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2017]

WHAT DOES "GREEN" REALLY MEAN?: HOW INCREASED
TRANSPARENCY AND STANDARDIZATION CAN
GROW THE GREEN BOND MARKET

I. INTRODUCTION

As society progresses further into the twenty-first century, the fight against climate change continues to become one of the most important battles it faces.¹ A key component in this fight is the global financial system.² In December 2015, representatives from nearly two hundred nations reached an agreement on climate change goals.³ Decreasing the annual global temperature increase to two degrees Celsius above pre-industrial levels was one of the major goals resulting from the agreement.⁴ To achieve this goal, developed nations have agreed to provide at least one hundred billion dollars per year to climate change projects.⁵ Consequently, the demand for socially-responsible investment options from institutional investors and other consumers will continue to increase.⁶ There are several options available to environmentally conscious investors, including securities issued by companies with environmentally friendly goals, green mutual funds, environmentally focused exchange-traded funds, and green bonds.⁷

1. See Camila Domonoske, *2 Degrees, \$100 Billion: The World Climate Agreement, By The Numbers*, NPR (Dec. 12, 2015, 5:53 PM), <http://www.npr.org/sections/the-two-way/2015/12/12/459502597/2-degrees-100-billion-the-world-climate-agreement-by-the-numbers> (discussing importance of global warming issue).

2. See Brianna Baily, *An Institutional Truth: Increasing Institutional Investor Involvement in Climate Finance*, 27 GEO. INT'L ENVTL. L. REV. 447, 448 (2015) (discussing global financial system's role in fight against climate change).

3. See Domonoske, *supra* note 1 (discussing climate agreement reached at recent Paris COP21 summit). The COP21 summit included representatives from 196 nations. *Id.* The summit focused on climate change solutions, and the discussions resulted in an agreement to decrease the rate of global temperature increase, set a timeline for this goal, and set a one hundred billion dollars per year target for climate change research funding. *Id.*

4. *Id.* (defining two degree goal).

5. See *id.* (discussing financial requirements to achieve two degree goal). Developed countries were dedicated to reaching the one hundred billion dollars per year goal in 2009-2010. *One hundred billion dollars*, PARIS COP21, <http://www.cop21.gouv.fr/en/one-hundred-billion-dollars/> (last visited July 18, 2016) (providing background on one hundred billion dollar plan). The money will come from both public and private sources. *Id.*

6. See Baily, *supra* note 2, at 449-50 (explaining increased demand for socially responsible investment options by institutional investors).

7. See Monica Steinisch, *Green Investing*, NOLO: LAW FOR ALL, <http://www.nolo.com/legal-encyclopedia/green-investing-29940.html> (last visited July 18, 2016)

128 VILLANOVA ENVIRONMENTAL LAW JOURNAL [Vol. XXVIII: p. 127

A green bond is a debt instrument for which the proceeds are used to finance environmentally-friendly projects.⁸ There are two major types of green bonds: labeled and unlabeled.⁹ Unlabeled green bonds are standard bonds issued by corporations “whose businesses are naturally aligned with environmental projects.”¹⁰ While both types of green bonds play an important role in climate change reform, the focus of this Comment is on labeled green bonds, which are bonds the issuer has designated as “green.”¹¹ In 2007, the European Investment Bank (EIB) issued the first labeled green bonds as a new financial instrument to help encourage investment in green projects.¹² Shortly thereafter, in 2008, the “World Bank Treasury issued its first green bond. . . .”¹³ The first green bond issuance marked the beginning of a new financial market that grew to \$41.8 billion by year-end 2015.¹⁴

Green bonds are “fixed income, liquid financial instruments that are used to raise funds dedicated to climate-mitigation, adapta-

(describing various forms of green investment vehicles). Green mutual funds and exchange-traded funds allow investment in “a pool of securities,” which allows “average investors an affordable way to diversify across multiple sectors or industries.” *Id.*

8. See *Green Bonds – how to unlock their full potential?* REED SMITH 1 (Dec. 2015), http://www.reedsmith.com/files/Publication/5d51d05e-9e0e-40d7-97cc-82d2b487d6fe/Presentation/PublicationAttachment/7e46377e-1d93-4969-9212-98d1fc7dc8d3/151214_GreenBonds_email_gk.pdf (defining green bonds). A green bond financed a project in Brazil to “increase water use efficiency” and support the Brazilian government to strengthen its water sector. See *Brazil Federal Integrated Water Sector*, THE WORLD BANK, http://treasury.worldbank.org/cmd/pdf/ProjectExampleinBrazil_FederalIntegratedWaterSector.pdf (last visited July 18, 2016) (showing example of green bond’s full potential).

9. See Ryan Preclaw & Anthony Bakshi, *The Cost of Being Green*, BARCLAYS 6 (Sept. 18, 2015), https://www.environmental-finance.com/assets/files/US_Credit_Focus_The_Cost_of_Being_Green.pdf (explaining difference between labeled and unlabeled green bonds).

10. See *id.* (defining unlabeled green bonds). For example, a bond issued by a solar energy company is considered an unlabeled green bond. See *id.*

11. See *id.* (defining labeled green bonds). All references to green bonds in this Comment refer to labeled green bonds, unless otherwise specified. *Id.*

12. See Bridget Boule, *The Dawn of an Age of Green Bonds?*, GREEN ECONOMY COALITION (Mar. 2015), <http://www.greenconomycoalition.org/know-how/dawn-age-green-bonds> (discussing history of green bonds).

13. See *Green Bonds Attract Private Sector Climate Finance*, THE WORLD BANK (June 10, 2015), <http://www.worldbank.org/en/topic/climatechange/brief/green-bonds-climate-finance> (summarizing World Bank’s history in green bond market).

14. See *2015 Green Bond Market Roundup*, CLIMATE BONDS INITIATIVE, <http://www.climatebonds.net/files/files/2015%20GB%20Market%20Roundup%2003A.pdf> (last visited Jan. 21, 2015) (reporting \$41.8 billion in labeled green bonds issues in 2015).

tion, and other environment-friendly projects.”¹⁵ The types of projects funded by green bonds range from renewable energy to water and agriculture.¹⁶ The bonds were initially introduced as a way to tap into the multi-trillion dollar bond market, and to promote the growth of environmentally-focused projects.¹⁷ The green bond has been successful in its early years.¹⁸ Despite this success, in order to make a significant impact on climate change, “conservative estimates” predict the market must grow to one trillion dollars per year by 2050.¹⁹ Although the market reached forty billion dollars by year-end 2015, its current size is only “scratching the surface for [its] potential growth” moving forward.²⁰ A major concern thus facing the future of the green bond market is the lack of transparency and the accompanied risk of “greenwashing.”²¹

Greenwashing, a major risk facing green bonds, is defined as “the superficial or insincere display of concern for the environment.”²² Barclays’ report, issued in September 2015, showed evidence of higher investor demand for green bonds when the issuer provided more transparency as to the use of the bond’s proceeds.²³ A United Nations report released in July 2016 expected the green bond market’s rapid growth to continue through year-end 2016 and beyond; as the market grows, so will the need to regulate the market to help increase investor confidence.²⁴

15. See *Green Bonds Attract Private Sector Climate Finance*, *supra* note 13 (defining “green bond”).

16. See *Green Bond Impact Report*, THE WORLD BANK 1-2 (June 2015), <http://treasury.worldbank.org/cmd/pdf/WorldBankGreenBondImpactReport.pdf> (breaking down different projects for which green bond revenues are used).

17. See Baily, *supra* note 2, at 453 (discussing history of green bond market).

18. See *Green Bonds – how to unlock their full potential?*, *supra* note 8, at 1 (describing early success of green bonds).

19. See *id.* (explaining current estimates of total cost to combat climate change over next few decades).

20. *Id.* (describing green bond market’s growth potential).

21. See Phillip Ludvigsen, *Advanced topics in green bonds: Risk*, ENVIRONMENTAL FINANCE (Nov. 24, 2015), <https://www.environmental-finance.com/content/analysis/advanced-topics-in-green-bonds-risks.html> (describing “greenwashing” and relation to green bonds).

22. *Id.* (defining “greenwashing”).

23. See Preclaw, *supra* note 9, at 7 (explaining higher demand for bonds with high quality information regarding environmental benefits). The Barclays report noted “the quality of post-issuance impact reporting has become a *key differentiator* for the buyer base. . . .” *Id.* (emphasis added).

24. See *Green Bonds Can Drive Low Carbon Economy After Paris But Standards Need Firming and Tuning*, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (July 11, 2016), <http://newsroom.unfccc.int/climate-action/green-bonds-a-low-carbon-economy-driver-after-cop21/> (estimating green bond market growth to continue and advising increased regulation). The UN report cites “Moody’s ratings agency [predictions for the market] to exceed fifty billion dollars [by

130 VILLANOVA ENVIRONMENTAL LAW JOURNAL [Vol. XXVIII: p. 127

This Comment will explore the relationship between the continued growth of the green bond market and the increasing need for standardization and regulation to supplement that growth. Part I explains how increased transparency and standardization can help grow the green bond market size by instilling confidence in investors that the bonds' proceeds are used as advertised.²⁵ Part II analyzes the history and growth of the green bond market, and identifies the driving forces behind this growth.²⁶ Part III examines the present state of the green bond market and the different issues the market currently faces.²⁷ Part IV describes the current legal landscape and the standards applied to green bonds.²⁸ Finally, Part V investigates the future of climate finance and the importance of standardization and transparency for green bond market growth.²⁹

II. BACKGROUND

Global investment in green bonds reached eight hundred million dollars at the beginning of 2008.³⁰ By the end of 2015, the total market grew to \$41.8 billion.³¹ There are several key factors instrumental in the rapid expansion of the green bond market, including the involvement of many different national governments, private sector involvement that began in 2013, and the high demand for green bonds relative to their supply.³²

The growing number of national governments issuing green bonds around the world has driven green bond market growth.³³ The EIB and the World Bank were the first two entities to issue

2016].” *Id.* HSBC bank estimates an even more optimistic increase ranging from fifty-five billion to eighty billion dollars. *Id.* The UN report also warns, “Misuse of proceeds can damage reputations, if not the market itself.” *Id.*

25. For a discussion on potential benefits of increased green bond regulation, see *supra* notes 1-24 and accompanying text.

26. For a discussion on the history and growth of the green bond market, see *infra* notes 30-68 and accompanying text.

27. For a discussion on the present state of the green bond market and the challenges it faces, see *infra* notes 69-96 and accompanying text.

28. For a discussion on the legal issues facing the green bond market, see *infra* notes 97-168 and accompanying text.

29. For a discussion on the impact regulation can have on green bonds in the future, see *infra* notes 169-184 and accompanying text.

30. See *History*, CLIMATE BONDS INITIATIVE (Dec. 31, 2014), <https://www.climatebonds.net/market/history> (showing total green bond market size from 2008 to 2014).

31. See *2015 Green Bond Market Roundup*, *supra* note 14 (stating total value of green bond market at year end 2015).

32. See *id.* (identifying several factors driving green bond growth).

33. See *id.* (illustrating number of different countries to enter green bond market in 2015).

these types of bonds.³⁴ The proceeds went toward projects around the world, in countries, such as Peru, Mexico, and Colombia.³⁵ The United States entered the market in 2013, when Massachusetts issued a one hundred million dollar municipal bond.³⁶ Shortly thereafter, in 2014, California and New York issued their own green bonds.³⁷ The participation of these local municipal governments was essential in establishing the credibility of the market in its early stages.³⁸

In early 2015, China, the largest current international player, entered the green bond market and immediately became the leader in market growth.³⁹ At that time, a United Nations report estimated China to have a thirty-three percent share of the entire green bond market.⁴⁰ India issued its first bonds shortly thereafter.⁴¹ As of May 2016, emerging international markets have accounted for nearly half of the total global green bond issuance for the year, which accounts for ten billion dollars of the twenty-one billion dollars in global green bond issuance.⁴² Optimistic estimates project that the green bond market will grow to three hundred billion dollars by 2018.⁴³ To make this a reality, China must

34. *History*, *supra* note 30 (identifying European Investment Bank as first issuer of green bonds).

35. *See Green Bonds Are Changing Investor Expectations & Making Sustainable Investing Easier*, THE WORLD BANK (Jan. 22, 2015), <http://www.worldbank.org/en/news/feature/2015/01/22/green-bonds-changing-investor-expectations-three-trends> (providing examples of different locations benefitting from green bond proceeds).

36. *See Gearing up for green bonds*, KPMG 3, <https://assets.kpmg.com/content/dam/kpmg/pdf/2015/03/gearing-up-for-green-bonds-v1.pdf> (last visited July 31, 2016) (referencing Massachusetts as first US state to issue green bond).

37. *See History*, *supra* note 30 (discussing different local government green bond issuances).

38. *See Trends in Private Sector Climate Finance*, U.N. 23 (Oct. 9, 2015), <http://www.un.org/climatechange/wp-content/uploads/2015/10/SG-TRENDS-PRIVATE-SECTOR-CLIMATE-FINANCE-AW-HI-RES-WEB1.pdf> (explaining importance of municipal green bond issuance to establish market).

39. *See id.* at 24 (describing China as “forefront of [] recent green bond developments”).

40. *See id.* (illustrating distribution of global green bond market share).

41. *See id.* (discussing India’s entry into bond market).

42. *See* Jennifer Hughes, Gavin Jackson & Thomas Hale, *Chinese banks lead ‘green’ bond boom*, FINANCIAL TIMES (May 24, 2016, 8:03 AM), <http://www.ft.com/intl/cms/s/0/9ee1a5f4-20d2-11e6-aa98-db1e01fab0c.html#axzz49oK4vqzg> (explaining impact of emerging markets on worldwide green bond market). An emerging market economy is defined as “an economy with low to middle per capita income.” Reem Heikal, *What Is An Emerging Market Economy?*, INVESTOPEDIA (Dec. 8, 2015, 7:50 PM), <http://www.investopedia.com/articles/03/073003.asp> (defining emerging market economy).

43. *See* Jon Hay & Toby Fildes, *2016: the year of divergence*, GLOBAL CAPITAL (Jan. 6, 2016), <http://www.globalcapital.com/article/vxhj71scj6tm/2016-the-year>

132 VILLANOVA ENVIRONMENTAL LAW JOURNAL [Vol. XXVIII: p. 127

be the driver of that growth.⁴⁴ Chief economist of the Research Bureau of People's Bank of China, Ma Jun, stated in early 2016 that China plans on issuing over forty-six billion dollars in green bonds in 2016 alone, which would be larger than the entire green bond market in 2015.⁴⁵ A major driving force behind the green bond market growth has been the uniform global effort to invest in climate financing instruments.⁴⁶

A second major driving force behind the success of the green bond market is the introduction of corporate green bonds, which private entities, such as banks and corporations, issue, as opposed to national banks.⁴⁷ Before 2013, multilateral development banks and international financial institutions primarily issued green bonds.⁴⁸ The initial success of green bonds led to private sector involvement in 2013.⁴⁹ The market nearly tripled in value from 2013 to 2014.⁵⁰ The private sector's new involvement largely drove this change.⁵¹ By 2014, more than forty percent of all labeled green bond issuances were in the private sector.⁵²

In 2015, major international banks, including ING and HSBC France, began to participate in this booming market.⁵³ The market continued its rapid growth in the first part of 2016, and the private

of-divergence (citing Climate Bond Institutes projection for green bond market size).

44. *See id.* (explaining China must be largest contributor if market is to meet projections).

45. Vincent Shaw, *China aiming for \$46bn green bonds market in 2016*, PV MAGAZINE (Mar. 29, 2016), http://www.pv-magazine.com/news/details/beitrag/china-aiming-for-46bn-green-bonds-market-in-2016_100023915/#axzz49oRZqzNV (announcing China's green economic goals for 2016).

46. *See Hay, supra* note 43 (outlining international impact on green bond market size).

47. *See History, supra* note 30 (describing private sector entrance to green bond market as "turning point").

48. *See Green Bonds – how to unlock their full potential?*, *supra* note 8, at 1 (explaining how private sector got involved in green bond market in 2013). A multilateral development bank (MDB) is a "financial institution that provides financing for national development." *Multilateral Development Bank – MDB*, INVESTOPEDIA, http://www.investopedia.com/terms/m/multilateral_development_bank.asp (last visited July 28, 2016) (defining multilateral development bank). Examples of MDB's include the World Bank and the African Development Bank. *Id.*

49. *See Green Bonds – how to unlock their full potential?*, *supra* note 8, at 5-6 (discussing effect of private sector on green bond market).

50. *See History, supra* note 30 (describing corporate green bond issuances as turning point in success of green bond market).

51. *See Trends in Private Sector Climate Finance, supra* note 38 (attributing green bond market's rapid development to private sector).

52. *See id.* (illustrating forty percent of green bond market funded by private sector).

53. *See Hay, supra* note 43 (reviewing 2015 green bond activity).

sector has played an integral role in the market's current success.⁵⁴ Chinese banks and companies have been at the forefront of this growth.⁵⁵ One Chinese bank, Shanghai Pudong Development Bank, issued over five billion dollars in green bonds in two deals this year.⁵⁶ Additionally, a Chinese automobile company recently raised over four hundred million dollars to fund research used to develop an electronic taxi service for the United Kingdom.⁵⁷ Apple Incorporated, the American technology giant, entered the market in early 2016 by issuing a \$1.5 billion green bond to fund "clean energy projects across its global business operations."⁵⁸ Today, more than ever before, companies are finding it important to invest funds into environmentally-friendly projects.⁵⁹

A third major driving force behind the green bond market growth is the high demand for these types of environmentally-friendly products.⁶⁰ Institutional investors are among the largest purchasers of green bonds.⁶¹ In July 2014, it was estimated that "[over] [two hundred fifty] institutional investors ha[d] [purchased] at least one green bond[.]"⁶² "[These] institutional investors . . . [often] have mandates for [socially-responsible] . . .

54. *See id.* (explaining private sector importance on green bond market).

55. *Id.* (valuing total impact of Chinese banks on total green bond market size in 2016).

56. *See* Shaw, *supra* note 45 (citing Shanghai Pudong Development Bank's 2016 green bond issuance).

57. *See* Hughes, *supra* note 42 (discussing Geely Auto's green bond development).

58. *See* Valerie Volcovici, *Apple issues \$1.5 billion in green bonds in first sale*, REUTERS (Feb. 17, 2016, 2:42 PM), <http://www.reuters.com/article/us-apple-greenbonds-idUSKCN0VQ2K2> (announcing Apple's first green bond issuance and speculating on impact it will have moving forward).

59. *See* Kathleen Burke, *Companies are going green and reaping rewards on their bottom line*, MARKET WATCH (July 29, 2015, 9:54 AM), <http://www.marketwatch.com/story/from-household-trash-to-jet-fuel-how-companies-are-going-green-2015-07-27> (describing benefits companies receive by going green).

60. *See* Sean Kidney, *2015 Year End Review*, CLIMATE BONDS INITIATIVE (Jan. 11, 2016), <https://www.climatebonds.net/2016/01/2015-year-end-review-tall-trees-many-green-shoots-evolution-green-bond-market-continues-2015> (explaining that investor demand is greater than supply).

61. *See* *Green grow the markets*, O, THE ECONOMIST (July 5, 2014), <http://www.economist.com/news/finance-and-economics/21606326-market-green-bonds-booming-what-makes-bond-green-green-grow> (describing impact of institutional investors on green bond demand). Institutional investors, which include pension funds and life insurance companies, are non-bank organizations that trade securities in such large shares that they face fewer regulations and receive preferential treatment. *Institutional Investor*, INVESTOPEDIA, <http://www.investopedia.com/terms/i/institutionalinvestor.asp> (last visited July 28, 2016) (defining institutional investor).

62. *See* *Green grow the markets*, O, *supra* note 61 (listing number of green bond institutional investors).

134 VILLANOVA ENVIRONMENTAL LAW JOURNAL [Vol. XXVIII: p. 127

investments[.]”⁶³ By investing in green bonds, specifically those issued by major entities, such as the World Bank or the International Finance Corporation, these large institutions are able to meet their obligation of investing in socially-responsible projects with AAA-rated investments.⁶⁴ Recent history shows that when a bank or other financial institution introduces a new green bond, the result is consumer oversubscription.⁶⁵ Oversubscription occurs when the demand for a newly issued financial instrument exceeds the supply of that instrument,⁶⁶ in other words, “investors are [] [un]able to buy all the . . . bonds they want[.]”⁶⁷ The market should continue its steady and rapid growth until the supply from issuers meets the demand from investors.⁶⁸

III. PRESENT CHALLENGES FACING GREEN BONDS

When a new market emerges and expands as rapidly as the green bond market, critics will inevitably be skeptical of the market’s success.⁶⁹ As with any financial instrument, investment in green bonds involves a certain degree of risk.⁷⁰ The most common

63. See *Green Bonds Are Changing Investor Expectations & Making Sustainable Investing Easier*, *supra* note 35 (explaining how pension funds and other institutional investors have sustainable and responsible investment requirements).

64. See *id.* (describing how institutional investors can meet environmental sustainability mandates through high quality investment vehicles). “AAA is the highest possible [credit] rating assigned to a [] [] bond [] [.]” typically by a major credit rating agency such as Moody’s or Standard and Poor’s. *AAA Definition*, INVESTOPEDIA, <http://www.investopedia.com/terms/a/aaa.asp?lgN=infinite> (last visited Nov. 30, 2016) (defining AAA rating). A bond rated AAA presents “the smallest risk of default,” and typically have “lowe[r] yields” as a result. See *id.*

65. See *Bonds and Climate Change: State of the Market in 2015*, CLIMATE BONDS INITIATIVE (July 2015), <https://www.climatebonds.net/files/files/CBI-HSBC%20report%20July%20G01.pdf> (attributing oversubscription to green bond issuances to strong investor demand). The Dutch bank, ABN AMRO, “received [one billion euros] of orders for . . . [a planned 350 million euro] issu[ance].” *Id.* Oversubscription also “allowed the World Bank’s retail green bond[, released] in January 2015[.] to be [increased] from [fifteen million dollars] to [ninety-one million dollars][.]” *Id.*

66. See Campbell R. Harvey, *Oversubscription Definition*, NASDAQ, <http://www.nasdaq.com/investing/glossary/o/oversubscription> (last visited Dec. 15, 2016) (defining oversubscription in context of financial instruments).

67. See Campbell R. Harvey, *Oversubscribed issue Definition*, NASDAQ, <http://www.nasdaq.com/investing/glossary/o/oversubscribed-issue> (last visited July 28, 2016) (defining oversubscription in context of financial instruments).

68. See *Green Bonds – how to unlock their full potential?*, *supra* note 8 (explaining lack of adequate supply for green bonds).

69. See Sophia Grene, *The dark side of green bonds*, FIN. TIMES (Jun. 13, 2015), <https://www.ft.com/content/16bd9a48-0f76-11e5-b968-00144feabdc0> (outlining concerns surrounding green bonds).

70. See Ludvigsen, *supra* note 21 (listing different risks presented by green bonds).

inquiry challenging green bonds is simple: What does "green" really mean?⁷¹ Though this seems like a simple question, "[t]here is [currently] no regulatory or universally accepted definition" for what constitutes a green bond.⁷² Some believe that the wide variety of definitions and standards that currently apply to green bonds inhibits the market's growth.⁷³ Presently, a "[l]abeled green bond . . . [simply requires the issuer to] designate[] [the bond as] 'green.'"⁷⁴ The lack of oversight has resulted in several substantial risks facing the green bond market, the first of which is greenwashing.⁷⁵

Greenwashing "is defined as the superficial or insincere display of concern for the environment."⁷⁶ Investors have varying expectations when investing in green bonds.⁷⁷ Corporations, for example, have seen the benefits of issuing green bonds, and are now doing so at a rapid rate.⁷⁸ Without any mandatory regulations or standards put in place, however, there is nothing to prevent a corporation from using its "green bonds" in a way that does not truly benefit the environment, such as using the proceeds for a fracking project, or using the proceeds as if they were from a regular bond.⁷⁹ Greenwashing existed before the introduction of green bonds, and will continue to be an issue as long as there is an intermix of business and the environment.⁸⁰ If greenwashing continues to occur in the green bond market, "[it] could undermine the credibility of the market[.]"⁸¹ Some critics have even gone so far as to say, "[I]f

71. See *Green bonds – how to unlock their full potential?*, *supra* note 8 (discussing regulatory agencies' difficulties in defining "green").

72. *Id.* (stating no true definition of "green bond" exists).

73. See Volcovic, *supra* note 58 (discussing issue relating to various green bond standards and definitions).

74. See Preclaw, *supra* note 9 (describing requirements for labeled green bond).

75. See Ludvigsen, *supra* note 21 (addressing "greenwashing" as it relates to green bonds).

76. *Id.* (endnote omitted) (defining "greenwashing").

77. See *id.* (observing difficulties associated with different investor's "ideas" of what is really green).

78. For a further discussion on corporate green bond issuance, see *supra* notes 47-59 and accompanying text.

79. See *Green grow the markets, O*, *supra* note 61 (discussing differing beliefs between investors as to what is really green and need for working definition to "strike [] balance between accepting anything . . . and being so strict that hardly anyone can meet [] criteria").

80. See *Greenwashing Definition*, INVESTOPEDIA, <http://www.investopedia.com/terms/g/greenwashing.asp> (last visited Feb. 3, 2016) (describing greenwashing generally, as opposed to strictly from green bond perspective).

81. See Andrew Mason, *Green bonds: All that glitters is not green*, INV. EUR. (Nov. 9, 2015), <http://www.investmenteurope.net/opinion/green-bonds-all-that-glitters->

136 VILLANOVA ENVIRONMENTAL LAW JOURNAL [Vol. XXVIII: p. 127

there is going to be a lot of ‘green washing’, this market will die.”⁸² Without investor confidence that green bond proceeds are being used correctly, the market’s explosive growth may be hindered.⁸³ Moving forward, the identification and prevention of greenwashing is vital in maintaining credibility in the green bond market.⁸⁴

There is also a “non-performance risk[]” associated with green bonds.⁸⁵ Environmental non-performance occurs “[when] a green bond issuer . . . provides misleading or insufficient information such that a reasonable investor would consider it material to their investment decision” to purchase a green bond.⁸⁶ If an investor feels that bond issuers misled him or her when making an investment decision, litigation could follow.⁸⁷ Due to the lack of standardization and regulation, issuers have broad leeway in labeling a product as “green.”⁸⁸ Currently, with no regulation in place, it is difficult for an investor to ensure that his or her funds are being allocated to projects that are truly green.⁸⁹ This non-performance risk is further exacerbated because there is no recourse available against an issuer who misappropriates the bond’s proceeds.⁹⁰

is-not-green-2/ (describing dangers related to greenwashing in green bond market).

82. Stephen Minas, *What’s in a name? Regulating the growing green bond market*, KSLR COM. & FIN. L. BLOG (Nov. 14, 2014), <https://blogs.kcl.ac.uk/kslrcommercialsblog/2014/11/14/whats-in-a-name-regulating-the-growing-green-bond-market/> (quotation marks omitted) (quoting Zurich Insurance’s chief investment officer).

83. See Sean Kidney, *Responsible Investor blog: On three major risks to the market’s credibility; how standardization can help ensure that the green bonds market delivers on its potential*, CLIMATE BONDS INITIATIVE (Oct. 17, 2014), <https://www.climatebonds.net/2014/10/responsible-investor-blog-three-major-risks-market%E2%80%99s-credibility-how-standardization-can> (observing how lack of investor confidence can destabilize financial markets).

84. See Ludvigsen, *supra* note 21 (proposing greenwashing is “[p]erhaps [] most recogni[zed] risk related to green bond[] [market]”).

85. See *id.* (introducing environmental non-performance risk).

86. *Id.* (defining environmental non-performance as it relates to green bonds).

87. See *id.* (associating litigation outcome to situation involving misinformed investor).

88. See *id.* (relating lack of regulation to environmental non-performance with green bonds).

89. See Mark Howe, *Preventing Greenwash with Green Bonds*, SOURCEABLE (Mar. 14, 2016), <https://sourceable.net/preventing-greenwash-with-green-bonds/> (advising on risk of greenwashing and other associated risks tied to loosely regulated green bond market).

90. See *id.* (explaining how lack of legal resources make it difficult to enforce “green” aspect of “green bonds”).

A Barclays study in September 2015 revealed that investors currently pay a premium on green bonds.⁹¹ One theory the study presents explains the premium as a reflection of the bond's external benefits.⁹² This theory highlights an issue with the premium investors pay on green bonds, namely, the difficulty in accurately "quantify[ing] the financial value of the [] environmental benefit" derived from green bonds.⁹³ Due to this problem, it would be difficult for any court to assess damages in the event of environmental non-performance by the green bond issuer.⁹⁴ Even if an investor could prove the issuer erroneously labeled a bond as green, there is no legal recourse the investor could pursue in the event of misappropriation.⁹⁵ This lack of accountability harms the green bond market's credibility and poses a risk to the socially-responsible investor who wants to make an investment using green bonds.⁹⁶

IV. CURRENT TRANSPARENCY STANDARDS FOR THE GREEN BOND MARKET

The private sector's involvement in the green bond market caused green bond investors and observers to raise questions regarding the validity of green bonds.⁹⁷ In response to the increasing concerns regarding the transparency of green bonds, the International Capital Markets Association (ICMA), along with other large investment banks, published the Green Bond Principles (GBP) in 2014.⁹⁸ Following a worldwide summit that nearly two hundred different institutions and observers involved in the green bond market attended, the ICMA updated the GBP in June 2016.⁹⁹ "The Green Bond Principles (GBP) are voluntary process guidelines that [promote the] transparency . . . and integrity . . . of the [g]reen [b]ond

91. See Preclaw, *supra* note 9 (providing detailed data on existence of premiums paid on green bonds by investors).

92. See *id.* (detailing several different theories explaining premium placed on green bonds).

93. Ludvigsen, *supra* note 21 (identifying difficulty in attaching quantifiable financial value to environmental benefit associated to green bond).

94. See *id.* (discussing difficulty courts face to properly assess damages relating to green bonds).

95. See *id.* (illustrating risk of environmental non-performance taken by investors when purchasing green bond).

96. See *id.* (summarizing risks facing green bond market).

97. *Green bonds – how to unlock their full potential?*, *supra* note 8 (discussing private sector involvement in green bonds as related to potential regulation).

98. See *id.* (introducing history of Green Bond Principles).

99. See *Green bonds*, INT'L CAPITAL MKT. ASS'N, <http://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/green-bonds/> (last visited July 31, 2016) (describing history and development of Green Bond Principles).

138 VILLANOVA ENVIRONMENTAL LAW JOURNAL [Vol. XXVIII: p. 127

market.”¹⁰⁰ These guidelines “are intended for [investors to use] broad[ly] . . . in the market[,]” and to help issuers establish credibility.¹⁰¹

The GBP consists of “four [main] components[:] [][u]se of [p]roceeds, [p]rocess for [p]roject [e]valuation and [s]election, [m]anagement of [p]roceeds[,] and [r]eporting[].”¹⁰² The “[u]se of [p]roceeds” component is described as “the cornerstone of a [g]reen [b]ond.”¹⁰³ There are several “Green Project” categories that the GBP designates, with each project category providing clear, environmentally-sustainable benefits.¹⁰⁴ These broad categories include projects in “renewable energy[,] . . . sustainable [waste] management[,] . . . clean transportation[,] [and] climate change adaptation[.]”¹⁰⁵ The purpose of the “use of proceeds” component is to require an issuer to state, at the time of the bond’s issuance, exactly how the bond proceeds will be used.¹⁰⁶ Outlining the use of proceeds helps attach a quantifiable value to the environmentally-beneficial projects the bond funds, and promotes transparency and accountability on behalf of the issuer.¹⁰⁷

The second GBP component is “[p]rocess for [p]roject [e]valuation and [s]election.”¹⁰⁸ This component requires “[an] issuer . . . [to] outline[] [the decision-making] process [the issuer follows when] [] determin[ing] [] [the eligibility of] the projects” using the green bond’s proceeds.¹⁰⁹ Under this prong, an issuer should detail the process used in deciding how the projects will qualify as “Green Projects.”¹¹⁰ At this stage, “[t]he issuer . . . should [also] outline[] . . . the [project’s] environmental sustainability

100. *Green Bond Principles, 2016*, INT’L CAPITAL MKT. ASS’N (June 16, 2016), <http://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/GBP-2016-Final-16-June-2016.pdf> (defining Green Bond Principles).

101. *Id.* (describing purpose of Green Bond Principles and intended effect on increasing funds for environmentally sustainable projects).

102. *Id.* (listing Green Bond Principles four main components).

103. *Id.* (describing first component, use of proceeds, as cornerstone of green bond).

104. *See id.* (describing GBP’s recognition of “several broad categories of eligibility for Green Projects aiming to address key areas of concern[,] such as climate change, . . . [renewable energy], [and] loss of biodiversity[]”).

105. *Green Bond Principles, 2016, supra* note 100 (providing list of categories eligible for “Green Projects” designation).

106. *See id.* (describing purpose of first GBP component).

107. *See id.* (explaining how “use of proceeds” component encourages issuers to quantify projects).

108. *Id.* (introducing second GBP component).

109. *Id.* (describing second GBP component and what issuer should outline).

110. *Green Bond Principles, 2016, supra* note 100 (describing requirements for meeting second GBP component).

objectives.”¹¹¹ This component highlights the GBP’s encouragement of “high[-]level [] transparency” within the green bond market by allowing for “external review” of “[the] issuer’s process for project evaluation and selection[.]”¹¹²

The third GBP component is “management of proceeds[.]”¹¹³ This step requires an issuer to “credit[] [any net proceeds] to a sub-account[.]”¹¹⁴ According to the GBP, issuers should use this sub-account periodically to track how the green bond proceeds are used, and to ensure compliance with predetermined environmental sustainability objectives.¹¹⁵ Information related to this sub-account should be made available to investors in order to ensure high-level transparency.¹¹⁶ “The GBP encourages . . . the use of an auditor, or [similar] third party, to verify the internal tracking method and the allocation of funds [that result] from the [g]reen [b]ond proceeds[.]”¹¹⁷

The fourth and final component of the GBP is the “reporting requirement.”¹¹⁸ This additional requirement mandates that the issuer make an annual report “available [with] up[dated] . . . information [regarding] the use of proceeds[.]”¹¹⁹ The annual report should include both “qualitative performance indicators and, where feasible, quantitative performance [indicators] measur[ing]” the environmental sustainability impact of the various “Green Projects.”¹²⁰ In the event that this requirement conflicts with an organization’s duty to keep information confidential, the bond issuer can issue a report with more “generic terms[,]” yet still provide enough information to satisfy a bond purchaser’s need for transparency.¹²¹

111. *Id.* (listing different aspects of second GBP component).

112. *Green Bond Principles, 2016, supra* note 100 (supporting desire for “high level transparency” in green bond market, and second component supports notion).

113. *Id.* (introducing third GBP component).

114. *Id.* (detailing requirements of third component regarding net proceeds).

115. *See id.* (describing process of managing net proceeds of Green Bonds in sub-accounts or sub-portfolios).

116. *See id.* (describing need to share information with investors in order to preserve “high[-]level transparency”).

117. *Green Bond Principles, 2016, supra* note 100 (encouraging use of third party auditor to promote transparency).

118. *Id.* (introducing fourth GBP component).

119. *Id.* (describing requirements of reporting component).

120. *Id.* (outlining different things issuers should include in environmental sustainability reports).

121. *See id.* (addressing potential conflicts stemming from confidential information and reporting).

140 VILLANOVA ENVIRONMENTAL LAW JOURNAL [Vol. XXVIII: p. 127

The GBP further recommends issuers use external review to demonstrate the green bond's compliance with the GBP.¹²² These assurances materialize in a variety of ways, “includ[ing] [] [(1) [c]onsultant [r]eview[,] . . . [(2) [v]erification[,] . . . [(3) [c]ertification[,] . . . [and] [(4) [r]ating[.]”¹²³ A consultant review requires a green bond issuer to seek the advice and consultation of an organization that has expertise in environmental sustainability projects.¹²⁴ Verification involves auditors, or another independent third party, reviewing the green bond to evaluate its “alignment with internal standards or claims made by the issuer.”¹²⁵ Certification and rating allow a qualified third party to “certify” or “rate” an issuer's green bond.¹²⁶ The GBP recommends that issuers whose bonds are reviewed externally should disclose these reviews publicly to promote transparency between issuers and investors.¹²⁷

In addition to these four GBP components, there are four specific types of green bonds.¹²⁸ The first type is a “Green Use of Proceeds Bond,” which is defined as “a standard recourse-to-the-issuer debt obligation.”¹²⁹ This type of bond must have its proceeds moved to a sub-account or a sub-portfolio.¹³⁰ “[The] sub-portfolio [must be] tracked by the issuer and attested to by a formal internal process that will be linked to . . . eligible Green Projects” that use the bond proceeds.¹³¹ The issuer is also encouraged to inform investors of the intended use of any proceeds that are not allocated to green projects.¹³² These bonds are earmarked for specific projects at the time of issuance.¹³³

The second green bond type, according to the GBP, is a “Green Use of Proceeds Revenue Bond.”¹³⁴ This bond type is simi-

122. *Green Bond Principles, 2016*, supra note 100 (discussing recommendation for external review).

123. *Id.* (listing different forms of external review recommended by GBP).

124. *See id.* (defining consultant review recommendation).

125. *See id.* (defining and describing “verification”).

126. *Id.* (describing certification process).

127. *Green Bond Principles, 2016*, supra note 100 (recommending public disclosure of external review).

128. *Id.* at 7 (introducing four types of green bonds).

129. *Id.* (naming first type of green bond under GBP).

130. *Id.* (defining “Green Use of Proceeds Bond”).

131. *Id.* (continuing to define “Green Use of Proceeds Bond”).

132. *Id.* (describing final detail of “Green Use of Proceeds Bond”).

133. *See Explaining green bonds*, CLIMATE BONDS INITIATIVE, <https://www.climatebonds.net/market/explaining-green-bonds> (last visited Feb. 25, 2016) (illustrating different definitions and for green bonds).

134. *Green Bond Principles, 2016*, supra note 100, at 7 (introducing second type of green bond under GBP).

lar to the "Green Use of Proceeds Bond."¹³⁵ The primary difference is that this second bond type is a "non-recourse-to-the-issuer debt obligation."¹³⁶ This means "the credit exposure in the bond is to the pledged cash flows of the revenue streams, fees, [and] taxes."¹³⁷ The proceeds of the bonds go directly toward "related or unrelated Green Projects."¹³⁸ These bonds are also earmarked for green projects at the time of issuance.¹³⁹

The third green bond type is a "Green Use of Proceeds Project Bond."¹⁴⁰ This bond's proceeds are applied directly to either a single project or several different projects.¹⁴¹ According to the GBP, the major difference between this bond type and the other three bonds types is that "the investor has direct exposure to the risk of the project(s) with or without potential recourse to the issuer."¹⁴²

The fourth and final type of bond pursuant to GBP is a "Green Use of Proceeds Securitized Bond."¹⁴³ This bond type is "collateralized by one or more specific Green Projects."¹⁴⁴ Collateralization typically takes the form of a covered bond, an asset-backed security, or a mortgage-backed security.¹⁴⁵ The repayment source of the bond is generally the cash flows from the asset.¹⁴⁶ The GBP also

135. *See id.* (defining "Green Use of Proceeds Revenue Bond").

136. *See id.* (continuing definition of "Green Use of Proceeds Revenue Bond").

137. *Id.* (describing "Green Use of Proceeds Revenue Bond").

138. *Id.* (explaining where proceeds of "Green Use of Proceeds Revenue Bond" are distributed).

139. *See Explaining green bonds, supra* note 133 (detailing use of proceeds for green revenue bonds).

140. *Green Bond Principles, 2016, supra* note 100, at 7 (introducing third green bond type under GBP).

141. *Id.* (defining "Green Use of Proceeds Project Bond").

142. *Id.* (describing difference between "Green Use of Proceeds Project Bond" and other green bond types).

143. *Id.* (introducing fourth green bond type under GBP).

144. *Id.* (defining "Green Securitized Bond").

145. *See Green Bond Principles, 2016, supra* note 100, at 7 (defining "Green Use of Proceeds Securitized Bond"). A covered bond is a "security created from the public sector loans or mortgage loans where the security is backed by a separate group of loans. *Covered Bond*, INVESTOPEDIA, <http://www.investopedia.com/terms/c/coveredbond.asp> (last visited July 31, 2016) (defining covered bond). Asset-backed securities and mortgage-backed securities are similar financial instruments, with the former backed by assets such as loans or credit card debt, and the latter backed by a mortgage or collection of mortgages. *See Asset-Backed Security – ABS*, INVESTOPEDIA, <http://www.investopedia.com/terms/a/asset-backedsecurity.asp> (last visited July 31, 2016) (defining asset-backed security).

146. *Green Bond Principles, 2016, supra* note 100, at 7 (defining "Green Use of Proceeds Securitized Bond").

142 VILLANOVA ENVIRONMENTAL LAW JOURNAL [Vol. XXVIII: p. 127

notes that additional bond types may emerge as the market develops.¹⁴⁷

The GBP are not the only set of voluntary standards aimed at green bond transparency and regulation.¹⁴⁸ The primary alternative to the GBP is the Climate Bonds Standard and Certification Scheme (CBSCS).¹⁴⁹ The Climate Bonds Initiative, an “investor-focused not-for-profit organization,” promoting the growth of the green bond market, established the CBSCS as a framework for the green bond market.¹⁵⁰ The Climate Bonds Initiative produced this certification scheme because the organization considers “[c]onfidence in the climate objectives and the use of funds intended to address climate change” as fundamental to the credibility of a green bond.¹⁵¹ The organization emphasizes that “[t]rust in the green label and transparency to the underlying assets are essential” factors in order to have the green bond market reach its maximum potential.¹⁵² CBSCS targets corporate issuers specifically, but is also available to any issuer for use.¹⁵³

CBSCS is similar to GBP in that it embodies the similar fundamental principles of environmental sustainability.¹⁵⁴ CBSCS, however, has a narrower scope than that of the GBP.¹⁵⁵ The GBP can be applied to any green bond and maintains broader requirements, whereas CBSCS is directed only at green bonds with a focus on low-carbon and other climate-focused projects.¹⁵⁶ The requirements of CBSCS and GBP are similar, but the CBSCS requires an additional “[c]ertification by an independent Climate Bonds Standards Board.”¹⁵⁷

147. *Id.* (noting additional types of green bonds may be added to GBP).

148. *See Minas, supra* note 82 (discussing competing green bond regulation standards).

149. *See id.* (introducing and explaining Climate Bonds Standards).

150. *See Climate Bonds Standard*, CLIMATE BONDS INITIATIVE 1, [http://www.climatebonds.net/files/files/Climate%20Bonds%20Standard%20v2_0%20-%20Dec2015%20\(1\).pdf](http://www.climatebonds.net/files/files/Climate%20Bonds%20Standard%20v2_0%20-%20Dec2015%20(1).pdf) (last visited Feb. 24, 2016) (defining “Climate Bonds Initiative”).

151. *See id.* at 3 (stating purpose behind climate bonds standards and certification scheme).

152. *Id.* (describing reasons for creating climate bonds standards and certification scheme).

153. *See id.* (describing target group for Certification Scheme).

154. *See Supporting Standards*, CLIMATE BONDS INITIATIVE <https://www.climatebonds.net/policy/policy-areas/market-integrity> (last visited July 31, 2016) (discussing both Climate Bonds Standards and Green Bond Principles).

155. *See id.* (providing descriptions of both Certification Scheme and Green Bond Principles).

156. *See Climate Bonds Standard, supra* note 150, at 9-10 (comparing Certification Scheme with Green Bond Principles).

157. *Id.* at 3 (describing step by step requirements for Certification Scheme).

The Climate Bonds Standards Board (Board) consists of three sub-groups: the Climate Science Reference Group, the Technical Working Group, and the Industry Working Group.¹⁵⁸ The Climate Science Reference Group advises issuers and the Board on the scope of low-carbon economy and eligible types of projects.¹⁵⁹ The Climate Science Reference Group also recommends the next sub-group, the Technical Working Group.¹⁶⁰ The Technical Working Group develops eligibility criteria for different investment areas, such as low-carbon transport, low-carbon buildings, water, and agriculture projects.¹⁶¹ The third sub-group is the Industry Working Group.¹⁶² This group reviews the practicality of proposed eligibility criteria, as well as various aspects of the operation of the certification.¹⁶³ The Board oversees the implementation of work performed in the development of standards and supervises these three working sub-groups.¹⁶⁴

CBSCS also outlines several different sector-specific standards.¹⁶⁵ The current version of CBSCS covers projects pertaining to wind energy, solar energy, geothermal energy, low carbon buildings, and bus rapid transit systems.¹⁶⁶ CBSCS also details more sector-specific standards, including low-carbon transport, bioenergy, and water.¹⁶⁷ Each of these sector-specific standards lists different technical and scientific criteria that issuers must meet in order to get their climate bonds certified.¹⁶⁸

V. LOOKING TOWARD THE FUTURE OF GREEN BOND REGULATION

While the GBP and the CBSCS are the most definitive guidelines seeking to define "green," both systems are flawed.¹⁶⁹ The pri-

158. *Id.* at 7 (illustrating structure of Climate Standards Board).

159. *Id.* at 6 (defining role of Climate Science Reference Group).

160. *Id.* (defining secondary role of Climate Science Reference Group).

161. *Climate Bonds Standard, supra* note 150, at 6 (highlighting role of Technical Working Groups).

162. *Id.* (introducing third sub-group of Climate Standards Board).

163. *Id.* (defining role of Industry Working Group).

164. *Id.* (describing work overseen by Climate Standards Board).

165. *See id.* at 7 (setting forth Board's role in establishing sector-specific standards available to green bond issuers).

166. *Climate Bonds Standard, supra* note 150, at 7 (describing sector-specific standards currently available to green bond issuers). All references to CBSCS in this Comment refer to CBSCS version 2.0. *See id.*

167. *Id.* (listing different sector-specific standards that may become available to green bond issuers).

168. *Id.* (explaining role of sector-specific standards).

169. *See* Luke Spajic, *Green Bonds: The Growing Market for Environment-Focused Investment*, PIMCO (Sept. 2015), <http://europe.pimco.com/EN/Insights/Pages/>

144 VILLANOVA ENVIRONMENTAL LAW JOURNAL [Vol. XXVIII: p. 127

mary issue with both sets of guidelines is that cooperation with either is voluntary.¹⁷⁰ No organization enforces these guidelines, and there are no legal repercussions against a deviating issuer.¹⁷¹ It is difficult to negotiate a universal agreement on principles that should govern green bonds.¹⁷² The current trend demonstrates that market observers believe that the green bond market is not yet ready for product standardization.¹⁷³ These observers believe it is time for a standard approach to green bond transparency.¹⁷⁴

It is important for issuers and regulators to find a balance when ensuring transparency.¹⁷⁵ If the standards regulating the green bond market are too stringent, it could prove to be too costly to issuers and thus result in slow market growth.¹⁷⁶ Still, it is imperative to ensure transparency to allow the market to expand its investor-base through increased confidence.¹⁷⁷ If even one private green bond issuer deliberately misleads investors, the entire market could lose credibility.¹⁷⁸ The GBP and the CBSCS will continue to evolve with time.¹⁷⁹ Investors currently face a challenge when attempting to assess the “green credentials” of a green bond.¹⁸⁰

With more standardization and regulation, the green bond market can further grow and become more liquid, thus becoming a more widely recognized and credible financial instrument.¹⁸¹ Soon, the green bond market will outgrow self-regulation.¹⁸² It is unlikely the world will have achieved the climate change goal of

Green-Bonds-The-Growing-Market-for-Environment-Focused-Investment.aspx (outlining and discussing issues stemming from GBP).

170. *See id.* (stressing voluntary framework as biggest flaw for GBP).

171. *See id.* (acknowledging lack of enforcement for GBP).

172. *See id.* (explaining difficulties in unifying green bond issuers under one set of principles).

173. *See Green bonds – how to unlock their full potential?*, *supra* note 8, at 2 (discussing current state of green bond regulation and standardization).

174. *See id.* (suggesting market observers believe it is time to standardize approaches to green bond transparency).

175. *See Transparency the key for burgeoning Green bond market*, REUTERS (Mar. 30, 2015), <http://www.reuters.com/article/green-bonds-idUSL6N0WW16120150330> (discussing line between too much and too little regulation).

176. *See id.* (advising against stringent standards).

177. *See id.* (emphasizing importance of transparency in green bond market).

178. *See id.* (providing example of event that would severely harm green bond market).

179. *See Green bonds – how to unlock their full potential?*, *supra* note 8, at 2 (discussing evolving state of GBP).

180. *See id.* at 1 (demonstrating difficulty of investors to properly assess green credentials of green bonds).

181. *See id.* (illustrating how standardization may allow green bonds to become more “mainstream”).

182. *See id.* (discussing looming future for green bonds).

2017] WHAT DOES "GREEN" REALLY MEAN? 145

decreasing the annual global temperature increase to two degrees Celsius above pre-industrial levels by that time.¹⁸³ In order to help accelerate increases in the finance of environmental sustainability through green bonds and push for the green bond market's long-term success, transparency and standardization are essential.¹⁸⁴

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183. *See id.* (discussing importance of reaching two-degree goal through regulation).

184. *See Green bonds – how to unlock their full potential?*, *supra* note 8, at 6 (linking transparency and standardization to green bond market growth).

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