrastructure in the green securitization space compared to conventional securitized products. While the solar panel lease and electric vehicle lease ABS products can be relatively uniform, especially when issued by the financing arm of an automobile or solar panel manufacturer, the same may not be true of other green securitization spaces, such as CMBS and CLOs. Even within green ABS transactions, there could be significant variations in creditworthiness underlying the individual loans, which were pooled and subsequently sold off to investors. Therefore, while all else being equal, securitization should, in theory, reduce risk; when applied to green securitized products, there could be increased risk inherent in the lack of uniform sustainability measurement standards. Specifically, in a hypothetical transaction with multiple green commercial mortgage loans, the extent to which each loan finances a green project, and the extent to which the project itself is green, will likely vary significantly. The rationale could be extended to CLOs, RMBS, and ABS when the underlying assets vary in value and sustainability factors.

VII. TOWARDS UNIFORMITY IN THE GREEN SECURITIZATION MARKET

A. *Relevance of the SFDR, CSRD, EU GBS, EU Taxonomy, and Securitization Regulation*

Each of the EU SFDR, EU Green Bond Standard, the EU Taxonomy, and the Securitization Regulation contain frameworks and

[239] *Id.*

approaches that could be extrapolated to the sustainable securitization space. The EU SFDR is relevant to CLOs, as the regulation imposes requirements on ESG reporting by companies. The EU GBS and Securitization regulation are increasingly relevant for vehicles such as CLOs, CMBS, RMBS, and various ABS transactions. Lastly, as an overarching taxonomic lexicon for the sustainable finance movement, the EU Taxonomy could integrate with green securitizations.

The EU SFDR provides a strong foundation for green securitization because it applies to financial market participants, like asset managers.[240] It lays out provisions for considering sustainability risks in connection with investment processes and the provision of sustainability-related information for financial products.[241] SFDR compliance will likely encompass an asset manager's or other financial institution's promotion of a securitized product or why the institution invested in the security in the first place. While not directly related to securitization, SFDR will likely cross paths with securitized products when, for example, an asset manager incorporates CMBS or green ABS products into its overall portfolio mix. As such, the asset manager will be required to disclose how ESG factors are integrated on an entity and a product level.

The EU CSRD applies to corporate disclosures by certain large corporations. Again, while not directly related to securitization, it isn't hard to imagine a scenario where CSRD plays a role in the green securitized products space.[242] For example, a large public company issuing a green ABS will likely have already disclosed significant non-financial information as required by CSRD. This reporting may have been in connection with regular financial disclosures or a distinct set of disclosures relating to environmental impacts. As an added layer of investor confidence with securitized products, large companies under CSRD are reporting sustainability impacts more generally. Therefore, when deciding whether a particular green CMBS or green CLO is verifiably a sustainable finance investment, an investor could look to CSRD disclosures made by an issuing company if such disclosure exists. While an imperfect match, CSRD disclosures could be paired

[240] Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector (text with EEA relevance).
[241] *Id.*
[242] *Corporate Sustainability Reporting*, *supra* note 88.

with product-level analysis to evaluate a securitized product issuer's history in limited scenarios.

The EU Taxonomy is relevant to most, if not all, sustainability-linked financial products. It essentially provides a lexicon for determining how to measure a green investment and for identifying what is considered green in the first place.[243] As such, the EU Taxonomy is likely to be implicated with any sustainable securitized product. Underlying securities of securitized products, such as green auto loans or green commercial properties, are likely to have been screened under the Taxonomy framework prior to issuance for investment. An investor in a securitized product likely will receive the benefit of the EU Taxonomy regulation being in effect as a preliminary layer of protection, similar to CSRD. However, unlike CSRD's more correlation-centric relationship to securitized products, the securities making up a green CMBS or green CLO may have already been screened under strict taxonomic requirements.

The EU Securitization Regulation is particularly relevant to green securitizations because there is not yet a regulatory framework designed specifically for green securitized products.[244] As such, green securitization will likely have to follow the EU Securitization regulation. Here, much like the EU Taxonomy, investors receive the benefit of the additional screening and compliance requirements under the Securitization Regulation. An end investor of a green securitized product receives the benefits of prior disclosures, reporting, and structuring requirements under the Securitization Regulation.

The EU Green Bond Standard, as a regulatory framework targeted at debt securities, is increasingly relevant to securitized products.[245] The four prongs of GBS––taxonomy-alignment, transparency, external review, and supervision by the ESMA––serve as a compelling prototype for green securitization regulation.[246] Given that many securitized products are composed of bonds, the EU GBS is yet another layer of preliminary verification enjoyed by an end investor. For example, an issuer could package some amount of green bonds into one securitized product for subsequent sale to investors. In

243 *EU Taxonomy for Sustainable Activities*, *supra* note 14.
244 *See* Regulation 2017/2402, *supra* note 216.
245 *See European Green Bond Standard*, *supra* note 2.
246 *Id*.

this case, the original individualized green bond issuers would have already had to follow the EU GBS. Therefore, not only does an investor receive an added layer of screening, but so does the subsequent issuer of a securitized product which is composed of green bonds. Specifically, the investor and the issuer both receive the benefit of the prior issuer's due diligence and compliance costs as a result of EU GBS authority.

B. *European Banking Authority Report on Securitization*

In February 2022, the European Banking Authority (EBA) published a report which analyzed the recent developments in introducing sustainable finance to the EU securitization market.[247] Generally, the report explores how the European Union green bond standard (EU GBS), EU Taxonomy, and Sustainable Finance Disclosure Regulation (SFDR) can be applied to securitization.[248] It also explored sustainability-related disclosures and the relevance of a dedicated framework to securitization.[249] The report concentrates on two areas relating to current regulatory frameworks and measurement issues.[250] It starts by unpacking the relation of the EU Taxonomy and the SFDR to securitization and concludes that they do not apply.[251] Then, the report highlights that while debt finance can incorporate environmental, social, and governance (EGS) performance, securitized products will likely include a variety of parties and various underlying assets and structuring arrangements.[252] The EBA report provides two recommendations relating to the effective regulation of sustainable securitized products that remedy the aforementioned inconsistencies in regulating green securitized products.[253]

---

[247] *See generally* EUR. BANKING AUTH., EBA/REP/2022/06, EBA REPORT ON DEVELOPING A FRAMEWORK FOR SUSTAINABLE SECURITISATION (2022), https://www.eba.europa.eu/sites/default/files/document_library/Publications/Reports/2022/1027593/EBA%20report%20on%20sustainable%20securitisation.pdf [hereinafter EBA/REP/2022/06].
[248] *See id*. at 6-10.
[249] *See id*. at 8.
[250] *See id*. at 1.
[251] *See id*.
[252] *See id*.
[253] *See* EBA/REP/2022/06, *supra* note 247, at 7-8.

The first recommendation is the premise that the EU GBS needs to apply to securitization.[254] To do this, the EBA recommended shifting the use of proceeds requirements of GBS from the issuer level to the originator level, meaning from the entity that pools debt into portfolios to the entity that markets financial instruments and creates tranches.[255] Specifically, the implication is that collateral wouldn't have to be taxonomy-compliant; just the use of proceeds would.[256] However, this approach would allow issuers to securitize debt that isn't backed by green assets but would ensure that its subsequent use of proceeds would be required to finance new green assets. The justification for this approach is two-fold. First, there aren't a lot of green assets to securitize, and only a small proportion of taxonomy-compliant assets are on the market.[257] Second, the use of proceeds requirement already applies to other types of green bonds.[258] From an administrative standpoint, the EBA elaborates that originators would just include provisions in transaction documentation concerning the use of proceeds requirement.[259] This shift from the issuer to the originator would require that additional EU GBS disclosure requirements be imposed so investors are aware of the underlying portfolio.[260] Originators would have to provide information for investors to perform their ESG due diligence and would help ensure that green assets are being purchased with the use of proceeds and that investors can compare green credentials with an originator's balance sheet.[261] While this approach and its concerns have merit, they are likely missing the mark on effective investor protections and incentives to foster green securitization.

First, to effectively promote green securitized products, the underlying assets of an ABS, CMBS, or CLO should be taxonomy-compliant.[262] Otherwise, under the EBA's approach to shifting requirements to the originator level, the first swath of securitized

[254] *Id*. at 7.
[255] *See id*. at 7, 32-33.
[256] *See id*. at 32.
[257] *See id*.
[258] *See id*.
[259] *See* EBA/REP/2022/06, *supra* note 247, at 32-33.
[260] *See id*. at 33.
[261] *See id*.
[262] *See id*. at 32, 39.

products could be backed by any number of assets unrelated to sustainability.[263] Not only does this cut against the foundation of green securitized products, but it could also be detrimental to investors. For example, a pool of auto loans could optimistically be a blend of both EV loans and conventional power train loans. While the use of proceeds would be required to invest in subsequent 'green' debt, an investor holding the aforementioned 'blended' ABS is not investing in taxonomy-compliant security. The thesis for investing in this product is distinct from that to which a green securitization framework would apply. Further, to verify the portfolio mix of this ABS, investors might have to devote additional capital and resources toward understanding the composition of green versus conventional auto loans. A similar thought process could apply to CMBS, as a blended product would consist of conventional hard assets and more sustainable ones. A better solution, instead of shifting responsibility to the issuer from the originator, comes in two parts.

The first part is concise, maintaining responsibility on the originator to preserve uniformity in green securitized product issuance to the market through compliance with the EU Taxonomy at the collateral level. Even though there are a relatively small amount of taxonomy-compliant assets out in the market, scarcity does not in itself justify green securitized products backed by assets that are not sustainable. If the underlying assets of green securitized products are verified to be green, then the product should not be regulated as such. Otherwise, as the EBA would suggest, the market would be littered with a quasi-green securitized product backed entirely by assets that are not taxonomy compliant, welcoming greenwashing with open arms.[264] There are, of course, solutions to the scarcity dilemma and increased costs on the originator. The solutions to scarcity will be discussed later in this Note. The solution to increased costs on the originator is relatively straightforward: the originator is selling the securitized product and can work through its own internal calculus to achieve profitability. An originator of a green bond has a significant upside given the low supply of said bonds and extremely high investor demand. Any increased costs on the originator are the cost of doing business and a small price to pay to deliver highly sought-after

[263] *See id*. at 32.
[264] *See id*. at 39.

products to an undersaturated market. In addition, securitized products should be regulated similarly to the EU GBS framework at the issuer level. Issuers should be required to verify the use-of-proceeds will be committed towards investment in green financial products.

The second part of a solution to address the EBA's approach to regulating solely at the issuer level is to apply some requirements on the issuer while, as mentioned prior, maintaining primary regulation on the originator. While underlying assets should be taxonomy-compliant, and the issuer should remain compliant with an EU GBS style use-of-proceeds requirement, the issuer could have some flexibility when creating tranches. In traditional securitized products, such as a CMBS, tranches are hierarchal in terms of risk profile and repayment rights. A 'AAA' tranche, for ease of demonstration, will carry a lower yield but primary repayment rights compared to a 'CCC' tranche, which will carry a higher yield, but with the risk that an investor will be last in line for default, liquidation, or repayment purposes. A similar rating approach could be applied to tranches or overall ratings throughout the portfolio. Once an issuer receives confirmation that an originator's portfolio is taxonomy-compliant, it can further evaluate the pool's sustainability. For example, if a CMBS is composed of otherwise similar mortgage debt, tranches could group the most sustainable pieces accordingly. While not necessary, rating tranches based on relative sustainability could further protect and educate investors in sustainable securitized products. Lastly, the use of proceeds from the sale could be evaluated to determine the extent to which proceeds are used to finance subsequent green projects by the issuer. Portfolios could subsequently be measured based on the combination of green collateral and green use of proceeds and rated accordingly.

The second recommendation is the impracticability of a dedicated framework toward sustainable securitized products.[265] The EBA report advises that there are several reasons to approach a dedicated framework cautiously: (1) the EU green securitization market is in its early stages; (2) the are insufficient green assets to securitize and support a collateral-based approach; (3) the EU GBS has not been adopted yet; and (4) no green parallel framework is currently

[265] *See* EBA/REP/2022/06, *supra* note 247, at 35-36.

considered for other asset-back securities. [266] The EBA report acknowledges that the underlying incentive for investors in ESG investments that are contingent on the performance of underlying assets with green use.[267] Further, the report specifies that a separate regulatory framework in an industry where there is not yet a market consensus would cause confusion among originators, issuers, and end investors.[268]

The EBA report's discussion on this matter is sound. However, there might be a middle ground where some regulation is specifically tailored to securitized products as an extension of existing frameworks. Between the EU Taxonomy, the EU Securitization Regulation, and the EU GBS, securitized products could be regulated without an entirely distinct regulatory framework. The EU Taxonomy is a readily verified source of compliant sustainable assets to be subsequently securitized. The EU Securitization Regulation generally provides comprehensive regulation encompassing the entire securitization process generally. And the EU GBS provides standards specific to bonds, which is a significant underlying instrument often securitized. Furthermore, in the case of the SFDR and CSRD, corporate debt is likely to be verifiable for CLO products. While a separate legal framework is likely too costly, cumbersome, and confusing for green securitized products, there could be a public-private authority providing voluntary guidance and best practices tools to originators. To effectively regulate and promote sustainable securitization, the aforementioned regulatory frameworks provide a comprehensive legal program, while a governmental agency or third-party roundtable could develop best practices aimed at investors and private originators.

C. *Avenues for Effective Regulation*

Avenues for effective regulation can be broken down into solutions to greenwashing and scaling. On the greenwashing front, a public taxonomy, originator assessments, deal document review, and due diligence reviews could pose viable avenues for investor

[266] *See id*. at 36.
[267] *See id*. at 35.
[268] *See id.* at 36.

protection. Solutions to scaling could include public-private partnerships, transitory regulations, and tax incentives.

1. Solutions to Greenwashing

Greenwashing, as alluded to throughout this Note, is the concept of misleading investors regarding sustainability commitments or classifications to either attract investment or market products. A public taxonomy, provided by the EU Taxonomy regulation, is an auditable standard by which assets can be verified for subsequent green securitization. Given its binding character, the EU Taxonomy can be readily implemented in the private sector to protect investors and enable uniformity in green securitized products. Second, originator assessments conducted by rating agencies would hold originators to higher standards to further ensure that the financial products marketed to investors are, in fact holding green assets in compliance with the EU Taxonomy. While it would increase compliance costs, originator assessments would further promote uniformity in sustainable finance. Third, originators should be required to submit verification that their internal deal documents and due diligence reports were conducted in compliance with the EU Taxonomy and EU Securitization Regulation. Originators hold voluminous information as related to the assets they pool together for subsequent sale and, as such, should be required to demonstrate the appropriate level of diligence and caution that was implemented. Investor protection and uniformity are prerequisites in any novel financial product regulation, and compliance with existing frameworks, coupled with diligence assessments, would make sure investors are informed and that reporting is standardized.

Investor risk-weighting is another approach to the greenwashing dilemma. For example, issuers that fail to meet the most prescriptive standards when selling a green securitized product could carry interest payment penalties or caps. On the other hand, securitized products meeting the most stringent standards could be allowed to carry interest rates above the cap set on less-compliant securitized products. Risk weights could also be tied to contractual covenants in bond agreements. For example, the issuer could covenant that funds from a bond are pledged to a given green infrastructure product. All of these product-level risk weights would be compiled

into an overarching score at the securitized product level. The securitized product, such as a Green CMBS, would carry risk weights based on the underlying bonds financing commercial real estate projects. An issuer that compiles only the most stringently compliant loans on green commercial projects may distribute higher yields to investors, receive some tax incentives, and carry a publicly accessible rating demonstrating the sustainability of the underlying bonds.

2. Solutions to Scaling

Arguably the most engrained headwind to the widespread adoption of sustainable securitization is the challenge of scaling or introducing products to market to meet varying levels of demand, from small-scale infrastructure to ABS products composed of thousands of loans with green collateral. The primary driver of scaling risk is the lack of taxonomy-compliant green collateral in the market. In other words, there aren't enough green loans, green CMBS, or green debt in the market that meets all the requirements of the EU Taxonomy regulation to reach a volume necessary for originators to securitize and issuers to leverage proceeds. Two solutions to the lack of taxonomy-compliant assets in the market are public-private partnerships, transitory frameworks, and tax incentives.

Public-private partnerships present a unique opportunity to improve uniformity in green securitization, improve market access, and foster effective government regulation. On the public authority side, the European Securities Markets Authority (ESMA), as an EU authority, could lead the regulatory components of a public-private partnership. Private sector players include large banks, securities companies, asset managers, and rating agencies. A public-private partnership could manifest both on the collateral front and on the securitized product front. Government authorities, whether through municipal bonds or otherwise, could work with originators to craft taxonomy-compliant collateral in the form of infrastructure or commercial real estate projects through CMBS. In addition, market participants could work with the ESMA to find novel ways to develop publicly financed green projects that could subsequently be securitized as a step towards improving market access to green collateral. The International Capital Markets Association (ICMA) and the ESMA would be prime candidates for fostering working groups on

securitization amongst banks, issuers, originators, and other relevant market participants such as energy companies and third-party ESG or carbon rating agencies. For example, the ICMA and ESMA could coordinate routine meetings amongst delegates from various sectors of the market to discuss the progress of green securitization regulation, drawbacks of certain regulations, proposed regulations, comprehensive surveys, and open round table discussions about the state of the market.

Tax incentives would drive investment and give authorities more of a direct path to oversight and discretion in the burgeoning green securitization market. Public authorities could make a more direct impact with the introduction of tax-based incentives or carbon credits. Carbon credits, a widely used incentive program, assist in driving private sector interest in sustainability programs, such as infrastructure or renewable energy programs. On the other hand, tax incentives could be specific toward investments in green securitized products. Concerns of increased greenwashing stemming from a rush towards tax-friendly investments in green CMBS, ABS, or other securitized products would be mitigated by the aforementioned strict compliance with the EU Taxonomy at the originator and collateral level and compliance with EU Securitization standards. Furthermore, issuers would still be required to verify at the use-of-proceeds level that proceeds will be committed toward green investments or subsequent financial products. The combination of collateral verification under the EU Taxonomy and use-of-proceeds compliance under an EU GBS-styled approach would deter greenwashing born out of increased adoption from tax incentives. Administering tax incentives on green securitized products could either occur at the collateral level, the purchase and sale of a securitized product, or at the use of proceeds level. Because there are tax regimes in place on green collateral, carbon credits, and incentives for green investment, the focus should be on the purchase and sale of securitized products. For example, committing capital from a sale of a non-green securitized product and committing it towards a compliant green ABS or CMBS could occur with a reduced tax burden on potential gains on the prior investment. Implementing such a system would require strict oversight and caps on tax benefits, but it could spur dramatic increases in sustainable securitization.

Transitory frameworks would be case-by-case fast-tracked approval processes for time-sensitive securitized products introduced over the new couple of years. While grandfathering solves the problem of bringing impending issuances or recently issued green securitized products, there should be a first-mover program for those originators promoting a compliant product at the collateral level. Administering the first-mover program could occur in a sandbox program or in a program in which provisional licenses are granted.

3. Sandbox Program for Piloting Regulation

A sandbox program would be composed of a variety of applicants demonstrating that they can adequately pool underlying assets or debt obligations compliant with EU frameworks for subsequent issuance. Being in the sandbox, the originators would not be penalized for minor infractions, improper disclosures, or minor omissions. The sandbox could be overseen as a partnership between the ESMA and the ICMA. Sandbox participants would be under the oversight of both organizations and frequently monitored for ongoing compliance for a given time period, a year, for example. The result of the sandbox program would be data on best practices, key pain points in the green securitization process, metrics on green collateral, and quantitative and qualitative information that could guide subsequent regulatory processes.

A licensure program would serve a similar function as a sandbox program. Licenses could be provisional for a period, and upon meeting continuing obligations, originators and issuers would move towards permanent licensure. Subsequent to the sandbox program, the ESMA and ICMA would have a working knowledge of securitization within the confines of their oversight. And further, granting licenses to promote and develop collateral and use proceeds-compliant green securitized products. Licensing programs would provide accountability to originators and issuers in the green securitization market. And just as licenses can be granted, they can be suspended or dissolved entirely as a result of an enforcement action or penalty. Both investors and regulators would have another level of security through the licensure program, as continued noncompliance or fraudulent activity would prevent the originator or the issuer from participating in green securitization. The licensure regime could entail

regular reporting on overall portfolios, detailed reporting on impending securitized products, and adherence to best practices programs arising out of round tables.

Overall, the combination of a sandbox program, and a subsequent licensure regime, would not only legitimize originators and issuers in the space but also gives authorities significant purview over the development and market of green securitized products. While opponents would push back against the relatively significant involvement of the ESMA and ICMA, originators and issuers stand to gain potential tax incentives and access to a lucrative market with unmet demand. The price of entry is effective regulation because otherwise, the risk to investors and verifiable distinction from traditional securitized products would be difficult to overcome. Furthermore, given the nuanced nature of securitization, sustainable finance, and transaction structuring, regulation needs to be predicated on an effective understanding of the relationship between effective legislation and the effective functioning of green securitization. A Sandbox program provides regulators with otherwise unattainable context, it enables participants to materialize their concerns to find out what financial approaches are compliant under the regulations, and it opens the doors to collaboration between regulators and participants. A license program enables those originators and issuers that invested in building out internal compliance programs and standardized collateral and use-of-proceeds mechanisms to capitalize on their investments with a license to sell green securitized products. Furthermore, it ties the public and private sectors together, fostering workable regulations and investor protection.

CONCLUSION

The sustainable finance market is now a staple in the overall global financial ecosystem. Investments in bonds, public equities, index funds, and other asset classes are all possible through the lens of sustainability. The green investment asset class, focusing on the environment, encompasses everything from carbon tax credits to removing fossil fuels from supply chains. While the recent macroeconomic backdrop is laced with uncertainty, green investments, and accompanying inertia is unlikely to dissipate. The EU, in particular, is leading in the sustainable finance space, occupying

a large share of assets under management and capital and being a regulatory leader. Fostered by ambitious EU programs like the Green New Deal, there are a variety of regulatory frameworks focused on sustainable finance. The CSRD, EU Taxonomy, SFDR, and the Green Bond Standard are four of particular note.

However, remarkable growth and adoption in sustainable finance are not without growing pains. For example, there is significant risk in the form of greenwashing, misleading and fraudulent statements about the relative sustainability of assets. Also, there is a risk of scaling efforts in light of more stringent regulations. In addition to traditional assets, securitization, or the pooling of assets is an area that is without direct regulation in sustainable finance. Legislation focused on the proper regulation of green bonds has been introduced. However, it leaves open the possibility of securitized products remaining unregulated. The European Banking Authority published an insightful report on the proper regulation of green securitization. In addition to the EBA recommendations, securitizations should be taxonomy compliant, and stand-alone regulation tailored to securitized products is paramount. Lastly, introducing sustainability risk weights and tax credits could be solutions to the scaling problems embedded in securitization. And public-private partnerships manifested as sandbox programs streamline effective implementation.