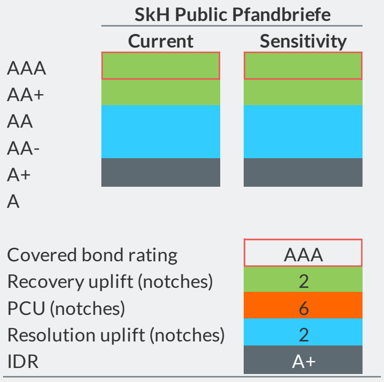
Sparkasse Hannover

Public Sector Pfandbriefe

Covered Bonds rating/Outlook	AAA(EXP)/Stable	**Asset type**	Public Sector
Issuer Default Rating/Outlook	A+ / Stable	**Cover assets (EURm)**[a]	1,372.2
Resolution uplift	2 notches	**Covered bonds (EURm)**[a]	566.1
Payment continuity uplift (PCU)	6 notches	**Nominal OC (%)**[a]	142.4
Recovery uplift	2 notches	**OC-Fitch considers in its analysis (%)**	71.5
Unused notches for rating	0	**Basis of OC relied upon**	Lowest of the last 12 months
Break-even OC (%)	26	**Covered bonds maturity type**	Extendable
Credit loss (%)	25.9	**WAL of the assets (years)**[a]	13.3
ALM loss (%)	n/a	**WAL of the liabilities (years)**[a]	4.4

[a] Data as of 30 June 2023. OC – Overcollateralisation



Source: Fitch Ratings

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Key Rating Drivers

Linked to Issuer Rating: The 'AAA(EXP)' rating of Sparkasse Hannover (SkH)'s public sector Pfandbriefe is based on Sparkasse Hannover's Long-Term Issuer Default Rating (IDR) of 'A+/Stable Outlook' aligned with the Sparkassen-Finanzgruppe's (SFG) IDR, a resolution uplift of two notches and a recovery uplift of two notches. The rating is also based on the overcollateralisation (OC) of 71.5% that Fitch Ratings considers in its analysis. This is higher than the agency's 'AAA(EXP)' break-even OC of 26%. The Stable Outlook on the rating reflects the Stable Outlook on the bank's IDR.

Two-Notch Resolution Uplift: The covered bonds are granted a two-notch resolution uplift, resulting in a 'AA' resolution reference point. Fitch considers that Germany has adopted an advanced bank resolution regime in which fully collateralised covered bonds are exempt from bail-in. The bank's long-term IDR is based on its participation in a mutual support scheme and equalised with the group IDR. Fitch does not expect a resolution of the issuer, should it occur, to result in the direct enforcement of recourse against the cover pool and the risk of undercollateralisation at the point of resolution is assessed as low.

Timely Payment Rating Capped: Fitch has granted six notches to the PCU, reflecting the conditional extension of the bonds' maturity of up to 12 months and the inclusion of liquid assets. However, the timely payment rating is then capped at the resolution reference point of 'AA', which is equal to the IDR adjusted by the two-notch resolution uplift.

The rating is capped at this level due to the high cover pool concentration as in the case of the default of the largest obligors, it is considered that there will be a good recovery but the recovery timing is assumed to be three years, which is longer than the 12 months extendible maturity foreseen in the Pfandbrief law. Therefore, Fitch does not test for timely payments on the covered bonds in its analysis and factors in two notches of recovery uplift.

Two-Notch Recovery Uplift: Fitch has granted a recovery uplift of two notches to the programme as the 'AA' resolution reference point is in the investment grade range and the agency expects outstanding recoveries for SkH's public sector Pfandbriefe if there is a default.

'AAA(EXP)' Break-Even OC: The 'AAA(EXP)' break-even OC of 26% is based on the 'AAA(EXP)' credit loss of the cover pool, as the rating is based on a two-notch recovery uplift above the resolution reference point of 'AA'.

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Programme Highlights

High Regional Concentration: German savings banks focus on providing banking products within a clearly defined area. SkH's public sector portfolio is heavily concentrated in the region of Hannover and Lower Saxony (78.4% of the cover pool assets). The top 10 exposures account for 69% of the cover pool.

Small Cover Pool Size: The cover pool comprised 393 assets with exposures to 58 individual names as of June 2023.

Only German public sector borrowers: As of June 2023 the cover pool solely consisted of exposures to German public sector borrowers.

Peer Comparison

The table below compares the key rating drivers for SkH's covered bond programme with other Fitch-rated public sector Pfandbrief programmes.

The 'AAA(EXP)' break-even OC for SkH's public sector Pfandbriefe is 26%. This is higher than the 3.5% 'AAA' break-even OC for Helaba's public sector Pfandbriefe and the 14.5% 'AAA' break-even OC for SaarLB's public sector Pfandbriefe.

The pfandbriefe issued by SkH and Helaba benefit from a higher issuer IDR, two notches of resolution uplift and two notches of recovery uplift respectively, allowing them to reach the 'AAA' rating on a recovery basis and hence without modelling the asset-liability mismatches of the programmes. The break-even OC for these Pfandbriefe consists only of the credit loss component. The Pfanbriefe issued by SaarLB also reach the 'AAA' rating, but by using also several notches of PCU, which means that asset-liability mismatches are modelled as well and the ALM Loss component becomes part of the 'AAA' break-even OC.

The 'AAA(EXP)' credit loss component of 25.9% for SkH's public sector assets is higher than for Helaba and SaarLB due to the high concentration in SkH's cover pool. SaarLB's cover pool is more diversified, but shows a high percentage of French public sector assets as an additional risk driver. Helaba's cover pool is significantly larger and more diversified while consisting predominantly of German assets.

SkH's public sector Pfandbrief rating is capped at the resolution reference point plus two notches of uplift, due to its high regional concentration. The other public sector Pfandbriefe benefit from six notches of PCU being available to support the rating and to create a corresponding buffer against a potential downgrade of the bank IDR respectively.

Please see Fitch's *Covered Bonds Snapshot – 3Q23* (October 2023) and the related excel file for a detailed comparison of rating drivers across all Fitch-rated covered bond programmes.

	Spk Hannover	Helaba	SaarLB
IDR/Outlook	A+/Stable	A+/Stable	A-/Stable
Resolution uplift (notches)	2	2	1
PCU (notches)	6	6	6
Recovery uplift (notches)	2	2	2
B portfolio loss rate (%)	3.9	0.5	1.0
Break-even OC (%)	26	3.5	14.5
Break-even OC components (%)			
Credit loss (%)	25.9	3.4	14.9
ALM loss (%)	n/a	n/a	-0.2
Pfandbrief rating/Outlook	AAA(EXP)/Stable	AAA/ Stable	AAA/ Stable
Buffer against issuer downgrade	0	6	3
Rating constraint	Sovereign link	Sovereign link	Sovereign link

Source: Fitch Ratings

Applicable Criteria

Covered Bonds Rating Criteria (October 2023)

Bank Rating Criteria (September 2023)

Covered Bonds and CDOs Public Entities' Asset Analysis Rating Criteria (October 2023)

Structured Finance and Covered Bonds Counterparty Rating Criteria (March 2023)

Structured Finance and Covered Bonds Counterparty Rating Criteria: Derivative Addendum (August 2022)

Structured Finance and Covered Bonds Country Risk Rating Criteria (July 2023)

Related Research

Covered Bonds Snapshot - 3Q23 (October 2023)

German Public Sector Pfandbrief Programmes – Peer Review (February 2023)

Country Risk Impact

There is no country risk impact on this programme given that the Country Ceiling for Germany is at 'AAA'.

The Issuer

SkH's IDR has been aligned with SFG'S IDR. SFG includes 390 savings banks. The savings banks form a homogeneous and relatively cohesive group and are organised into 12 regional savings banks associations. SkH is the sixth-largest savings bank in Germany with EUR19.9 billion of total assets at YE22. SkH is a leading financial institution in Hannover area and offers the whole financial service product spectrum to private and commercial clients. SKH holds a Pfandbrief licence for the issuance of public sector and mortgage Pfandbriefe.

Further details on Sparkassen-Finanzgruppe can be found in Fitch Affirms Sparkassen-Finanzgruppe at 'A'; Outlook Stable (April 2023).

Resolution Uplift: Two Notches

The two-notch resolution uplift granted to the public sector covered bonds reflects that collateralised Pfandbriefe in Germany are exempt from bail-in in a resolution scenario and that Fitch deems the risk of under-collateralisation to be sufficiently low. A resolution of Sparkasse Hannover is not expected to lead to a direct enforcement of recourse to the cover pool.

The two-notch Resolution uplift further reflects that the bank's 'A+' IDR is based on its participation in the mutual support scheme of SFG.

PCU: Six Notches, but Rating Capped

SKH's Pfandbriefe benefit from the conditional 12-months maturity extension feature and 180-day liquidity buffer as mandated under the Pfandbrief law and are eligible for a PCU of six notches assigned by Fitch to the Pfandbriefe it rates in Germany. However, the cover pool shows a high asset concentration to public sector borrowers in the Hannover region. In the case of the default of the largest assets, it is considered that there will be a good recovery but the recovery timing is assumed to be three years, which is longer than the 12 months extendible maturity foreseen in the Pfandbrief law. We therefore do not to test for timely payments and cap the rating of the Pfandbriefe at the resolution reference point adjusted by the recovered uplift.

None of the factors influencing payment continuity analysed by Fitch (see Appendix 4) represents a high risk, which in Fitch's view would otherwise be reflected in a PCU reduction.

Recovery Uplift: Two Notches

A maximum recovery uplift of two notches has been granted to the public sector Pfandbriefe, which reflects the view that the cover pool, which comprises standard German public sector assets, should generate an outstanding level of recoveries in the event of a default on the Pfandbriefe.

Fitch did not identify any limitations to recovery expectations. Both the cover assets and the Pfandbriefe are denominated in euros.

Abbreviations

IDR: Issuer Default Rating

PCU: Payment Continuity Uplift

PCM: Portfolio Credit ModelOC: Overcollateralisation

RDR: Rating Default Rate

RRR: Rating Recovery Rate

Cover Pool Analysis

Cover Pool Composition

The cover pool consists of public sector loans and bonds from Germany denominated in euros. The cover pool analysis is based on loan-by-loan data at 30 June 2023 and stratified reported numbers as at 30 September 2023.

Sparkasse Hannover Public-Sector Cover Pool

Characteristics as of 30 September 2023			
General			
Cover assets (EURm)	1.387	Denominated in euros	100%
Pfandbriefe (EURm)	566	Fixed rate	94.6%
Regional debtor entity		Floating rate	5.4%
German Sovereign	0%		
German Regional Government	3%	**Type of Debt**	
German Local Government	91%	Direct Government lending	86%
Other German Public Entity	6%	Lending subject to a guarantee	14%

Source: Fitch Ratings, issuer reporting

Cover Pool Credit Analysis

Fitch analysed the public sector portfolio with its applicable *Covered Bonds and CDOs Public Entities Asset Analysis Rating Criteria* by using Fitch's proprietary Portfolio Credit Model (PCM).

The majority of cover assets either carries a public rating, a Fitch private rating or an internal credit opinion from Fitch's International Public Finance (IPF) team (74% of the cover pool). For the remaining assets, assumptions were applied according to our criteria. The specific asset model assumptions are outlined in more detail below.

Credit Link to Germany

Fitch has credit-linked SkH's public sector Pfandbrief rating to Germany (AAA/Stable/F1+) as the cover pool entirely consists of German exposure. Consequently, Fitch does not model a default of the German sovereign in its asset analysis and models all assets directly exposed to or guaranteed by the German sovereign or its federal states as risk-free (about 7.5% of the cover pool).

Rating Assumptions for German Municipalities

Fitch divided German municipalities into two groups in this analysis. For the first group, the largest municipal exposures (74% of the cover pool), we applied Fitch public and private ratings or assigned internal credit opinions provided by our IPF team. For the second group (26% of the cover pool), no individual credit assessment was conducted. Instead, a 'BBB-' assumption has been applied according to our criteria to reflect a conservative average credit quality of these municipal obligors on a portfolio basis.

Obligor and Country Concentrations

To capture the risk posed by large obligor exposures, Fitch stresses the pairwise correlation of all obligors exceeding 2% of the cover pool by 50% and reduces the assumed recovery rates by 25%. This stress was applied to 63.6% of the cover pool assets irrespective of any correlation uplifts applied for countries or regions.

The overall credit results that have been derived from Fitch's PCM are outlined in the Asset Model Output table.

Asset Model (PCM) Output (%)

Rating Level	RDR (%)	RRR (%)	Rating Loss Rate (%)
AAA	44.9	54.1	20.6

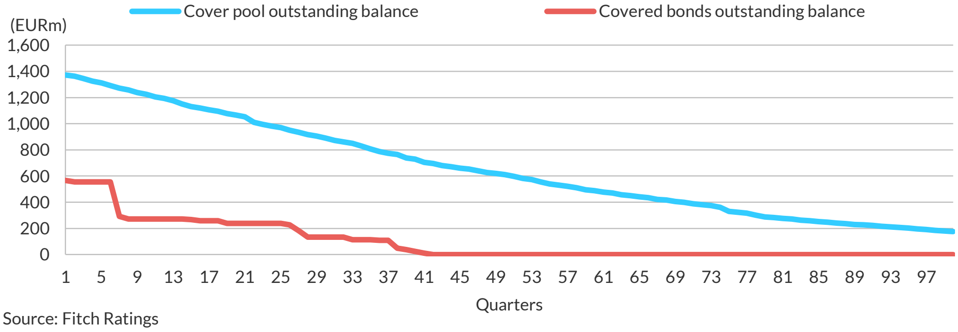
Source: Fitch Ratings

Asset-Liability Mismatches

No cash-flow modelling has been performed for Sparkasse Hannover's public sector Pfandbrief programme as Fitch does not rely on 'timely payment' for the programme and caps the rating accordingly.

The below graph shows the amortisation profile of the assets assuming no prepayment until final legal maturity and the amortisation of the outstanding Pfandbriefe. The cover pool predominantly consists of fixed rate exposures (94.6%) with a small exposure to Euribor-linked floating rate loans. The liability structure shown represents the existing outstanding Pfandbriefe, without a new issuance.

Assets and Liabilities Amortisation Profile



Source: Fitch Ratings

Hedging

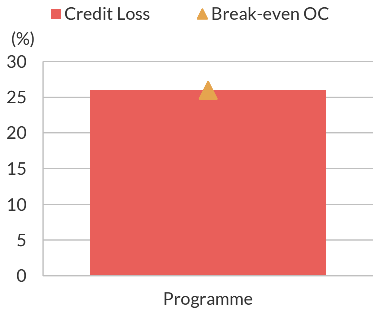
The covered bond programme includes no dedicated swaps either on the asset or liability side.

Break-Even OC for the Rating

Fitch calculated a 'AAA(EXP)' break-even OC of 26%. The 'AAA(EXP)' break-even OC supports two notches of recovery uplift to the 'AAA' Pfandbrief rating.

Fitch's break-even OC for the Pfandbrief rating will be affected by, among other factors, the profile of cover assets, which can change over time, even in the absence of assets being added to the cover pool. Therefore, the break-even OC for a covered bond rating cannot be assumed to remain the same over time.

Break-Even OC Breakdown



Source: Fitch Ratings

OC Fitch Relies Upon in Its Analysis

In its analysis, Fitch gives credit to the minimum nominal OC for the covered bonds over the last 12 months, or the lowest since inception if this is less than 12 months ago. This is in line with Fitch criteria for issuers with a Short-Term IDR above F3. Based on the cover pool notional amount of 1,399.5 at closing and EUR 250m in planned new issuance, we give credit in our analysis to an OC of 71.5%. This provides more protection than Fitch 'AAA(EXP)' break-even OC of 26%.

Sensitivity Analysis

The public sector Pfandbriefe's 'AAA(EXP)' rating represents the highest rating on the Fitch rating scale and hence cannot be upgraded.

The public sector Pfandbriefe's 'AAA(EXP)' rating would be vulnerable to a downgrade if there was a downgrade of SkH's 'A+' Long-Term IDR or if the OC Fitch relies upon would decrease below the 'AAA(EXP)' break-even OC of 26%.

Fitch's 'AAA(EXP)' break-even OC were likely to increase to reflect higher assued credit losses if Germany (AAA/Stable/F1+) were to be downgraded. In tested rating scenarios above the credit-linked sovereign rating, the sovereign is assumed to default.

If the OC Fitch relies upon in its analysis decreases to the minimum legal OC of 2% on a nominal basis, the covered bond rating would be downgraded 'AA+', Fitch's resolution reference point for the rating plus one notch of recovery uplift.

Applicable Criteria, Models and Data Adequacy

Applicable Criteria

Fitch applies to the *Covered Bond and CDOs Public Entities' Asset Analysis Rating Criteria* as its sector-specific criteria under the *Covered Bonds Rating Criteria* master criteria. The cross-sector criteria apply to specific counterparty and interest rate risks. A full list of applicable criteria is detailed on page 2 of this report.

Applicable Models

Fitch derived its portfolio default rate, recovery rate and loss rate assumptions for the pool of German public sector assets using its Portfolio Credit Model. The model-derived assumptions are calculated using loan-by-loan data, by analysing each loan's individual default and recovery rate assumptions as well as assumed correlation in the cover pool at various rating stress levels.

Data Adequacy

Fitch's analysis takes into account the loan characteristics, borrower profile and portfolio-specific factors that influence the default assumption and recovery assumptions for different rating stresses. The analysis also includes a review of Sparkasse Hannover's origination, underwriting and servicing practices and procedures, which are deemed to be of a high quality. In addition, Fitch reviewed a selection of loan files from the cover pool. The composition and credit quality of the cover pool may change over time because of the dynamic nature of the programme.

Programme Review

Cover pool and covered bond information is updated on a quarterly basis and displayed on Fitch's covered bond surveillance pages, available at www.fitchratings.com, and in the quarterly *Covered Bonds Snapshot*.

Disclaimer

References in this report to the content and impact of relevant legislation and/or regulation represent Fitch's interpretation. Fitch relies on legal opinions or memoranda provided by issuers' and/or other outside legal counsel. As Fitch has always made clear, Fitch does not provide legal advice or confirm that a country's legal or regulatory framework, the legal opinions or memoranda, or any other programme documents or any structures are sufficient for any purpose. The disclaimer at the foot of this report makes it clear that this report does not constitute legal, tax and/or structuring advice from Fitch, and should not be used or interpreted as legal, tax and/or structuring advice from Fitch. Should readers of this report need legal, tax and/or structuring advice, they are urged to contact relevant advisers in the relevant jurisdictions.

Appendix 1: Structural and Legal Aspects of the Programme

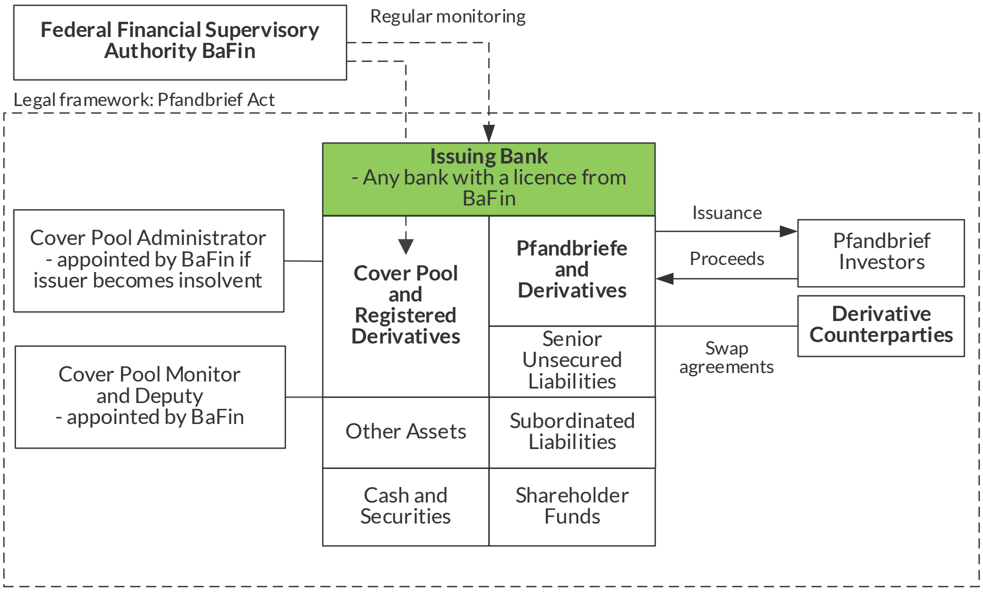
Overview and Basis of Dual Recourse

Sparkasse Hannover can issue extendable-maturity Pfandbriefe under this programme, which are secured by a dynamic pool of public sector assets. These assets are recorded in a dedicated cover register and would not belong to the insolvency estate of the issuer but constitute a separate, bankruptcy-exempt estate.

As long as the issuer is solvent, it will repay covered bond obligations when due pari passu among themselves and with their senior liabilities, irrespective of the performance of the cover assets. On a second recourse, if issuer insolvency proceedings were started, outstanding covered bonds and registered cover assets would constitute a separate legal estate in the form of a so-called 'Pfandbriefbank with limited business activity' (PBwLBA). The scope of this PBwLBA is restricted to administration of the cover assets and repayment of the covered bond obligations.

The legislation also foresees a conditional two-stage maturity extension possibility. Bond principal and interest payments may initially be postponed by the cover pool administrator for four weeks on its appointment. Principal payments may be postponed for a total of 12 months by the administrator, if this is deemed to lead to a better outcome for bondholders. Furthermore, the alternative manager has the right to sell assets, to receive the cash flows from the assets, to take out loans or to issue new Pfandbriefe.

Diagram of a Pfandbrief Issuance



Source: Fitch Ratings

Financial Structure and Flows of Funds Within the Programme

Upon registration of an asset in the cover register, it becomes part of the cover pool. The issuance proceeds of the public sector covered bonds flow in the general bank account and are not earmarked for the funding of public sector loan origination.

Covered bond repayment will also be made from this account unless there has been an enforcement of the recourse to the cover pool. Fitch understands that, on its appointment, the alternative manager (Sachwalter) is the sole party entitled to disburse incoming cash flows from the cover assets to satisfy covered bond payments becoming due. The Sachwalter is appointed by BaFin at the latest on issuer insolvency.

Priority of Payments

Priority of Payments Prior to Alternative Manager Appointment

Prior to an alternative manager appointment, all cash flows from the asset portfolio flow to the general bank account. Whenever covered bond payments, interest or principal, are due, the issuer must settle them in full and timely according to the bonds' terms and conditions. The issuer also bears all administrative costs related to the cover pool and the bonds.

The issuer is accountable for compliance with all legal requirements, in particular adherence with all eligibility criteria, minimum OC and liquidity requirements.

Post-Alternative Manager Appointment Priority of Payments

Following its appointment, the Sachwalter holds the exclusive right to manage cover assets. This includes liquid assets and incoming cover asset interest and principal repayments. This right is not limited to the amount registered in the cover pool but extends to the whole loan. The Sachwalter will deduct appropriate administration costs from the incoming public sector loan cash flows.

Subsequently, the Sachwalter is responsible for separating the incoming whole loan cash flows according to their legal status, i.e. cash flows will be split between cover pool loan part and junior ranking loan parts. Cash flows of junior ranking loan parts will be transferred to the general insolvency estate. From the cash flows of the registered loan parts, the Sachwalter will deduct administrative costs relating to the cover pool, such as his remuneration and special cover pool audit costs. Cash flows of the syndicated loan parts will then be transferred to the creditor. All remaining funds must be used to repay the public sector Pfandbriefe according to their terms and conditions.

Payments to privileged derivative counterparties rank pari passu with covered bond payments. Should monies remain after all administration costs are satisfied and all privileged liabilities have been redeemed in full, the alternative manager will pass these on to the general insolvency estate.

Appendix 2: ESG Relevance Scores

FitchRatings

Sparkasse Hannover, Public Sector Pfandbriefe

Covered Bonds ESG Navigator
Residential Mortgage and Public Sector

Credit-Relevant ESG Derivation

Sparkasse Hannover, Public Sector Pfandbriefe has 6 ESG potential rating drivers

- Sparkasse Hannover, Public Sector Pfandbriefe has exposure to compliance risks including fair lending practices, mis-selling, repossession/foreclosure/recovery practices, borrower/consumer data protection (data security) but this has very low impact on the rating.
- Sparkasse Hannover, Public Sector Pfandbriefe has exposure to macroeconomic factors and sustained structural shifts in secular preferences affecting consumer behavior and underlying mortgages and/or mortgage availability but this has very low impact on the rating.
- Governance is minimally relevant to the rating and is not currently a driver.

			ESG Relevance to Credit Rating
key driver	0	issues	5
driver	0	issues	4
potential driver	6	issues	3
not a rating driver	3	issues	2
	5	issues	1

Environmental (E) Relevance Scores

General Issues	E Score	Sector-Specific Issues	Reference	E Relevance
GHG Emissions & Air Quality	1	Regulatory risks, fines, or compliance costs related to building emissions and related reporting standards (including energy consumption)	Asset Stresses; Cash Flow Stresses; OC Protection	5
Energy Management	1	n.a.	n.a.	4
Water & Wastewater Management	1	n.a.	n.a.	3
Waste & Hazardous Materials Management; Ecological Impacts	2	Environmental site risk and associated remediation/liability costs; sustainable building practices including Green building certificate credentials	Asset Stresses; Cash Flow Stresses; OC Protection	2
Exposure to Environmental Impacts	2	Asset, operations and/or cash flow exposure to extreme weather events and other catastrophe risk, including but not limited to flooding, hurricanes, tornadoes, and earthquakes	Asset Stresses; Cash Flow Stresses; OC Protection	1

Social (S) Relevance Scores

General Issues	S Score	Sector-Specific Issues	Reference	S Relevance
Human Rights, Community Relations, Access & Affordability	2	Accessibility to affordable housing; GSE/agency issued or provision for social good; services for underbanked and underserved communities	Asset Stresses; Cash Flow Stresses; OC Protection	5
Customer Welfare - Fair Messaging, Privacy & Data Security	3	Compliance risks including fair lending practices, mis-selling, repossession/foreclosure/recovery practices, borrower/consumer data protection (data security)	Asset Stresses; Cash Flow Stresses; OC Protection; Issuer Risk Present	4
Labor Relations & Practices	1	n.a.	n.a.	3
Employee Wellbeing	1	n.a.	n.a.	2
Exposure to Social Impacts	3	Macroeconomic factors and sustained structural shifts in secular preferences affecting consumer behavior and underlying mortgages and/or mortgage availability	Asset Stresses; Cash Flow Stresses; OC Protection	1

Governance (G) Relevance Scores

General Issues	G Score	Sector-Specific Issues	Reference	G Relevance
Rule of Law, Institutional and Regulatory Quality	3	Jurisdictional legal risks; regulatory effectiveness; supervisory oversight; foreclosure laws; government support and intervention	Issuer Risk Present; Payment Continuity Assessment; OC Protection; Asset Stresses; Cash Flow Stresses	5
Transaction & Collateral Structure	3	Asset isolation; resolution/insolvency remoteness; legal structure; structural risk mitigants; complex structures	Issuer Risk Present; Payment Continuity Assessment; OC Protection; Asset Stresses; Cash Flow Stresses	4
Transaction Parties & Operational Risk	3	Counterparty risk; origination, underwriting and/or aggregator standards; borrower/lessee/sponsor risk; originator/servicer/manager/operational risk	Issuer Risk Present; Payment Continuity Assessment; OC Protection; Asset Stresses; Cash Flow Stresses	3
Data Transparency & Privacy	3	Transaction data and periodic reporting	Issuer Risk Present; Payment Continuity Assessment; OC Protection; Asset Stresses; Cash Flow Stresses	2
				1

How to Read This Page

ESG relevance scores range from 1 to 5 based on a 15-level color gradation. Red (5) is most relevant to the credit rating and green (1) is least relevant.

The Environmental (E), Social (S) and Governance (G) tables break out the ESG general issues and the sector-specific issues that are most relevant to each industry group. Relevance scores are assigned to each sector-specific issue, signaling the credit-relevance of the sector-specific issues to the issuer's overall credit rating. The Criteria Reference column highlights the factor(s) within which the corresponding ESG issues are captured in Fitch's credit analysis. The vertical color bars are visualizations of the frequency of occurrence of the highest constituent relevance scores. They do not represent an aggregate of the relevance scores or aggregate ESG credit relevance.

The Credit-Relevant ESG Derivation table's far right column is a visualization of the frequency of occurrence of the highest ESG relevance scores across the combined E, S and G categories. The three columns to the left of ESG Relevance to Credit Rating summarize rating relevance and impact to credit from ESG issues. The box on the far left identifies any ESG Relevance Sub-factor issues that are drivers or potential drivers of the issuer's credit rating (corresponding with scores of 3, 4 or 5) and provides a brief explanation for the relevance score. All scores of '4' and '5' are assumed to result in a negative impact unless indicated with a '+' sign for positive impact.

Classification of ESG issues has been developed from Fitch's sector ratings criteria. The General Issues and Sector-Specific Issues draw on the classification standards published by the United Nations Principles for Responsible Investing (PRI), the Sustainability Accounting Standards Board (SASB), and the World Bank.

CREDIT-RELEVANT ESG SCALE - DEFINITIONS

How relevant are E, S and G issues to the overall credit rating?

5	Highly relevant; a key transaction or program rating driver that has a significant impact on an individual basis.
4	Relevant to transaction or program ratings; not a key rating driver but has an impact on the ratings in combination with other factors.
3	Minimally relevant to ratings; either very low impact or actively mitigated in a way that results in no impact on the transaction or program ratings.
2	Irrelevant to the transaction or program ratings; relevant to the sector.
1	Irrelevant to the transaction or program ratings; irrelevant to the sector.

Appendix 3: Summary of Events and Relevant Consequences

Table of Events and Relevant Consequences to the Issuer and the Bondholders

Event	Trigger	Structural consequence	Payer	Acceleration?	Timely payments	Full repayment
Initial (before any of the following events)	None	The issuer makes scheduled payments to the covered bonds out of its resources. All costs incurred are borne by the issuer. Any funds in connection with privileged swap agreements are to be paid directly to or by the issuer.	Issuer	No	Interest and principal to be paid on their due date	Principal payments to be met in full by the issuer.
Assignment of the Sachwalter (alternative manager)	At or before the issuer's insolvency proceedings	On the commencement of insolvency proceedings in relation to the cover pool, privileged derivatives and covered bonds are legally separated into the PBwLBA. BaFin appoints the SachwalterSachwalter.. On appointment, the Sachwalter is the only party allowed to dispose of cover assets including incoming payments on the cover assets. Covered bond payments are settled by the Sachwalter according to their terms and conditions. Swap payments rank pari passu and are also settled by the Sachwalter. Expenses are deducted from incoming cash flows before settling bond and swap payments.	Pfandbrief bank with limited banking activity	No	Interest and principal remain due as scheduled	Principal payments to be met in full by the Pfandbrief bank with limited banking activity
Default of the Pfandbriefbank with limited banking activity (PBwLBA)	Default on any of its obligations, including covered bonds, or iverindebtedness of the Pfandbriefbank with limited banking activity	BaFin files an application for commencement of insolvency proceedings against the Pfandbrief bank with limited business activity. All covered bonds become immediately due and payable at their early redemption amount plus accrued interest.	Insolvent estate of Pfandbrief bank with limited business activity	Yes	No	Depending on the proceeds deriving from the portfolio sale

Source: Fitch Ratings, Pfandbriefgesetz

Appendix 4: Main Characteristics of Applicable Legislation

The table below is based on Fitch's understanding of aspects of the applicable regime and programme structure and is not a substitute for the original texts and/or German legal advice.

Main Characteristics of German Legislative Pfandbriefe

Issuers	Financial institutions with a licence to issue Pfandbriefe.
Supervision	German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungensaufsicht, BaFin).
Public sector assets	• Public sector assets • Geographical scope to the EU/EEA • For assets from the US, Canada, Japan and Switzerland, the debtor must be assigned to credit quality step 1 • Up to 15% of the total volume of Public Pfandbriefe outstanding can be substitute assets.
Transfer of assets	Integrated template, assets remain on the issuer's balance sheet.
Cover register	Cover register is required for the respective cover pool.
Cover pool monitor	Independent trustee appointed by BaFin.
Cover pool administrator	A dedicated cover pool administrator (Sachwalter) would take over the management of the cover assets and outstanding liabilities after the issuer's default. It would be appointed by a court at the request of BaFin, at the latest upon the issuer's insolvency.
Minimum OC	• 2% nominal value • 2% stressed net present value (NPV). The NPV is detailed in a specific net present value regulation (Barwertverordnung)
Treatment of swap counterparties	Derivatives counterparties rank pari passu with the claims of the covered bond holders.
Pfandbrief bank with limited business activity	The cover pool constitutes an insolvency-free asset and continues to exist post issuer default as PBwLBA to ensure the timely payment of the liability obligations. The PBwLBA would be managed by the cover pool administrator.

Source: Fitch Ratings

Appendix 5: Other Payment Continuity Risk Considerations

Asset Segregation

Fitch expects that ring-fencing of the cover pool will be effective given the 'all or nothing' nature of this risk. The ring-fencing of cover assets from any claims from unsecured creditors of the defaulted financial institution is achieved by virtue of law. This is often in the form of an exemption to normal bankruptcy legislation, or through a transfer of the assets to a bankruptcy-remote SPV acting as a guarantor of the issued covered bonds.

Asset Segregation: No Negative Impact on PCU

Component driver	Fitch assessment
Segregation of cover pool from other creditors of issuer	Cover assets are segregated through their registration in the cover register (Deckungsregister). Registered assets form a special estate (PBwLBA) and are exclusively available for the claims of the bondholders and privileged derivative counterparties.
Excess OC immune from claims from other creditors	Residual risk remains as the German covered bond law states that assets should be given back to the general insolvency estate if they are "obviously not necessary" to cover the claims of the bondholders, the minimum OC and the costs of the PBwLBA.
Asset and liability claw back risk	Remote risk of asset and liability claw back as circumstances in which claw back may occur are rare and rather hypothetical.
Commingling risk	Residual risk remains as prior to the commencement of insolvency proceedings or appointment of an alternative manager collections received are not separated from the general bank account in the issuer's name. No structural mitigating factors are in place. After beginning of insolvency proceedings or appointment of an alternative manager commingling is legally prohibited.
Set-off risk for deposits	Set-off against assets entered into the pool is excluded by law.

Source: Fitch Ratings

Alternative Management

Systemic Alternative Management

Fitch takes into consideration the framework or contractual clauses governing the appointment of a substitute manager, together with the length of time required to appoint one. We also consider any potential conflict of interest (in cases where a single administrator in a bankruptcy takes care of covered bonds and other creditors) and the manager's responsibilities in the servicing. Other factors we consider include liquidation of the cover assets to meet payments due on the covered bonds and any further protection due to oversight or potential support for regulated covered bonds.

If Fitch assesses that systemic alternative management represents a high risk to payment continuity, the otherwise achievable PCU for the programme would be reduced by one notch if the otherwise achievable PCU is in the one-to-three-notch range. The PCU for the programme would be reduced by two notches if it is in the four-to-eight-notch range.

Systemic Alternative Management: No Negative Impact on PCU

Component driver	Fitch assessment
Administrator takes exclusive care of covered bondholders? When are they appointed?	An alternative manager will service the pool in the interest of the bondholders. The alternative manager will be appointed at the latest at insolvency of the issuer by a court at the request of BaFin. Prior appointment is possible.
Importance of timeliness of payments in the legal provisions	The Pfandbrief act foresees a two-stage maturity extension process. Bond principal and interest payments may initially be postponed by the cover pool administrator for four weeks on its appointment. Principal payments may be postponed for a total of 12 months by the administrator if this is deemed to lead to a better outcome for bondholders. Interest payments would then need to be paid in a timely way.
Substitute manager able to sell cover assets or borrow to make timely payments	The alternative manager has the power to sell assets and take bridge-financing, take out loans or issue new Pfandbriefe.
Regulatory oversight	BaFin

Source: Fitch Ratings

Cover Pool-Specific Alternative Management

Fitch focuses on the likely ease of the transferability of relevant data and IT systems to an alternative manager and buyer, with such quality and ease also judged on the quality and quantity of data provided to Fitch.

We would lower the programme PCU driven by its liquidity protection if Fitch assesses cover-pool-specific alternative management to represent a high risk. This would reflect a greater link to the Long-Term IDR of the issuing institution via a reduction by one notch if the otherwise achievable PCU is in the one-to-three-notch range. A reduction of two notches would apply if it is in the four-to-eight-notch range.

Cover Pool Alternative Management: No Negative Impact on PCU

Component driver	Fitch assessment
Cover assets, debtors' accounts and privileged swaps clearly identified within IT systems	Market standard systems are in place that ensure identification of that registered assets of SkH.
Standardised or custom-made IT systems used.	Fitch considers used systems to be well known in the market, enabling an alternative manager to easily start managing the programme.
Automation and speed of cover pool reporting	Stratified information will be provided on a quarterly basis.
Adequate filing of loan documentation, evidence of security	Loan files are available partially in electronic and paper-based form.

Source: Fitch Ratings

Privileged Derivatives

The programme does not include any derivatives.

Appendix 6: Origination and Servicing

Origination and Underwriting

SkH's municipal loan business is mainly focused on the wider Hannover region in Lower Saxony. The issuer aims to maintain a market leading position in its home region and to participate in most financiing proposals sought by local governments. Public sector financings outside of the Hannover region are also acquired through brokers and other indirect channels.

For its loan origination and credit risk management, SkH relies on internal rating systems developed mutually within the German savings bank system. This ensures a high level of standardisation and transparency through the resources pooled by the savings banks on a group level.

As art of SkH's origination process, credit applications are normally assessed by experienced loan officers to ensure completeness of the required documents and compliance with internal rules. This is followed by a detailed credit analysis of the borrower.

The origination and servicing business is supported by a high level of standardisation in German public sector lending in terms of borrower types, loan documentation and credit assessment.

Servicing and IT Systems

The Pfandbrief programme is managed with market standard software, allowing for a daily pool registration of newly added loans. For all newly originated loans, specialists check the cover pool eligibility of the loan. Selection criteria are based on the Pfandbrief Act and strict internal guidelines. After cover pool eligibility has been confirmed for each loan, loans are registered in the pool. For removal of loans the cover pool monitor's consent is required as per the Pfandbrief law.

SOLICITATION & PARTICIPATION STATUS

For information on the solicitation status of the ratings included within this report, please refer to the solicitation status shown in the relevant entity's summary page of the Fitch Ratings website.

For information on the participation status in the rating process of an issuer listed in this report, please refer to the most recent rating action commentary for the relevant issuer, available on the Fitch Ratings website.