



Investor Newsletter

KDB Green & Social Bond Impact Report

March 2023

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Executive Summary

USD 3.9 billion equivalent, outstanding balance of KDB green bonds and social bond issued in foreign currencies, as of December 31, 2022

783 t CO₂/USD 1mn, annual amount of CO₂ emission Avoided per US\$1 million of KDB green bonds

821 SME borrowers with 21,145 employees, supported through KDB social bond

Since the issuance of the inaugural green bond in 2017, KDB has continued its commitment to help finance environmentally sustainable and socially responsible businesses through consequent offerings of green and social bonds.

KDB has issued 15 green bonds and one social bond in the international market by December 31, 2022, raising a total of USD 4.2 billion. Outstanding volume as of December 31, 2022 amounted to USD 3.9 billion. The first green bond was issued under KDB's Green Bond Framework 2017 while the other green bonds were issued under its Sustainable Bond Framework 2019. Both frameworks are in compliance with the principles introduced by the International Capital Market Association and the second party opinions on each framework were obtained. The 2019 framework and a related second party opinions are available at www.kdb.co.kr/index.jsp, KDB official website.

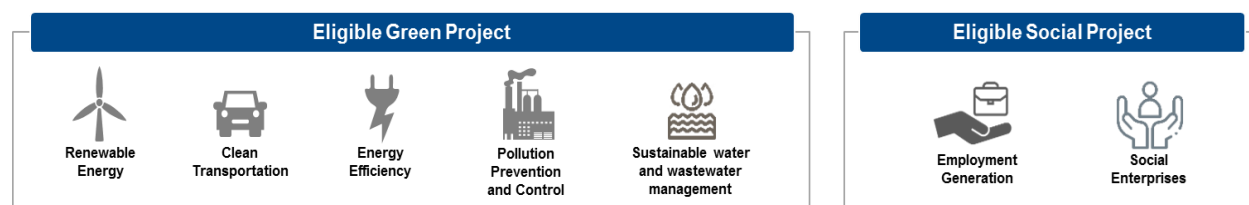
For the first social bond issued in 2020 in the wake of the COVID-19 pandemic, KDB disclosed its framework in the offering prospectus, which included 1) the process for selection of eligible projects, 2) use of proceeds, 3) management of proceeds, and 4) reporting. The extraordinary

circumstances triggered by the pandemic and the extensive array of urgent needs prompted KDB to issue the social bond to support certain small and medium sized enterprises ("SMEs") adversely affected by the pandemic. Thus, eligibility of those may not be in line with the 2019 Framework.

Building on the experience of issuing its debut green bond in the international capital markets in 2017, KDB pioneered and planted ESG bonds into Korean domestic capital market with the issuance of the country's first ever green and social bonds in 2018. Since then, many other Korean banks and corporates followed suit, driving growth and diversity of the Korean ESG bond markets. KDB successfully issued ESG bonds (including green bonds, social bonds and sustainable bonds) in Korean domestic market, totaling KRW 4.0 trillion (approximately USD 3.2 billion) with outstanding balance to date of December 31, 2022 at KRW 1.7 trillion (approx., USD 1.3 billion).

Please note that this Newsletter only covers the green and social bonds issued in the international markets. You can find the Newsletters for KRW denominated green and social bonds issued in Korea on KDB's Korean website at www.kdb.co.kr.

Eligible Projects for Green & Social Bonds classified in KDB's Sustainable Bond Framework



Outstanding of KDB Green Bonds and Social Bond issued in international markets as of December 31, 2022

No.	Issue Year	Maturity	Size	Use of Proceeds	ISIN
Green Bond					
2	2019	2024	EUR 500mn	Renewable Energy	XS2022179159
3	2021	2024	USD 700mn	Renewable Energy & Clean Transportation	US500630DF23
4	2021	2024	USD 300mn	Renewable Energy & Clean Transportation	US500630DK18
5	2021	2023	IDR 1,425bn	Renewable Energy	XS2351219055
6	2021	2031	CHF 200mn	Renewable Energy	CH1121837228
7	2021	2051	USD 20mn	Renewable Energy	XS2395577674
8	2021	2025	USD 700mn	Renewable Energy & Clean Transportation	US500630DM73
9	2022	2024	BRL 1,285mn	Renewable Energy & Water Management	XS2452429645
10	2022	2032	USD 40mn	Renewable Energy	XS2458348294
11	2022	2027	CHF225mn	Renewable Energy & Clean Transportation	CH1179184424
12	2022	2029	HKD390mn	Renewable Energy	XS2476745430
13	2022	2029	HKD169mn	Renewable Energy	XS2478301380
14	2022	2032	HKD349mn	Renewable Energy	XS2496446845
15	2022	2026	MXN3,500mn	Renewable Energy	MXCDKD000007
Subtotal of green bond outstanding			USD 3,401mn		
Social Bond					
1	2020	2023	USD 500mn	COVID-19 Pandemic Support for SMEs & SOHOs	US500630DD74
Grand Total			USD 3,901mn		

Exchange rates against USD as of the end of years where the bonds were issued are used.

KDB Green Bond

The net proceeds from KDB's green bonds were allocated to finance and/or refinance new and/or existing projects related to 1) the construction or expansion of renewable energy production facilities, including those that use solar or wind power, 2) the manufacturing of rechargeable batteries or their parts to be used for electric vehicles and 3) sustainable water management. The projects satisfy the eligibility criteria under the KDB Sustainable Bond Framework 2019.

Use of Proceeds

Total outstanding amount of the green bonds as of December 31, 2022 was approximately USD 3.4 billion equivalent, out of which USD 2.8 billion were (are to be) allocated. During the year 2022, some of projects that KDB had loaned to were fully or partially repaid earlier than the originally scheduled maturity and KDB endeavored to actively source eligible projects. KDB will do its best to source eligible projects and allocate the repaid funds and unused proceeds to them throughout the year 2023.

Green Portfolio and Proceed Allocation as of Dec 31, 2022

(Unit: USD mn)

Green Bond Series	Sector	Total Project Size	KDB Share	Disbursed Outstanding Amount	To be Disbursed	Status of Projects	
						Operation	Construction
2 nd Green Bond	Solar	541	165	71	0		
EUR 500mn	Offshore Wind	8,190	307	188	10		
(XS2022179159)	Onshore Wind	455	144	115	0		
	Sub Total	9,186	616	374	10	100%	0%
3 rd Green Bond	EV Battery	2,211	267	267	-		
USD700mn	Offshore Wind	12,400	267	164	72		
(US500630DF23)	Solar	228	112	63	-		
	Sub Total	14,839	645	494	72	67%	33%
4th Green Bond	Offshore Wind	2,975	40	40	-		
USD300mn	Onshore Wind	1,326	258	202	1		
(US500630DK18)	Sub Total	4,301	297	242	1	83%	17%
5 th Green Bond	Offshore Wind	3,527	136	31	106		
IDR 1,425bn							
(XS2351219055)	Sub Total	3,527	136	0	136	0%	100%
6th Green Bond	Solar	618	58	44	14		
CHF 200mn	Offshore Wind	4,061	120	84	36		
(CH1121837228)	Sub Total	4,679	178	128	50	0%	100%
7th Green Bond	Solar	120	40	17	26		
USD 20mn							
(XS2395577674)	Sub Total	120	40	17	26	0%	100%

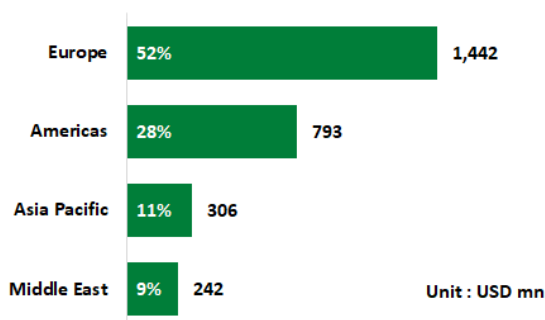
Green Bond Series	Sector	Total Project Size	KDB Share	Disbursed Outstanding Amount	To be Disbursed	Status of Projects	
						Operation	Construction
8th Green Bond	Solar	1,494	234	88	146		
USD 700mn (US500630DM73)	EV Batteries	2,143	463	463	-		
	Sub Total	3,637	697	551	146	30%	70%
9th Green Bond	Flooding Mitigation	1,422	200	-	200		
BRL 1,285mn (XS2452429645)	Offshore Wind	857	59	59	-		
	Sub Total	2,279	259	59	200	0%	100%
10 Green Bond	EV Battery	311	40	40	-		
USD 40mn (XS2458348294)	Sub Total	311	40	40	-	100%	0%
11th Green Bond	EV Battery	1,284	107	107	-		
CHF 225mn (CH1178184424)	Sub Total	1,284	107	107	-	100%	0%
12th Green Bond	Offshore Wind	3,526	64	59	5		
13th Green Bond							
14th Green Bond	Sub Total	3,526	64	59	5	100%	0%
15th Green Bond	Solar	960	67	67	-		
MXN 3,500mn (MXCDKD000007)	Sub Total	960	67	67	-	100%	0%
Grand Total		48,650	3,147	2,189	594		

12th Green Bond, HKD 390mn, (XS2476745430) / 13th Green Bond, HKD 169mn, (XS2478301380) / 14th Green Bond, HKD 349mn, (XS2496446845)

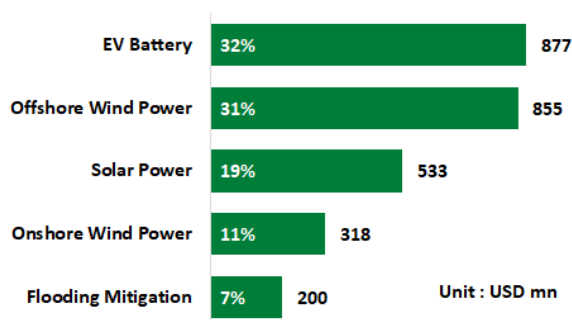
Use of Proceeds - Distribution

Following illustrates the green portfolio distribution in terms of use of proceeds that were already disbursed and were to be disbursed. Geographically, Europe accounted for the largest part, followed by Americas, Asia Pacific and Middle East in order. The biggest project category that the proceeds were used is renewable energy taking 61%, which is further divided into offshore wind power (31%), solar power (19%) and onshore wind power (11%). Rechargeable battery for electric vehicles categorized under clean transportation followed with 32% of total use of proceeds.

Breakdown by regions



Breakdown by project categories



Environmental Impact

The CO₂ emission equivalent avoided (“CO₂e Avoided”) by using renewable energy and/or by replacing internal combustion vehicles with electric vehicles serves as an indicator of environmental impact

783 t CO₂/USD 1mn, the amount of CO₂e Avoided per year per USD 1 million of KDB Share

3,272 GWh/year, the expected total energy production per year under KDB share

220,330, the number of electric vehicles annually manufactured under KDB share

CO₂e Avoided by the green portfolio under KDB Share

Portfolio category	KDB Share USD mn	Estimated CO ₂ e Avoided: t CO ₂ /Year	CO ₂ e Avoided t CO ₂ /USD 1.0mn *
Renewable Energy	2,070	1,446,045	699
Clean Transportation	877	859,931	981
Total	2,947	2,305,976	783

* Weighted average CO₂e Avoided among the projects

1. Breakdown of CO₂e Avoided from Renewable Energies

Green Bond Series	Total Project		KDB Share		
	Expected Energy Production (GWh/Year)	Estimated CO ₂ e Avoided: t CO ₂ /Year	Expected Energy Production (GWh/Year)	Estimated CO ₂ e Avoided: t CO ₂ /Year	CO ₂ e Avoided t CO ₂ /USD 1.0mn
2	9,528	3,578,860	923	449,743	730
3	9,957	3,360,918	300	102,225	270
4	4,517	1,996,881	448	193,465	650
5	4,100	1,311,898	158	50,586	372
6	2,777	977,476	121	42,565	239
7	161	56,737	54	18,912	473
8	4,321	2,081,714	783	382,927	1,636
9	2,439	780,579	50	16,105	273
12-14	4,735	1,515,241	86	27,456	429
15	2,172	1,008,032	349	162,063	2,419
Total	44,709	16,668,335	3,272	1,446,045	699

* Slightly changed from last year figure due to rectification on energy installed capacity of one project

2. Breakdown of Clean Transportation (Rechargeable EV Battery)

(Unit: t CO2e)

Green Bond Series	Total project		KDB Share		
	Annual Production of Electric Vehicles	Annual CO2e Avoided	Annual Production of Electric Vehicles	Annual CO2e Avoided	CO2e Avoided per USD mn
3	650,000	2,536,897	78,410	306,029	1,148
8	452,375	1,765,583	99,334	387,694	837
10	340,000	1,326,993	27,200	106,159	2,654
11	184,626	720,580	15,386	60,048	563
Total	1,627,001	6,350,053	220,330	859,931	981

*The life-cycle CO2e is based on 10-year lifetime of an average mid-size car by powertrain

Sustainable Water Management – Flooding Mitigation

Affected area	The number of protected residents	Estimated costs for flood damages prevented	The number of jobs created for the project
44,000 acres	245,000	194.8 million per year	4,185

* Source: US Environmental Protection Agency

Notes. Methodology for calculation of the impact indicator

The Renewable Energy Category

The Methodology for the Assessment of Project GHG Emissions and Emission Variations (the version 11.3) (https://www.eib.org/attachments/lucalli/eib_project_carbon_footprint_methodologies_2023_en.pdf) released in January 2023 by the European Investment Bank was used to calculate the CO2e Avoided per each renewable energy project.

For the capacity factors of renewable energies by country, we first used the Projected Costs of Generating Electricity published in 2020 (<https://www.iea.org/reports/projected-costs-of-generating-electricity-2020>) & 2015 (<https://www.oecd-neo.org/ndd/pubs/2015/7057-proj-costs-electricity-2015.pdf>) by the International Energy Agency. If factors for certain countries are not available from IEA references, the capacity factors provided by International Renewable Energy Agency (<http://www.irena.org/Data/Energy-Profiles>) were used.

The Clean Transportation Category

The Methodology for the Assessment of Project GHG Emissions and Emission Variations (the version 11.3) (https://www.eib.org/attachments/lucalli/eib_project_carbon_footprint_methodologies_2023_en.pdf) released in January 2023 by the European Investment Bank was used to calculate the CO2e Avoided by replacing internal combustion vehicles with electric vehicles. The average annual miles of driving per driver released by the Federal Highway Administration of the U.S. Department of Transportation (<http://fhwa.dot.gov/ohim/onh00/ba8.htm>) was also used for calculating the annual amount of CO2e.

Hence, please note that any difference in CO2e avoided from the previous Investor Newsletter is due to applying different versions of the aforementioned methodologies.

KDB Social Bond

KDB issued its inaugural COVID-19 Response Social Bond for U\$500mn in 2020 in an effort to provide financial support to small and medium sized enterprises (“SMEs”)¹ as well as small offices/home offices (“SOHOs”) adversely affected by the pandemic. There are two categories that the proceeds of the social bond can be used: (1) regions severely damaged by the pandemic and (2) most adversely affected industries by the pandemic.

Eligible Borrowers under two categories²:

- (1) SMEs and/or SOHOs in "regions severely damaged by the pandemic" within the special disaster zones as designated by the government or areas within a province or a city where the number of accumulated COVID-19 cases equal or exceed 1,000.
- (2) SMEs and/or SOHOs in "the most adversely affected industries" such as wholesale and retail, transportation, tourism, and accommodation, among others, as specified in Appendix I herein.

Status of Use of Proceeds as of December 31, 2022

Proceeds from the social bond were fully disbursed in year 2020 to the eligible borrowers, benefiting 1,034 borrowers in that year. As of December 31, 2022, the loan outstanding largely decreased to KRW 493bn (equivalent to approximately USD 391 mn) and the number of borrowers reduced to 821 as many of loans provided to the borrowers had been repaid.

Breakdown by Project Categories

Most of the proceeds were allocated to SMEs in the category falling under "regions severely damaged by the pandemic, amounting to 88% of the total loan outstanding. The repaid funds (that is, unallocated proceeds) will be reallocated to eligible borrowers until the maturity date of the bonds.

Project Category	Loan Amount (USD '000,000)	No. of Borrowers	Loan per Borrower (USD '000)
Regions severely damaged by the pandemic	343 (88%)	688	498
Most adversely affected industries	49 (12%)	133	366
Total	391 (100%)	821	864

KRW1261 per USD 1.00, the foreign exchange rates of December 31, 2022 was used.

¹ “Small and medium sized enterprises” are defined in Article 3 of the Enforcement Decree of the Framework Act on Small and Medium Enterprises, available at the following link: <https://www.mss.go.kr/site/eng/02/10205000000002019050902.jsp>

² The selection of eligible SMEs and/or SOHOs is subject to the list of sectors and/or industries excluded from allocation as set forth in Appendix II herein

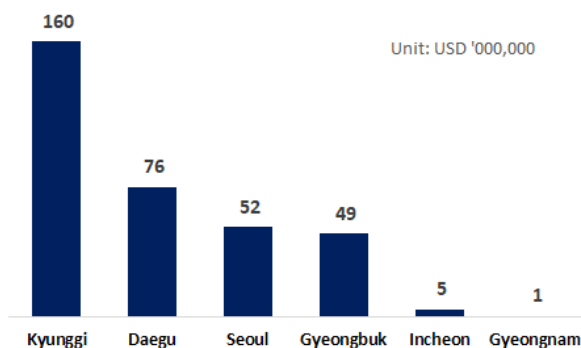
Breakdown by Number of Employees

Total number of employees of the SMEs that KDB extended loans to was 21,145, out of which 10,340 employees are from the SMEs that had employees of less than or equal to 50, which were found to be the most vulnerable group to the effects of the pandemic. Most of the loans were extended to SMEs that had employees of less than or equal to 50, accounting for 83% of total loans.

Employees Breakdown	Loan Amount	Number of Borrowers	Number of Employees	Loan per Borrower (USD '000)	Loan per Employee (USD '000)
1~50 Employees	327 (83%)	731 (89%)	10,340	447	32
51~100 Employees	32 (8%)	50 (6%)	3,730	644	9
101~200 Employees	25 (6%)	24 (3%)	3,418	1,027	7
201~300 Employees	8 (2%)	16 (2%)	3,657	486	2
Total	391 (100%)	821 (100%)	21,145	477	19

Eligible Borrower 1: SMEs and/or SOHOs in “Regions Severely Damaged by the Pandemic”

Breakdown by Region



Breakdown by Industry

Industry Breakdown	Loan Amount (USD '000,000)	%
Manufacturing	248	72%
Wholesale & Retail	30	9%
Transportation/Warehouse	15	5%
Healthcare	11	3%
Service	3	1%
Misc	35	10%
Total	343	100%

*Miscellaneous includes services, business facilities management, mining, livestock, recreation/leisure, drinking places for non-alcoholic beverage and education services.

Eligible Borrower 2: SMEs and/or SOHOs engaged in “The Most Adversely Affected Industries”

Breakdown by Industry

A total of U\$49mn was used to support wholesale and retail (40%), manufacturing (32%), transportation/warehouse (22%), services (5%), healthcare (1%), and recreation/leisure (1%).

Industry Breakdown	Loan Amount (USD'000,000)	%
Wholesale & Retail	19	40%
Manufacturing	16	32%
Transportation/Warehouse	11	22%
Service	2	5%
Healthcare	0	1%
Recreation/Leisure	0	1%
Total	49	100%

Appendix I: List of industries most adversely affected by the COVID-19 pandemic

Industry	Korea Standard Industry Code (KSIC)
Wholesale & Retail	G465 (Wholesale of machinery, equipment and supplies) G46202 (Wholesale of seeds and seedlings) G46441 (Wholesale of pharmaceuticals) G46442 (Wholesale of medical goods) G47811 (Retail sale of pharmaceutical and medical goods) G4521 (Sale of new parts and accessories for motor vehicles) G4672 (Wholesale of basic metals and metal ores)
Transportation/Warehouse	H49~52 (Transportation and storage)
Service	S95 (Maintenance and repair of personal and household goods)
Recreation/Leisure	R901 (Creative and arts related services) R902 (Library, historical sites and buildings and similar recreation related services) R9111 (Arena and stadium operation) R91111 (Indoor arena and stadium operation) R91112 (Outdoor arena and stadium operation) R9113 (Other sports facility operation) R91131 (Other complex sports facility operation) R91132 (Physical fitness facility operation) R91133 (Swimming pool operation) R91139 (Other sports facility operation n.e.c.) R9119 (Other sports services) R91191 (Sports club operation) R91199 (Other sports services n.e.c.)
Healthcare	Self-employed in the Q862 category (Medical and dental practice activities)
Tourism	N740 (Business facilities management and landscape services) N752 (Activities of travel agencies and tour operators and tourist assistance activities)
Drinking Places for non-alcoholic beverages	I56220 (Non-alcoholic beverage places) I56221 (Coffee shops) I56229 (Other non-alcoholic beverage places)
Accommodation	I5510 (General accommodation and accommodation with cooking facilities) registered as tourism business (with business registration) in the Jeolla region, Gangwon, or Jeju
Manufacturing (only for small businesses with ten or fewer employees)	C10~34 (Manufacturing) with ten or fewer employees *Excluding C111 (Manufacture of alcoholic beverages) and C120 (Manufacture of tobacco products)

Appendix II: List of sectors and/or industries excluded from allocation of the bond proceed

The proceeds of the social bond are not allocated to SMEs (or SOHOs) in the sectors or industries that are considered to have negative social or environmental impacts. These include, but are not limited to, the businesses or activities that are engaged in the following:

1. Fossil fuel exploration and distribution
2. Trade and production of conflict minerals
3. Predatory or payday lending
4. Production of palm oil
5. Production or trade of alcoholic beverages (excluding beer and wine)
6. Production or trade of tobacco products
7. Production or trade of nuclear fuel
8. Production or trade of weapons, ammunition and military fighting vehicles
9. Gambling related activities
10. Forced labor and/ or child labor
11. Activities or products that are deemed illegal under local laws or regulations or international conventions and agreements, and/or subject to international phase-outs or bans, whether in the past or the present
12. Production, distribution or storage of hazardous chemicals and radioactive materials
13. Production, distribution or storage of pornography and/or prostitution