

Second-Party Opinion

Korea Housing Finance Corporation Social Covered Bond

Evaluation Summary

Sustainalytics is of the opinion that the Korea Housing Finance Corporation (KHFC) Social Covered Bond Framework is credible and impactful, and aligns with the four core components of the Social Bond Principles 2018. This assessment is based on the following:



USE OF PROCEEDS The eligible category for the use of proceeds, affordable housing, is aligned with those recognized by the Social Bond Principles that seek to achieve positive socio-economic outcomes. Sustainalytics considers that KHFC's mortgage loan products will help to achieve two social objectives: (i) to improve the housing welfare of targeted vulnerable populations, specifically low- and middle-income households, and (ii) to provide stable supply of affordable and sustainable housing finance in South Korea through its long-term, low-interest, fixed-rate loans. Additionally, KHFC's mortgage loans advance the UN Sustainable Development Goal 11.



PROJECT EVALUTION / SELECTION KHFC's loan products reflect the government's housing policy and market situation. Mortgage loan products are reviewed by the KHFC Risk Management Committee chaired by KHFC's Vice President and approved by the Managing Director of the Securitization Business Group. The KHFC Securitization Working Group, comprised of cross-departmental team members, will review the issued social covered bonds' cover pools and annual reports. Additionally, KHFC has processes in place to pre-screen a majority of the borrowers to ensure that they meet loan eligibility criteria. KHFC has sufficient oversight internally to ensure that its mortgage loan products meet the eligibility criteria and that loans are disbursed to eligible borrowers as per the eligibility criteria. This process is in line with market practice.



MANAGEMENT OF PROCEEDS The process for the management of proceeds is aligned with market practices, as KHFC is required to (i) physically separate the purchased mortgage loans from KHFC's other asset, and (ii) separately manage the mortgage loans according to a securitization plan as per Article 30 of the KHFC Act. Proceeds from the social covered bonds will be immediately allocated. In case this does not occur, proceeds will be invested in cash or cash equivalents, in accordance with KHFC's usual sound and prudent liquidity management policy. This is in line with market practice.



REPORTING KHFC commits to disclosing an allocation and impact report on its website annually comprising relevant transaction information along with social impact metrics. Sustainalytics anticipates the level of disclosure to be aligned with current market practices.



Evaluation date	September, 2018
Issuer Location	Busan, Korea

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Introduction

Korea Housing Finance Corporation (KHFC) was established in March 2004 as a state-run government enterprise that supports the Korean government's housing welfare policy by facilitating the long-term, stable supply of housing funds and other related instruments.¹

KHFC has developed the KHFC Social Covered Bond Framework (the "Framework") under which it will issue social covered bonds and use the proceeds under the affordable housing eligibility category. KHFC's mortgage loans will (re)finance three mortgage loan products (Bogeumjari Loan, Didimdol Loan, Conforming Loan) in order to facilitate the supply of affordable housing finance on a long-term and sustainable basis.

KHFC engaged Sustainalytics to review the KHFC Social Covered Bond Framework and provide a second-party opinion on the alignment of the Framework with the Social Bond Principles 2018 (the "SBP 2018"), as administered by the International Capital Market Association (the "ICMA"), and the Framework's social credentials. This Social Covered Bond Framework has been published in a separate document.

As part of this engagement, Sustainalytics held conversations with the lead underwriter of the bond to understand the sustainability impact of KHFC's business processes and planned use of proceeds, as well as management of proceeds and reporting aspects of the KHFC social covered bond. Sustainalytics also reviewed relevant public documents and non-public information.

This document contains Sustainalytics' opinion of the KHFC Social Covered Bond Framework and should be read in conjunction with that Framework.

http://kmbs.hf.go.kr/biz/home/home.do

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¹ KHFC website: https://www.hf.go.kr/ehf/sub05/sub01.do

² ICMA's Social Bond Principles 2018 https://www.icmagroup.org/green-social-and-sustainability-bonds/social-bond-principles-sbp/



Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the KHFC Social Covered Bond Framework

Summary

Sustainalytics is of the opinion that the KHFC Social Covered Bond Framework is credible and impactful, and aligns with the four core components of the SBP 2018. Sustainalytics highlights the following elements of the KHFC Social Covered Bond Framework:

Use of Proceeds:

- The eligible use of proceeds categories, affordable housing, is recognized by the SBP 2018 as a project category with positive social impacts.
- Sustainalytics is of the opinion that KHFC's social covered bonds are in line with, and contribute to, KHFC's mandate to enhance the housing welfare in the country. KHFC's Bogeumjari Loan and Didimdol Loan products target vulnerable populations, specifically low- and middle-income households, and KHFC's Conforming Loan product provide stable supply of affordable and sustainable housing finance in South Korea through its long-term, fixed-rate amortizing loans.
- KHFC's Bogeumjari Loan and Didimdol Loan products have clearly defined eligibility criteria for household income and, as a government-entity, this income threshold is defined and identified by the Korean Government. Sustainalytics is of the opinion that the targeted nature of housing finance, in line with national definitions, increases the social benefits of KHFC's mortgage loan products and the impact of the social covered bonds.
- Though KHFC's Conforming Loan product does not specify a target population in terms of income bracket, Sustainalytics is of the opinion that this mortgage loan product increases the availability of long-term, fixed-rate amortizing loans in South Korea, which is a focus for the Korean Government. This mortgage loan product is intended to reduce the repayment burden of borrowers when compared with the primary types of mortgage loan products available in the Korean market. Please refer to Sections 1 and 2 for additional information on KHFC's mandate and impact.

Project Selection Process:

All mortgage loan products are reviewed by the KHFC Risk Management Committee, chaired by KHFC's Vice President, and approved by the Managing Director of the Securitization Business Group. KHFC ensures that its mortgage loan products reflect the government's housing policy and market situation. KHFC's Securitization Business Group will act as a Social Covered Bond Working Group and is comprised of cross-departmental team members responsible for reviewing the issued social covered bonds' cover pools and its annual reports. In addition, KHFC has comprehensive internal screening procedures to ensure that it disburses loans to eligible borrowers. Sustainalytics views KHFC's project evaluation and selection process as in line with market practice.

• Management of Proceeds:

KHFC will manage the purchased mortgage loans in each cover pool, as per the requirements of Article 30 of the KHFC Act. KHFC is required to maintain a minimum amount of committed over-collateralisation of mortgage loans over the life of the issuance which is tested on a monthly basis through an asset coverage test. A breach of the asset coverage test for more than two months will result in an issuer event of default under the social covered bonds agreements. Proceeds from the social covered bonds will be immediately allocated. In case this does not occur, any unallocated proceeds will be invested in cash or cash equivalents, in accordance with KHFC's usual sound and prudent liquidity management policy. This process is in line with market practice.

Reporting:

KHFC commits to reporting both allocation and impact on an annual basis until the maturity of the social covered bonds on its website. The allocation report will comprise relevant information including total eligible mortgage loan balance and number of eligible mortgage loans, the breakdown of eligible mortgage loan products and average eligible loan balance per person. With regards to the impact report, KHFC will disclose KPIs such as number of households benefitting from KHFC mortgage loans and the average household income of borrowers, amongst others.





 Sustainalytics highlights KHFC's commitment to provide transparent and relevant allocation and impact metrics and evaluates the scope and granularity of the company's reporting to be in line with market practices.

Alignment with Social Bond Principles 2018

Sustainalytics has determined that the Korea Housing Finance Corporation (KHFC) Social Covered Bond Framework's aligns to the four core components of the Social Bond Principles 2018. For detailed information please refer to Appendix 1: External Review Form.

Section 2: Sustainability Strategy of the Issuer

Contribution of the Framework to issuer's sustainability mandate

As a government entity, KHFC has a mandate to facilitate access to housing finance in South Korea with a mission to "Contribute to enhancing the welfare of people and national economic development through long-term and stable supply of housing finance". Sustainalytics is of the opinion that KHFC's social covered bond align with KHFC's mandate to contribute to the welfare of the Korean population and the development of the Korean economy by facilitating a stable and long-term supply of housing finance in Korea.

In order to support the fulfilment of its mission, KHFC offers a diverse range of ongoing mortgage loan products (Bogeumjari Loan, Didimdol Loan, Conforming Loan) in order to facilitate the supply of housing finance on a long-term and sustainable basis to large segments of financially vulnerable populations. This directly correlates to KHFC's social directive in that the provision of affordable and sustainable housing finance helps to meet the basic needs of the population and reduce social inequalities. In keeping with its mandate, in 2017, KHFC disbursed KRW30.2 trillion of mortgage loans, assisting 245,000 households to become homeowners. KHFC is also committed to providing KRW179 trillion of housing finance by 2027. As per KHFC, borrowers of the Bogumjari Loan earned on average KRW42 million and their house was valued at KRW235 million, which is lower than the average household income of KRW48.82 million and house price of KRW300 million in 2016. Furthermore, KHFC states that average house price for Conforming Loan disbursed between in 2017, was KRW 253 million which is still lower than average property price in Korea. Sustainalytics is of the opinion that KHFC's mortgage loans target large segments of financially vulnerable populations in Korea, thus positively contributing to reduce social disparities and facilitate affordable and sustainable access to housing finance.

Furthermore, as fixed rate long-term loans are considered less vulnerable to rising interest rates than variable-rate loans, the Korean government has steadily developed policies to require financial institutions to raise fixed-rate loans issued by the bank from 30% of all loans by end of 2016 to 47.5% by the end of 2017. In keeping with its mandate, KHFC has taken a leading role in providing financing to achieve this target by offering fixed-rate long-term loans. KHFC's loans are innovative in South Korea where historically the majority of mortgage products originated by private financial institutions were short-term, variable-rate bullet loans offered at high interest rates. Thus, KHFC is facilitating a stable and long-term supply of housing finance in Korea.

Overall, Sustainalytics considers the use of proceeds to contribute to KHFC's mandate and mission, and thus believes that KHFC is well-positioned to issue it social covered bonds.

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KHFC Annual Report 2017

⁵ KHFC Annual Report 2017

⁶http://kostat.go.kr/portal/eng/pressReleases/6/3/index.board?bmode=read&bSeq=&aSeq=366814&pageNo=1&rowNum=10&navCount=10&currPg=&sTarget=title&s

http://koreajoongangdaily.joins.com/news/article/article.aspx?aid=3047032



Well positioned to address common social risks associated with the projects

Sustainalytics is of the opinion that the KHFC has sufficient safeguards in place related to its lending activities which include:

- Robust procedures for screening loan applicants to confirm eligibility before Bogeumjari Loans and Didimdol
 Loans are disbursed to target populations, which is aligned with its mandate to facilitate access to housing finance
 for low- and middle-income earners in South Korea.
- KHFC ensures that proof of household income and property value requirements are met by borrowers through
 third-party auditors for both the Bogeumjari Loan and Didimdol Loan. KHFC indicates that if it is found out that
 borrowers did not meet eligibility requirements when the mortgage loan was originated, the partner bank which
 originated the loan would be required to repurchase the mortgage loan from KHFC.
- KHFC has indicated within its Framework that if a borrower faces temporary financial difficulties, the borrower
 can apply for payment deferral of up to three years. Such safeguards can protect the borrowers from further
 financial burden which is particularly important to low- and middle-income households.
- KHFC has been a signatory to the UN Global Compact since October 2008 which is indicative of the priority the entity sets to complying with human rights and labor standards.⁸

Section 3: Impact of Use of Proceeds

Importance of access to affordable financing for low- and moderate-income populations in South Korea

South Koreans shoulder high monthly payments for housing loans, with debt payments being the fastest-growing expenditures for South Korean middle-income households. This is further exacerbated by high home prices in Korea which average 7.7 times the average annual income, compared to 3.5 times in the United States and 6.1 times in the United Kingdom. Despite the exorbitant home prices, real estate makes up about 74% of household assets, which is almost triple the 25% share of wealth in the United States. The combination of high home prices and the need for homeownership leads to the inevitable growth of housing debt, with mortgages and other housing loans making up almost 53% of household debt. The ratio of debt-to-disposable income among Korean families is at 151%, showing that Korean households have taken on loans that they cannot afford, and the floating interest rates of most South Korean housing loans have only further increased the economic strains placed on Korean families.

Given the high cost of homeownership in South Korea and inadequate access to housing loans, ¹⁰ it is crucial for low-and moderate-income populations in South Korea to gain access to affordable housing loan options. Homeownership can offer financial security and stability by offering South Korean homeowners protection from increased real estate costs, increased savings and purchasing power, the option to borrow against the equity of the home, and the opportunity to refinance at lower interest rates. ¹¹ Considering that KHFC's mortgage loan products were created to contribute to the improvement of welfare and the national economy by promoting long-term and stable supply of housing finance, ¹² Sustainalytics is of the opinion that KHFC's social covered bond will contribute to meeting the need to fund affordable housing projects in Korea, resulting in positive social outcomes.

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⁸ KHFC Annual Report 2017

⁹ McKinsey Global Institute, Beyond Korean style: Shaping a new growth Formula

¹⁰ OECD, 2018. Housing Dynamics in Korea: Building Inclusive and Smart Cities.

¹¹ https://www.huduser.gov/portal/periodicals/em/fall12/highlight1.html

¹² Reference 3, Public Company Business Status, Korea Housing Finance Corporation



Alignment with/contribution to SDGs

The Sustainable Development Goals (SDGs) were set in September 2015 and form an agenda for achieving sustainable development by the year 2030. This social covered bond advances the following SDG goals and targets:

Use of Proceeds Category	SDG	SDG target	
Affordable Housing	11. Sustainable Cities and Communities	11.1 - By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.	

Conclusion

The Korea Housing Finance Corporation (KHFC) has developed the KHFC Social Covered Bond Framework under which it will issue social covered bonds with proceeds to be allocated to mortgage loans to (re)finance three mortgage loan products (Bogeumjari Loan, Didimdol Loan, Conforming Loan) in order to facilitate the supply of affordable housing finance on a long-term and sustainable basis.

Sustainalytics is of the opinion that the use of proceeds is impactful given that KHFC's mortgage loans target large segments of financially vulnerable populations in Korea, thus positively contributing to reduce social disparities and facilitate affordable and sustainable access to housing finance. KHFC's social covered bonds contribute to KHFC's mandate and mission, as well as helping to advance SDG 11. Sustainable Cities and Communities.

In addition, KHFC's project selection and evaluation process, its management of proceeds, and its planned reporting are aligned with market practices. Based on the above, Sustainalytics is confident that KHFC is well positioned to issue social covered bonds and that the KHFC Social Covered Bond Framework is robust, credible, and transparent and aligned with the four core components of the Social Bond Principles 2018.



Appendices

Appendix 1: Social Bond/ Social Bond Programme -External Review Form Section 1. Basic Information

	Issuer name:	Korea Housing Finance Corporation (KHFC)				
Soci	Social Bond ISIN or Issuer Social Bond Framework Name, if applicable: [specify as appropriate] Review provider's name: Completion date of this form:		Korea Housing Finance Corporation (KHFC) Social Covered Bond Framework Sustainalytics			
			September, 2018			
	Publication date of review publication: [where appropriate, specify if it is an update and add reference to earlier relevant review]					
Sect	tion 2. Review overview					
SCO	PE OF REVIEW					
	following may be used or adapted, where appropriate,	to sumr	narise the scope of the review.			
The f						
The f	following may be used or adapted, where appropriate,		ignment with the GBPs:			
The f The r ⊠	following may be used or adapted, where appropriate, eview assessed the following elements and confirmed	d their al				
The f The r ⊠	following may be used or adapted, where appropriate, eview assessed the following elements and confirmed Use of Proceeds	d their al ⊠	ignment with the GBPs: Process for Project Evaluation and Selection			
The f The r ⊠	following may be used or adapted, where appropriate, eview assessed the following elements and confirmed Use of Proceeds Management of Proceeds	d their al ⊠	ignment with the GBPs: Process for Project Evaluation and Selection			
The f The r	Tollowing may be used or adapted, where appropriate, eview assessed the following elements and confirmed Use of Proceeds Management of Proceeds E(S) OF REVIEW PROVIDER	l their al	ignment with the GBPs: Process for Project Evaluation and Selection Reporting			
The f The r ROL	following may be used or adapted, where appropriate, eview assessed the following elements and confirmed. Use of Proceeds Management of Proceeds E(S) OF REVIEW PROVIDER Consultancy (incl. 2 nd opinion)	d their al	ignment with the GBPs: Process for Project Evaluation and Selection Reporting Certification			
The f The r ROL	collowing may be used or adapted, where appropriate, eview assessed the following elements and confirmed Use of Proceeds Management of Proceeds E(S) OF REVIEW PROVIDER Consultancy (incl. 2 nd opinion) Verification	d their al	ignment with the GBPs: Process for Project Evaluation and Selection Reporting Certification Rating			



Section 3. Detailed review

Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.

1. USE OF PROCEEDS

Overall comment on section (if applicable):

The eligible category for the use of proceeds, affordable housing, is aligned with those recognized by the Social Bond Principles that seek to achieve positive socio-economic outcomes. Sustainalytics considers that KHFC's mortgage loan products leads to two social objectives: (i) housing welfare of targeted vulnerable populations, specifically low- and middle-income households, and (ii) provide stable supply of affordable and sustainable housing finance in South Korea through its long-term, low-interest, fixed-rate amortizing loans. Additionally, KHFC's mortgage loans advance the UN Sustainable Development Goal 11.

Use of proceeds categ	ories as	per SBP:
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	Affordable basic infrastructure	Access to essential services
\boxtimes	Affordable housing	Employment generation (through SME financing and microfinance)
	Food security	Socioeconomic advancement and empowerment
	Unknown at issuance but currently expected to conform with SBP categories, or other eligible areas not yet stated in SBPs	Other (please specify):

If applicable please specify the social taxonomy, if other than SBPs:

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (if applicable):

KHFC's loan products reflect the government's housing policy and market situation. Mortgage loan products are reviewed by the KHFC Risk Management Committee chaired by KHFC's Vice President and approved by the Managing Director of the Securitization Business Group. The KHFC Securitization Working Group, comprised of cross-departmental team members, will review the issued social covered bonds' cover pools and annual reports.

Additionally, KHFC has processes in place to pre-screen a majority of borrowers to ensure that they meet loan eligibility criteria. KHFC has sufficient oversight internally to ensure that its mortgage loan products meet the eligibility criteria and that loans are disbursed to eligible borrowers as per the eligibility criteria. This process is in line with market practice.



proceeds



Eva	aluation and selection		
\boxtimes	Credentials on the issuer's social objectives		Documented process to determine that projects fit within defined categories
	Defined and transparent criteria for projects eligible for Social Bond proceeds		Documented process to identify and manage potential ESG risks associated with the project
	Summary criteria for project evaluation and selection publicly available		Other (please specify):
Inf	ormation on Responsibilities and Accountability	y	
	Evaluation / Selection criteria subject to external advice or verification	\boxtimes	In-house assessment
	Other (please specify):		
sep acc imr wit	arate the purchased mortgage loans from KHFC's ording to a securitization plan as per Article 30 of the security of the securi	other a the KI oceeds gemen	er in an appropriate manner
	Other (please specify):		
Ad	ditional disclosure:		
	Allocations to future investments only		Allocations to both existing and future investments
	Allocation to individual disbursements		Allocation to a portfolio of disbursements
\square	Disclosure of portfolio balance of unallocated	П	Other (please specify):



4. REPORTING

Overall comment on section (if applicable):

KHFC commits to disclosing the allocation and impact report on the its website annually comprising relevant transaction information along with social impact metrics. Sustainalytics anticipates the level of disclosure to be aligned with current market practices.

Use	of proceeds repor	ting:				
	Project-by-project	i		On a projec	t portfolio basis	
	Linkage to individual bond(s)			Other (plea	se specify):	
	Information reported:					
		Allocated amounts		-	Social Bond financed share of total investment	
		Other (please specify):				
	Fre	equency:				
	\boxtimes	Annual			Semi-annual	
		Other (please specify):				
Imj	pact reporting:					
	Project-by-project	i.	\boxtimes	On a proje	ct portfolio basis	
	Linkage to individ	dual bond(s)		Other (ple	ase specify):	
	Fre	equency:				
	\boxtimes	Annual			Semi-annual	
		Other (please specify):				
	Information reported (expected or ex-post):					
	\boxtimes N	Number of beneficiaries		☐ Ta	arget populations	
	\boxtimes (Other ESG indicators (please sp	ecify)		e household income of borrowers, Average house Average house size	
Me	ans of Disclosure					
	Information publis	shed in financial report			on published in sustainability	
	_	shed in ad hoc documents	\boxtimes	Bonds Rej		
	Reporting reviewereview):	ed (if yes, please specify which	parts	of the repor	ting are subject to external	

Where appropriate, please specify name and date of publication in the useful links section.



USEFUL LINKS (e.g. to review provider methodology or credentials, to issuer's documentation, etc.)

https://www.hf.go.kr/ehf/sub01/sub01_01.do
https://www.hf.go.kr/ehf/index.do
https://www.hf.go.kr/ehf/sub01/sub02_01.do
http://kmbs.hf.go.kr/biz/home/home.do
http://kmbs.hf.go.kr/biz/scBond/scBond.do?MENU_ID=SM2004&SES_MENU_ID=SM0002

SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE

Type(s) of Review provided:						
	Consultancy (incl. 2 nd opinion)		Certification			
	Verification / Audit		Rating			
	Other (please specify):					
Re	view provider(s):	Da	te of publication:			

ABOUT ROLE(S) OF REVIEW PROVIDERS AS DEFINED BY THE SBP

- i. Second Party Opinion: An institution with social expertise, that is independent from the issuer may issue a Second Party Opinion. The institution should be independent from the issuer's adviser for its Social Bond framework, or appropriate procedures, such as information barriers, will have been implemented within the institution to ensure the independence of the Second Party Opinion. It normally entails an assessment of the alignment with the Social Bond Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to social sustainability, and an evaluation of the social features of the type of projects intended for the Use of Proceeds.
- ii. Verification: An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or social criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the socially sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Social Bond proceeds, statement of social impact or alignment of reporting with the SBP, may also be termed verification.
- iii. Certification: An issuer can have its Social Bond or associated Social Bond framework or Use of Proceeds certified against a recognised external social standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.
- iv. Social Bond Scoring/Rating: An issuer can have its Social Bond, associated Social Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on social performance data, process relative to the SBP, or another benchmark. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material social risks.



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Sustainalytics

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For more information, visit www.sustainalytics.com

Or contact us info@sustainalytics.com

