German Sparkassen Mortgage Pfandbriefe – Peer Credit Analysis

Low Credit Risk: The cover pools of all 10 Sparkassen discussed in this report have low-risk characteristics with loan-to-value (LTV) levels averaging 53.8% (at end-March 2025), based on the mortgage lending values of collateral properties. The differences between market and conservatively determined mortgage lending values are an additional mitigant of potential market value declines. The low loan-to-mortgage lending value (LTMLV), combined with conservative origination practices, reflect that losses given default are only expected in remote scenarios.

Rating Approach: The Pfandbriefe of SkBremen (for abbreviations see the table at the end), KSKLB, Naspa, SkHolstein, SkKrefeld, SkWML and SSkM are rated based on the limited rating uplift approach as the data provided by the issuers do not allow a full analysis by Fitch Ratings. Under this approach timely payment is not tested and the analysis focuses on identifying cumulative risk factors that could undermine recoveries given default. The recovery uplift is limited to one notch. The 'AAA' ratings of SkDort, SkH and SkPfCw's Pfandbriefe are based on a full rating approach.

Commercial Real Estate (CRE) Exposure: All the Pfandbrief programmes, except for SkWML, have loans secured by CRE within their cover pools, which range from 1.7% to 35.4% of the cover assets. Fitch does not consider that the CRE in the Sparkassen Pfandbriefe constitute a material risk, given the low LTV levels and the significant cushions between the overcollateralisation (OC) relied upon in its analysis and the Fitch break-even OC for the ratings.

Buffer Against an Issuer Default Rating (IDR) Downgrade: The 'AAA' Pfandbrief ratings of SkDort, SkH and SkPfCw are protected by six-notch buffers against a potential downgrade of the issuer. In contrast, the 'AA+' ratings of SkBremen, KSKLB, Naspa, SkHolstein, SkKrefeld, SkWML and SSkM have zero-notch buffers. All 10 programmes have Stable Outlooks, reflecting the Stable Outlooks on the issuers.

Credit-Loss Drives Fitch Break-Even OC: The 'AAA' break-even OC levels for the SkDort (14%), SkH (7.5%) and SkPfCw (5.5%) programmes, for which asset analysis is performed, are driven by the assumed credit losses in a 'AAA' rating case. The differences in the modelled 'AAA' credit losses among the cover pools reflect the different shares of commercial cover assets and the concentration of commercial borrowers. The 2% 'AA+' break-even OC for the remaining seven mortgage Pfandbriefe corresponds to the legal minimum OC in Germany.

ESG Governance: SkBremen, KSKLB, Naspa, SkHolstein, SkKrefeld, SkWML and SSkM's mortgage Pfandbriefe programmes have ESG Relevance scores of '5' for Data Transparency & Privacy as the data provided by the issuers do not enable Fitch to perform full analyses.

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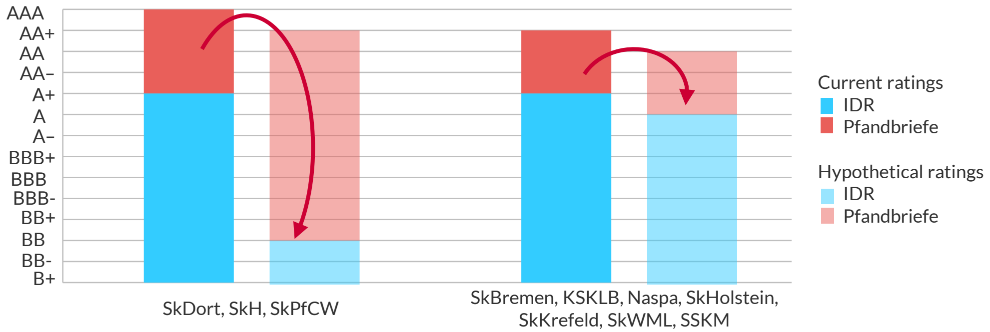
Key Rating Drivers (End-March 2025)

Programme	SkDort	SkH	SkPfCw	SkBremen	KSKLB	Naspa	SkHolstein	SkKrefeld	SkWML	SSkM
LT IDR	A+/ Stable	A+/ Stable	A+/ Stable	A+/ Stable	A+/ Stable	A+/ Stable	A+/ Stable	A+/ Stable	A+/ Stable	A+/ Stable
CVB rating	AAA	AAA	AAA	AA+	AA+	AA+	AA+	AA+	AA+	AA+
CVB Outlook	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable
Resolution uplift (notches)	2	2	2	2	2	2	2	2	2	2
PCU (notches)	6	6	6	6	6	6	6	6	6	6
Timely payment rating level	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Recovery uplift (notches)	2	2	2	1	1	1	1	1	1	1
Buffer against IDR downgrade	6-notch	6-notch	6-notch	0-notch	0-notch	0-notch	0-notch	0-notch	0-notch	0-notch
Break-even OC (%)	14.0	7.5	5.5	2.0[a]	2.0[a]	2.0[a]	2.0[a]	2.0[a]	2.0[a]	2.0[a]
OC Fitch relies upon (%)	27.7	41.3	29.8	18.6	63.0	92.0	48.9	277.3	67.9	92.7

[a] Break-even OC for the rating is the legal minimum OC of 2%. For abbreviations please see the table at the end of the report.
Source: Fitch Ratings

Cushions Against Issuers' Downgrades



Source: Fitch Ratings

Cover Pool – Peer Analysis

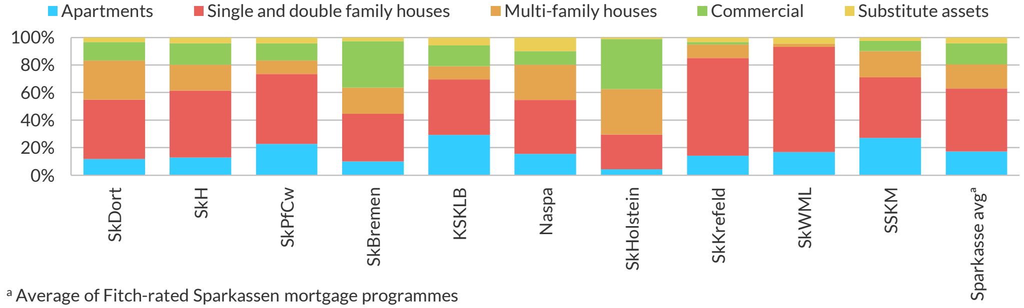
Cover Assets Credit Analysis

	SkDort	Resi	Com	SkH	Resi	Com	SkPfCw	Resi	Com
Covered bonds rating	AAA			AAA			AAA		
Rating default rate (RDR) for rating (%)	24.3	11.9	55.2	21.0	11.3	44.5	14.9	11.3	33.3
Rating recovery rate (RRR) for rating (%)	49.5	66.4	40.4	66.6	64.6	67.9	66.1	64.7	68.5
Rating loss rate (RDR (1-RRR)) for rating (%)	12.3	4.0	32.9	7.0	4.0	14.3	5.0	4.0	10.8
B case loss rate (%)	1.3	0.4	3.4	0.7	0.4	1.5	0.4	0.4	0.8

Not applicable for SkBremen, KSKLB, Naspa, SkHolstein, SkKrefeld, SkWML and SSkM as the ratings are based on the limited rating uplift approach.
Resi: residential. Com: commercial.
Source: Fitch Ratings

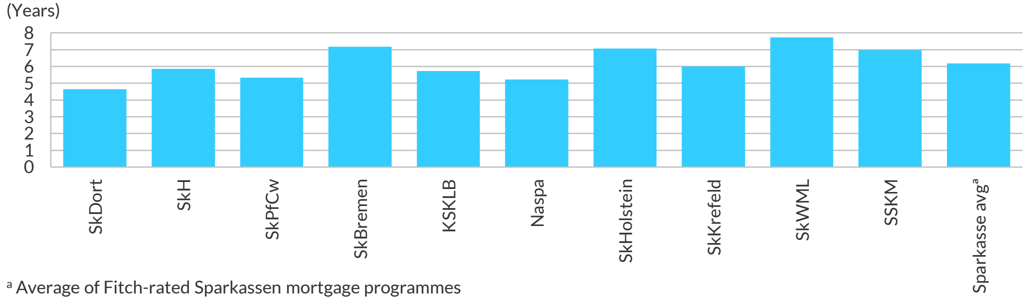
- The savings banks' mortgage Pfandbriefe cover pools consist of German mortgages and mainly contain private residential loans, with single- and double-family houses as the most common collateral type (ranging between 24% and 76% of total cover assets at March 2025). The expected loss for the cover pools is low, reflecting the good credit quality of the cover assets.
- The cover pools of SkHolstein and SkBremenhave the highest proportion of commercial assets, accounting for 35.4% and 33.8% of the cover assets respectively, while SkDort, SkH and SkPfCw's cover pools have 13.4%, 15.4% and 12.4% respectively. Under Fitch's classification, large multi-family houses with over EUR1.5 million in valuation are included in the share of commercial assets for modelling purposes.
- The larger share of commercial assets in the cover pools of SkDortmund and SkH drive the higher credit loss and the high 'AAA' break-even OC for these programmes in comparison to SkPfCw's. Additionally, the significant concentration of commercial borrowers for SkDort leads to higher default expectations for the commercial sub-pool.
- SkWML's purely residential cover assets are the most seasoned, with a weighted average (WA) seasoning of 7.7 years. The cover pools for SkWML and SkKrefeld have the highest granularity, with more than 99% and 93% of their mortgage pools consisting of loans under EUR300,000.

Cover Pool Composition (March 25)



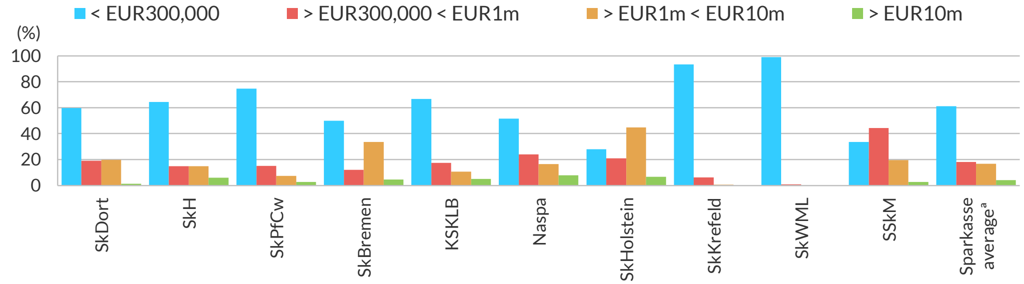
[a] Average of Fitch-rated Sparkassen mortgage programmes
Source: Fitch Ratings, issuers

WA Seasoning (March 25)



[a] Average of Fitch-rated Sparkassen mortgage programmes
Source: Fitch Ratings, issuers

Loan Size (March 25)



[a] Average of Fitch-rated Sparkassen mortgage programmes
Source: Fitch Ratings, issuers

'AAA' Break-Even Overcollateralisation – Peer Analysis

Programme	ALM loss (%)	Credit loss (%)
SkDort	n.a[a]	14.0
SkH	n.a[a]	7.5
SkPfCw	n.a[a]	5.3

[a] As the AAA ratings can be reached on a recovery basis, Fitch does not test for timely payments.
Source: Fitch Ratings

Credit Loss

All the programmes have a resolution reference point (RRP) of 'AA', based on the 'A+' IDR and a two-notch resolution uplift. The mortgage Pfandbriefe for SkDort, SkH and SkPFCW attain a 'AAA' rating with an additional two-notch recovery uplift. Consequently, we do not test for timely payments on the Pfandbriefe and the credit loss is the sole component of Fitch's 'AAA' break-even OC for SkDort (14.0%), SkH (7.5%) and SkPfCw (5.5%).

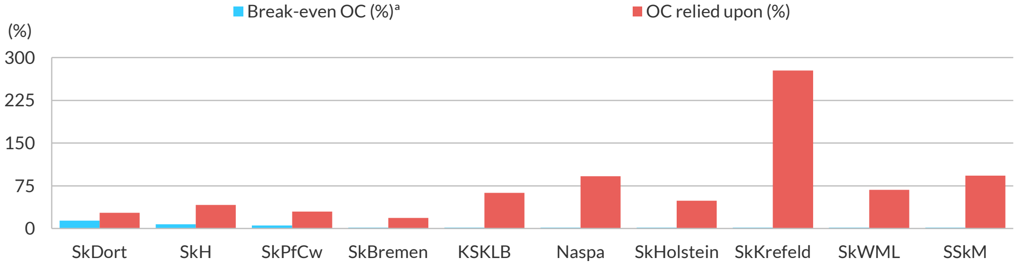
The differences in credit losses are driven by the share of commercial loans in the respective cover pools and their borrower concentration. The low expected loss for the residential assets of all three programmes reflects the high quality of these cover assets with a high seasoning and low current WA LTMLV ratios of 57.1, 55.4% and 53.2% respectively, allowing for outstanding recoveries. Fitch applies the minimum loss assumption defined in its criteria (4% in the AAA rating case) as the modelled credit results for the residential assets are below that of the threshold.

As the ratings for SkBremen, KSKLB, Naspa, SkHolstein, SkKrefeld, SkWML and SSkM's Pfandbrief programmes are based on the limited rating uplift approach. The legal minimum OC of 2% is also the break-even OC for the ratings.

A feature of all Sparkasse issuers is their focus on clearly defined geographic regions within Germany. As of March 2025, 91.2% of SkDort's portfolio was located in North-Rhine Westphalia, 92.9% of SkH's cover assets in Lower Saxony, while 94.7% of SkPfCw's cover assets in Baden-Wuerttemberg. If a significant economic shock were to occur in one of these regions, we would expect deterioration in the cover pool. Fitch therefore applies extra stresses to regionally concentrated pools when determining loss rates.

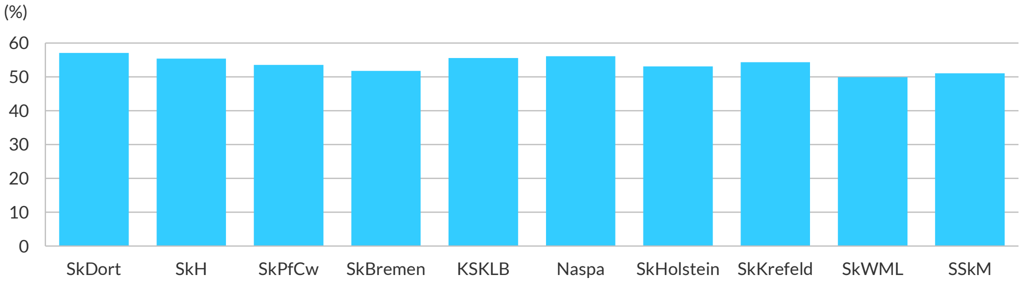
All Sparkasse programmes rated by Fitch maintain significant levels of OC. Fitch considers the lowest OC during the previous 12 months as the relied-upon OC in its analysis. At the end of March 2025 SkKrefeld had the highest relied-upon OC at 277.3% while SkBremen had the lowest at 18.6%. There is a substantial buffer to the break-even OC levels for the respective ratings for all 10 savings banks' mortgage Pfandbrief programmes.

Fitch Break-Even OC vs.OC Relied Upon (March 25)



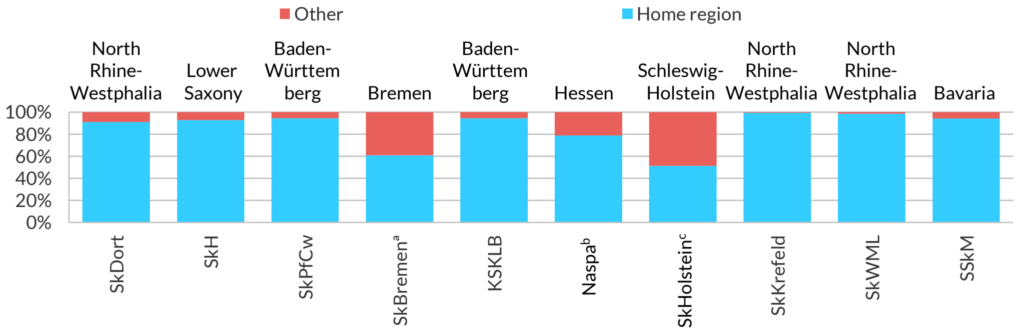
[a] Break-even OC for SkBremen, SkKrefeld, SkWML, KSKLB, Naspa, SkHolstein and SSkM is 2.0%
Source: Fitch Ratings

Residential WA LTMLV (March 25)



Source: Fitch Ratings, issuers

Geographical Distribution (% Total Assets, March 25)



[a] When combining Bremen with Lower Saxony, home region increases to 87.4%
[b] When combining Hessen with Rhineland-Palatinate, home region increases to 95.4%
[c] When combining Schleswig-Holstein with Hamburg, home region increases to 87.3%
Source: Fitch Ratings, issuers

Resolution Uplift, PCU and Recovery Uplift – Peer Analysis

Programme	Resolution uplift (notches)	PCU (notches)
SkDort	2	6
SkH	2	6
SkPfCw	2	6
SkBremen	2	6
KSKLB	2	6
Naspa	2	6
SkHolstein	2	6
SkKrefeld	2	6
SkWML	2	6
SSkM	2	6

Source: Fitch Ratings

Programme	CVB rating	Credit loss (%) in CVB rating stress scenario	OC (%) Fitch relies upon in its analysis[b]	Maximum achievable recovery uplift (notches)
SkDort	AAA	14.0	27.7	2
SkH	AAA	7.5	41.3	2
SkPfCw	AAA	5.3	29.8	2
SkBremen	AA+	n.a.[a]	18.6	1
KSKLB	AA+	n.a.[a]	63.0	1
Naspa	AA+	n.a.[a]	92.0	1
SkHolstein	AA+	n.a.[a]	48.9	1
SkKrefeld	AA+	n.a.[a]	277.3	1
SkWML	AA+	n.a.[a]	67.9	1
SSkM	AA+	n.a.[a]	92.7	1

[a] Not applicable as the rating is based on the limited rating uplift approach.
[b] At end-1Q25.
Source: Fitch Ratings

Resolution Uplift

- The two-notch resolution uplift reflects that collateralised Pfandbriefe in Germany are exempt from bail-in, that Fitch considers the risk of under-collateralisation at the point of resolution to be sufficiently low, and that a resolution, should it happen, is not likely to result in the direct enforcement of recourse against the cover pool.
- For the Sparkasse Pfandbrief programmes, the two-notch resolution uplift also reflects that the IDR is based on their participation in a mutual support scheme.

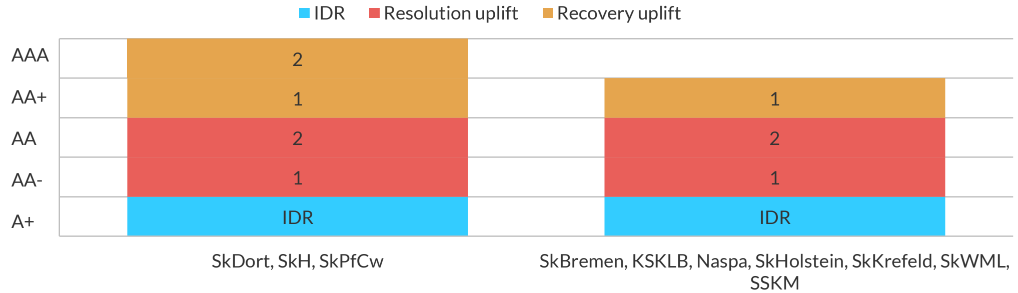
Payment Continuity Uplift (PCU)

- The six-notch PCU for all Sparkasse mortgage programmes reflects principal liquidity protection provided by a 12-month maturity extension feature under the Pfandbrief law. The mandatory inclusion of liquid assets in the cover pool matching the maximum negative cumulative balance of cash flows for the "next 180 days" provides effective protection for interest payments and senior expenses in excess of a minimum of three months under Fitch's criteria. Fitch does not consider that the other PCU components, "Asset Segregation" and "Alternative Risk Management", present a high risk to payment continuity.
- The six notches of PCU are unused for all 10 programmes, and these serve as a buffer against an IDR downgrade for SkDort's, SkH's and SkPfCw's programmes. This is not the case for the programmes of SkBremen, KSKLB, Naspa, SkHolstein, SkKrefeld, SkWML and SSkM because they are rated based on the limited rating uplift approach and the Pfandbrief ratings are directly linked to the IDRs of the issuers.

Recovery Uplift

- The recovery uplift for SkDort's, SkH's and SkPfCw's programmes is two notches as we expect the Pfandbrief holders to benefit from outstanding recoveries. This is because the OC that Fitch relies upon in its analysis offsets the credit loss modelled in the 'AAA' rating scenario and no material risks to these recovery expectations were identified.
- The programmes of SkBremen, KSKLB, Naspa, SkHolstein. SkKrefeld, SkWML and SSkM have a recovery uplift of one notch as they did not deliver historical performance data for the cover assets. The available periodic information was, however, sufficient to form a view on recoveries from the cover pool in the event of a covered bonds default. Our view considered that the cover assets consist of mortgage loans subject to loan-to-value ratio limits. Fitch considered the legal minimum OC sufficient to deliver a 'Good' level of recoveries given default, consistent with a one-notch recovery uplift.
- No rating cap is applied as a result of the applicable sovereign rating (Germany; AAA/Stable).

Used Uplifts Above IDR



Source: Fitch Ratings

A

ESG Considerations

ESG Relevance Scores Recap

		SkDort	SkH	SkPfCw	SkBremen	KSKLB	Naspa	SkHolstein	SkKrefeld	SkWML	SSkM
Environmental (E)	GHG emissions & air quality	2	2	2	2	2	2	2	2	2	2
	Energy management	2	2	2	2	2	1	2	2	2	2
	Water & wastewater management	1	1	1	1	1	1	1	1	1	1
	Waste & hazardous materials management; ecological impacts	2	2	2	2	2	2	2	2	2	2
	Exposure to environmental impacts	2	2	2	2	2	2	2	2	2	2
Social (S)	Human rights, community relations, access & affordability	2	2	2	2	2	2	2	2	2	2
	Customer welfare – fair messaging, privacy & data security	3	3	3	3	3	3	3	3	3	3
	Labour relations & practices	1	1	1	1	1	1	1	1	1	1
	Employee wellbeing	1	1	1	1	1	1	1	1	1	1
	Exposure to social impacts	3	3	3	3	3	3	3	3	3	3
Governance (G)	Rule of law, institutional and regulatory quality	3	3	3	3	3	3	3	3	3	3
	Transaction & collateral structure	3	3	3	3	3	3	3	3	3	3
	Transaction parties & operational risk	3	3	3	3	3	3	3	3	3	3
	Data transparency & privacy	3	3	3	5	5	5	5	5	5	5

Source: Fitch Ratings

Credit-Relevant ESG Scale – Definitions

How relevant are ESG issues to the overall credit rating?	
5	Highly relevant; a key transaction or programme rating driver that has a significant impact on an individual basis
4	Relevant to transaction or programme 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 programme ratings
2	Irrelevant to the transaction or programme ratings; relevant to the sector
1	Irrelevant to the transaction or programme ratings; irrelevant to the sector

Source: Fitch Ratings

ESG Considerations

The highest level of ESG credit relevance is typically a score of '3' - ESG issues are credit neutral or have only a minimal credit impact on the programme, either due to their nature or the way in which they are being managed by the issuers. Fitch assigned a maximum ESG relevance score of '3' for SkDort's, SkH's and SkPfCw's mortgage programmes. The ESG Relevance Score for GHG Emissions & Air Quality is '2' for all programmes reflecting an increased focus on emissions and wider energy efficiency considerations across the residential housing sector, making this general issue relevant to the sector as a whole.

For those programmes secured by portfolios with commercial real-estate assets (all programmes excluding SkWML) the ESG Relevance Score for Energy Management is '2', reflecting the increased expectation that the value of the assets will be affected by regulation around energy-efficiency.

SkBremen, KSKLB, Naspa, SkHolstein, SkKrefeld, SkWML and SSkM's mortgage programmes have an ESG Relevance Score of '5' for Data Transparency & Privacy as data provided by the issuers does not enable Fitch to perform a full analysis. For this reason, Fitch rates both programmes on a limited uplift approach, not testing for timely payment and limiting the recovery uplift to one notch.

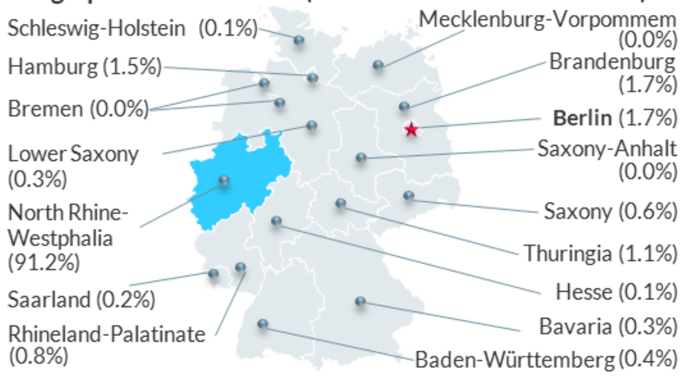
For more information on our ESG Relevance Scores, visit www.fitchratings.com/esg.

Appendix 1A– Focus on SkDort Mortgage Pfandbrief Programme

Programme Structure

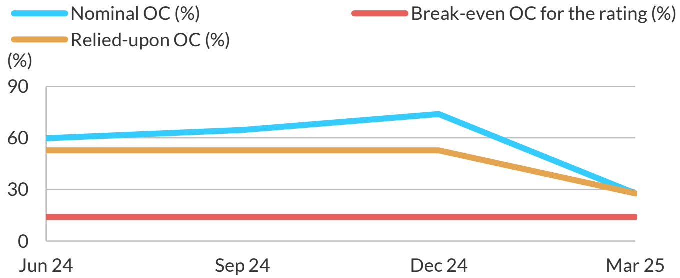
- **Key Rating Drivers:** The 'AAA' rating of the Pfandbrief is based on SkDort's's Long-Term IDR of 'A+', a resolution uplift of two notches, a two-notch recovery uplift and the OC Fitch relies on of 27.7%, which provides more protection than the 'AAA' break-even OC of 14.0%. The Stable Outlook on the rating reflects the six-notch buffer against an IDR downgrade due to the different uplift factors above the bank's IDR.
- **Cover Pool Composition:** The Pfandbriefe are secured by German residential and commercial loans with a high geographic concentration in North Rhine-Westphalia (91.2% of assets). At end-March 2025, the cover pool was EUR1.060 billion with a WA current LTV (CLTV) of 57.1% and a WA seasoning of 4.6 years.
- **Rating Sensitivities:** The covered bonds' rating is 'AAA'. This is the highest level on Fitch's scale, so the rating cannot be upgraded. The 'AAA' rating would be vulnerable to downgrade if SkDortmund's IDR was downgraded to 'BB' or below, or if the OC that Fitch considers in its analysis falls below Fitch's 'AAA' break-even level of 14.0%. If the relevant OC fell to the legal minimum requirement of 2% on a nominal basis, the programme could only achieve a one-notch recovery uplift. As a result, the Pfandbrief rating would probably be downgraded to 'AA+', one notch above SkDortmund's RRP.

Geographical Distribution (% Total Assets – March 2025)



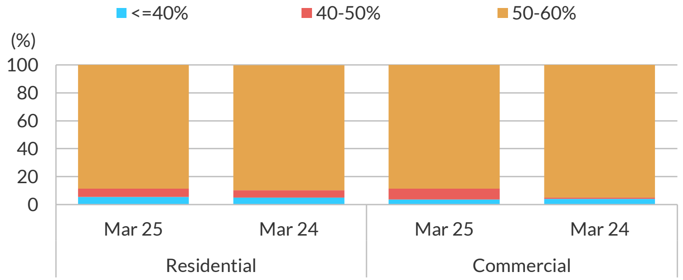
Source: Fitch Ratings, SkDort

Overcollateralisation Breakdown (%)



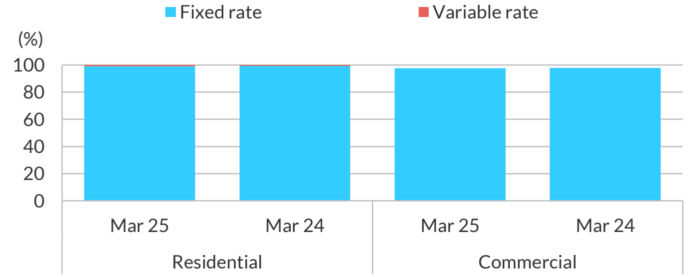
Source: Fitch Ratings, SkDort

Loan to Mortgage Lending Value Breakdown (%)



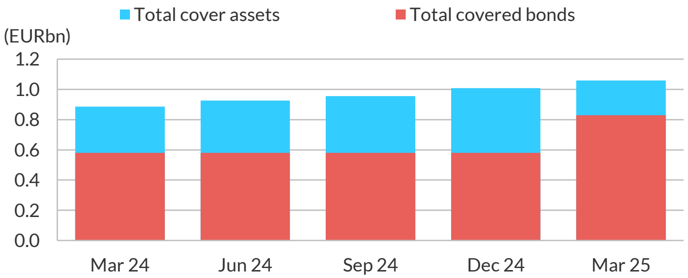
Source: Fitch Ratings, SkDort

Loan Payment Type (%)



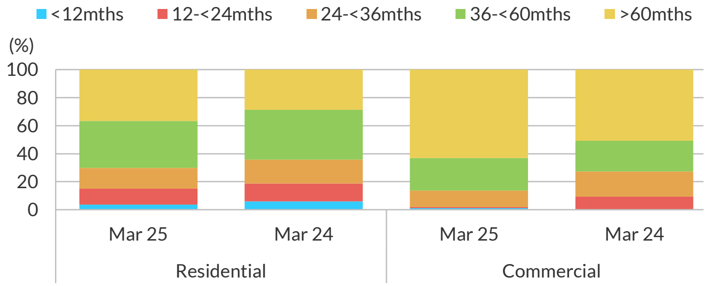
Source: Fitch Ratings, SkDort

Assets and Liabilities



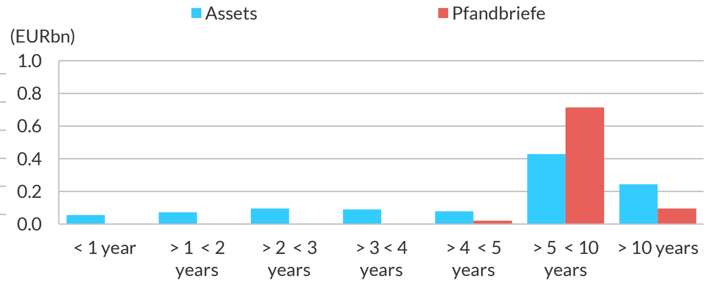
Source: Fitch Ratings, SkDort

Loan Seasoning (%)



Source: Fitch Ratings, SkDort

Maturity Structure of Assets and Liabilities (March 25)



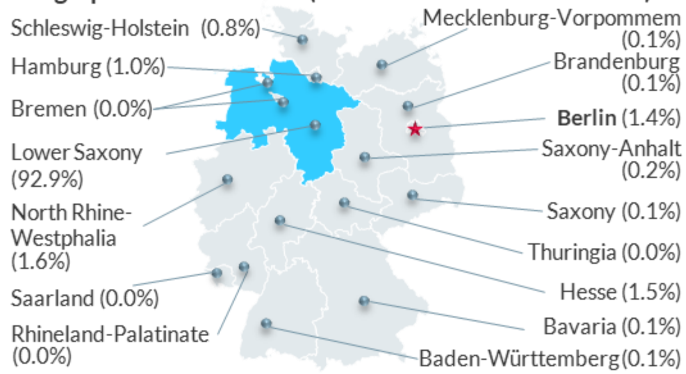
Source: Fitch Ratings, SkDort

Appendix 1B – Focus on SkH Mortgage Pfandbrief Programme

Programme Structure

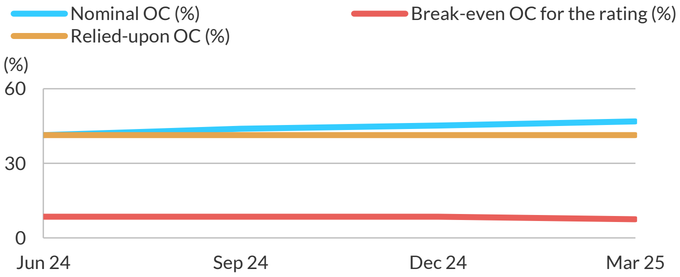
- **Key Rating Drivers:** The 'AAA' rating of the Pfandbrief is based on SkH's IDR of 'A+', a resolution uplift of two notches, a two-notch recovery uplift and the OC Fitch relies on of 41.3%, which provides more protection than the 'AAA' break-even OC of 7.5%. The Stable Outlook on the rating reflects the six-notch buffer against an IDR downgrade due to the different uplift factors above the bank's IDR.
- **Cover Pool Composition:** The Pfandbriefe are secured by German residential and commercial loans with a high geographic concentration in Lower Saxony (92.9% of assets). There has been an increase in cover assets during the last 12 months and, at March 2025, the cover pool was EUR3.154 billion with a WA current loan-to-value (CLTV) of 55.4% and a WA seasoning of 5.9 years.
- **Rating Sensitivities:** The covered bonds' rating is 'AAA'. This is the highest level on Fitch's scale so the rating cannot be upgraded. The 'AAA' rating would be vulnerable to downgrade if SkH's IDR was downgraded to 'BB' or below or if the OC that Fitch considers in its analysis falls below Fitch's 'AAA' break-even level of 7.5%. If the relevant OC fell to the legal minimum requirement of 2% on a nominal basis, the programme could only achieve a one-notch recovery uplift. As a result, the Pfandbrief rating would probably be downgraded to 'AA+', one notch above SkH's RRP.

Geographical Distribution (% Total Assets – March 2025)



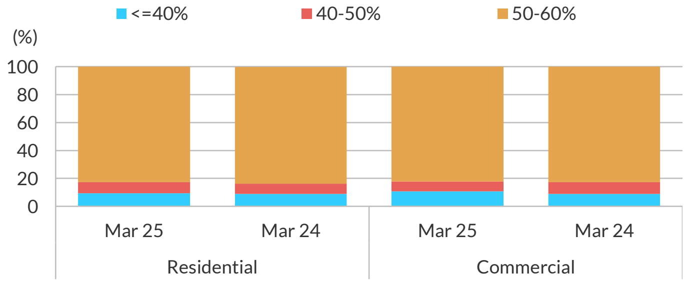
Source: Fitch Ratings, SkH

Overcollateralisation Breakdown (%)



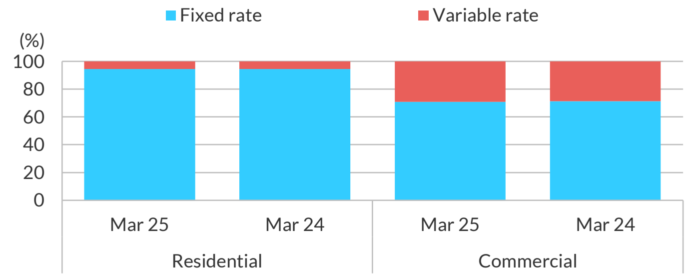
Source: Fitch Ratings, SkH

Loan to Mortgage Lending Value Breakdown (%)



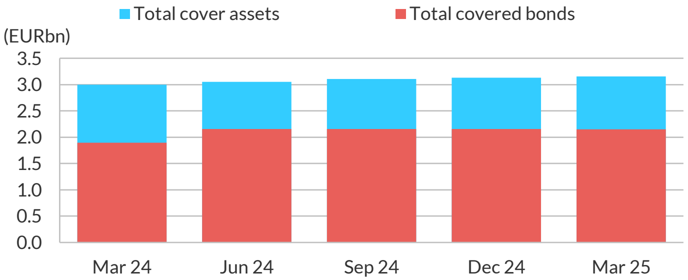
Source: Fitch Ratings, SkH

Loan Payment Type (%)



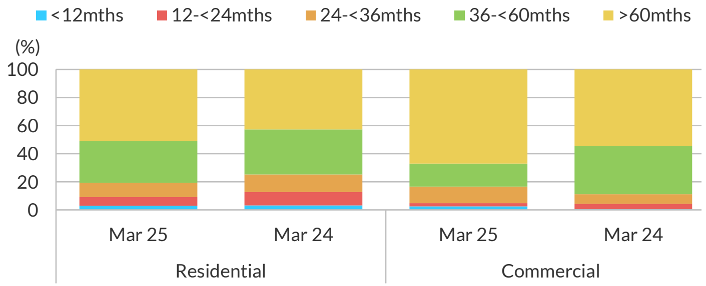
Source: Fitch Ratings, SkH

Assets and Liabilities



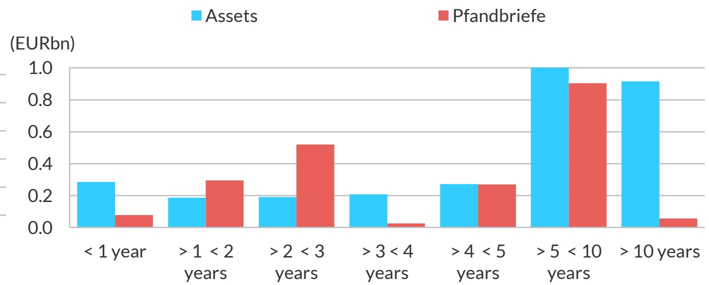
Source: Fitch Ratings, SkH

Loan Seasoning (%)



Source: Fitch Ratings, SkH

Maturity Structure of Assets and Liabilities (March 25)



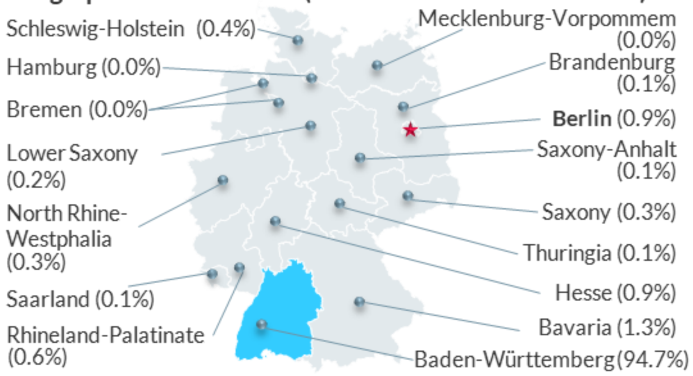
Source: Fitch Ratings, SkH

Appendix 1C – Focus on SkPfCw Mortgage Pfandbrief Programme

Programme Structure

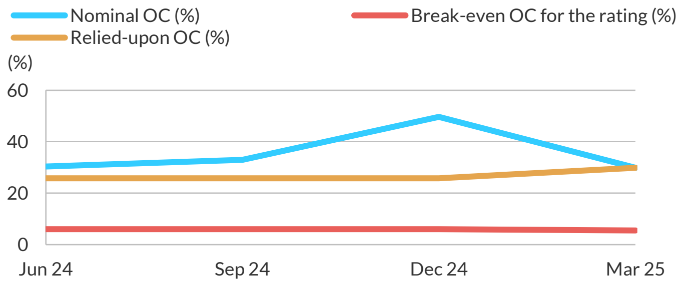
- **Key Rating Drivers:** The 'AAA' rating of the Pfandbrief is based on SkPfCw's Long-Term IDR of 'A+', a resolution uplift of two notches, a two-notch recovery uplift and the OC Fitch relies on of 29.8%, which provides more protection than the 'AAA' break-even OC of 5.5%. The Stable Outlook on the rating reflects the six-notch buffer against an IDR downgrade due to the different uplift factors above the bank's IDR.
- **Cover Pool Composition:** The Pfandbriefe are secured by German residential and commercial loans with a high geographic concentration in Baden-Württemberg (94.7% of assets). At end-March 2025, the cover pool was EUR3.060 billion with a WA CLTV ratio of 53.2% and a WA seasoning of 5.3 years.
- **Rating Sensitivities:** The covered bonds' rating is 'AAA'. This is the highest level on Fitch's scale, so the rating cannot be upgraded. The 'AAA' rating would be vulnerable to downgrade if SkPfCw's IDR was downgraded to 'BB' or below or if the OC that Fitch considers in its analysis falls below Fitch's 'AAA' break-even level of 5.5%. If the relevant OC fell to the legal minimum requirement of 2% on a nominal basis, the programme could only achieve a one-notch recovery uplift. As a result, the Pfandbrief rating would probably be downgraded to 'AA+', one notch above SkPfCw's RRP.

Geographical Distribution (% Total Assets – March 2025)



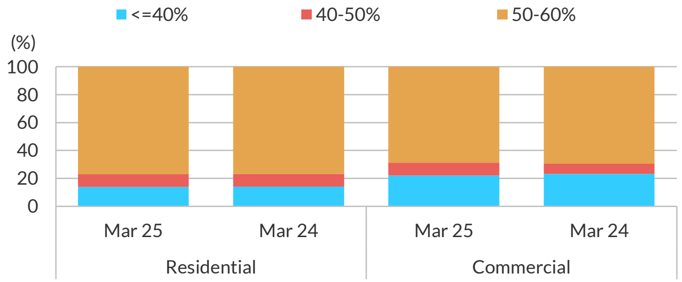
Source: Fitch Ratings, SkPfCw

Overcollateralisation Breakdown (%)



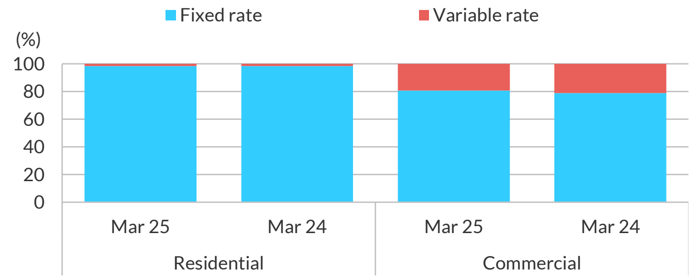
Source: Fitch Ratings, SkPfCw

Loan to Mortgage Lending Value Breakdown (%)



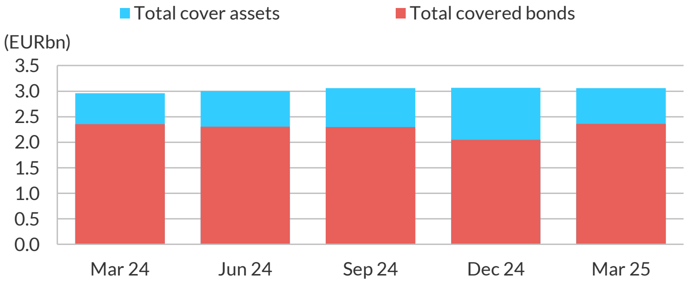
Source: Fitch Ratings, SkPfCw

Loan Payment Type (%)



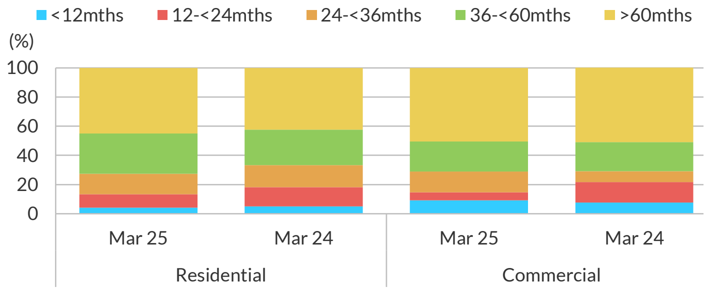
Source: Fitch Ratings, SkPfCw

Assets and Liabilities



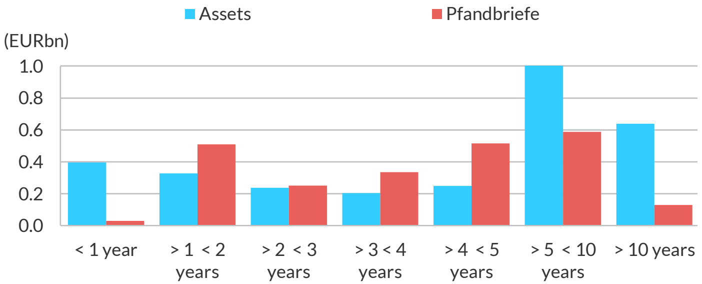
Source: Fitch Ratings, SkPfCw

Loan Seasoning (%)



Source: Fitch Ratings, SkPfCw

Maturity Structure of Assets and Liabilities (March 25)



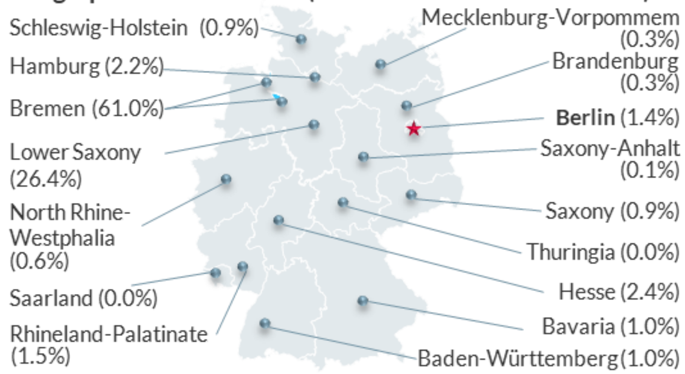
Source: Fitch Ratings, SkPfCw

Appendix 1D– Focus on SkBremen Mortgage Pfandbrief Programme

Programme Structure

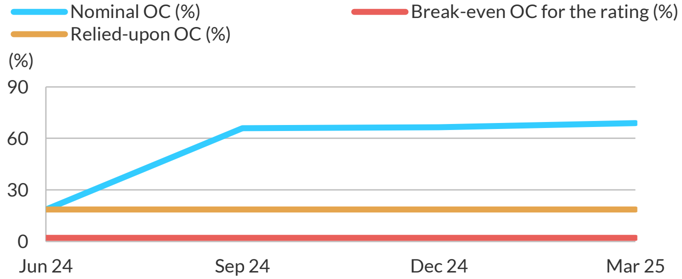
- **Key Rating Drivers:** The 'AA+' rating of the Pfandbrief is based on SkBremen's IDR of 'A+', a resolution uplift of two notches and a recovery uplift of one notch. The legal minimum overcollateralisation of 2% on a nominal basis is also the break-even OC for the rating. Fitch rates the Pfandbriefe based on a limited rating uplift as the data provided by SkBremen do not enable Fitch to perform a full analysis. For this reason, Fitch does not test for timely payment and limits the recovery uplift to one notch. The Stable Outlook mirrors that on SkBremen's Long-Term IDR.
- **Cover Pool Composition:** The Pfandbriefe are secured by German residential and commercial loans with a high geographic concentration in Bremen (61.0% of assets). At end-March 2025, the cover pool was EUR1.182 billion with a WA CLTV of 53.7% and a WA seasoning of 7.2 years. There has been a constant increase in OC levels over the past 12 months to Q1 2025.
- **Rating Sensitivities:** There is a direct link between the rating of the Pfandbriefe and SkBremen's IDR given Fitch's application of the limited rating uplift approach. Any rating action on the IDR would be reflected in the Pfandbrief rating. Fitch would be able to assign an additional notch of recovery uplift should the issuer deliver data allowing for a full analysis. In that scenario, the Pfandbrief rating could be upgraded to 'AAA' and a cushion against downgrade following an issuer downgrade would be provided.

Geographical Distribution (% Total Assets – March 2025)



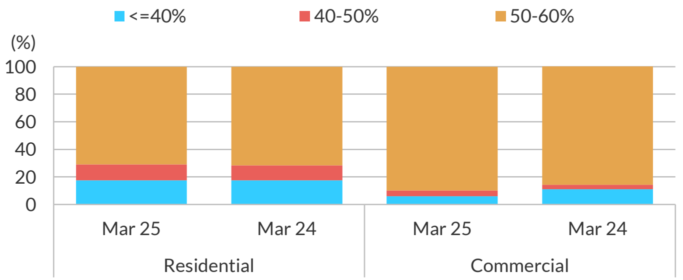
Source: Fitch Ratings, SkBremen

Overcollateralisation Breakdown (%)



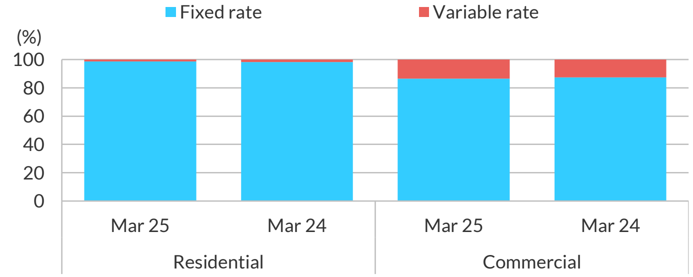
Source: Fitch Ratings, SkBremen

Loan to Mortgage Lending Value Breakdown (%)



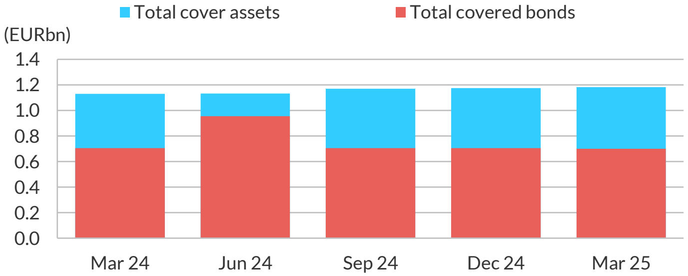
Source: Fitch Ratings, SkBremen

Loan Payment Type (%)



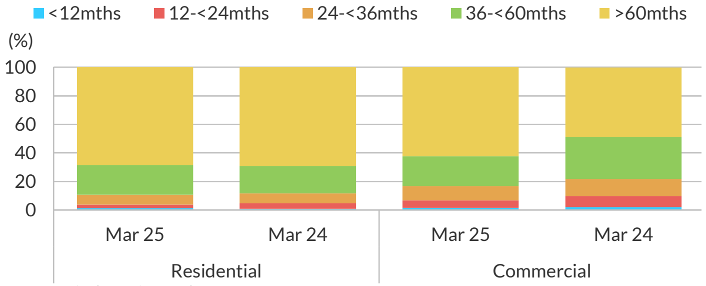
Source: Fitch Ratings, SkBremen

Assets and Liabilities



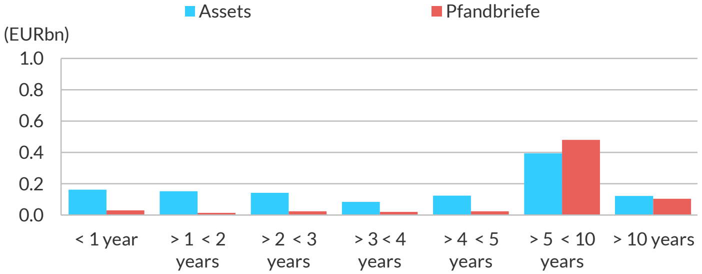
Source: Fitch Ratings, SkBremen

Loan Seasoning (%)



Source: Fitch Ratings, SkBremen

Maturity Structure of Assets and Liabilities (March 25)



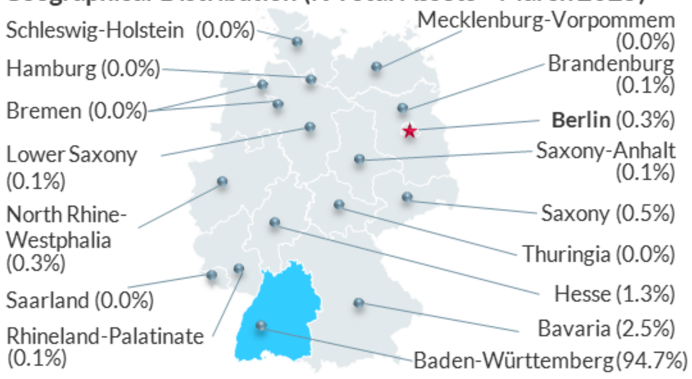
Source: Fitch Ratings, SkBremen

Appendix 1E– Focus on KSKLB Mortgage Pfandbrief Programme

Programme Structure

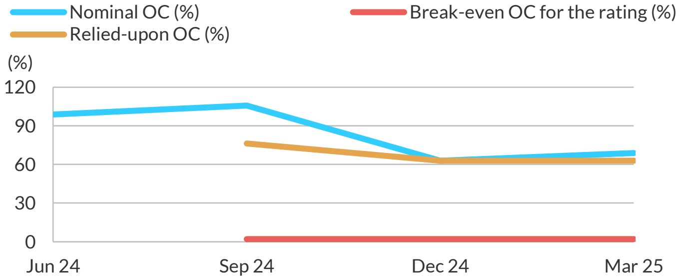
- **Key Rating Drivers:** The 'AA+' rating of the Pfandbrief is based on KSKLB's IDR of 'A+', a resolution uplift of two notches and a recovery uplift of one notch. The legal minimum overcollateralisation of 2% on a nominal basis is also the break-even OC for the rating. Fitch rates the Pfandbriefe based on a limited rating uplift as the data provided by KSKLB does not enable Fitch to perform a full analysis. For this reason, Fitch does not test for timely payment and limits the recovery uplift to one notch. The Stable Outlook mirrors that on KSKLB's Long-Term IDR.
- **Cover Pool Composition:** The Pfandbriefe are secured by German residential and commercial loans with a high geographic concentration in Baden-Württemberg (94.7% of assets). At end-March 2025, the cover pool was EUR1.701 billion with a WA CLTV of 55.8% and a WA seasoning of 5.7 years.
- **Rating Sensitivities:** There is a direct link between the rating of the Pfandbriefe and KSKLB's IDR given Fitch's application of the limited rating uplift approach. Any rating action on the IDR would be reflected in the Pfandbrief rating. Fitch would be able to assign an additional notch of recovery uplift should the issuer deliver data allowing for a full analysis. In that scenario, the Pfandbrief rating could be upgraded to 'AAA' and a cushion against downgrade following an issuer downgrade would be provided.

Geographical Distribution (% Total Assets – March 2025)



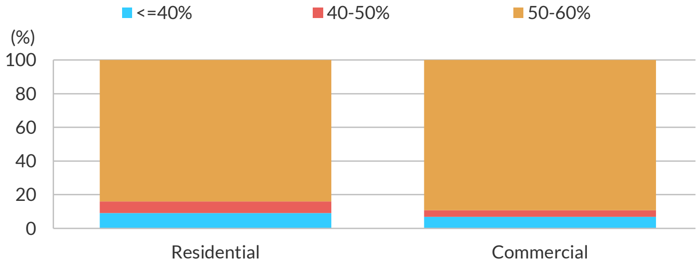
Source: Fitch Ratings, KSKLB

Overcollateralisation Breakdown (%)



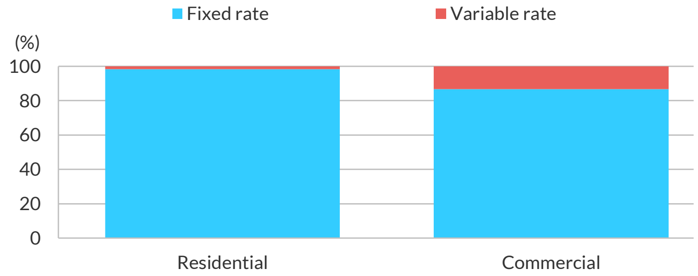
Source: Fitch Ratings, KSKLB

Loan to Mortgage Lending Value Breakdown (%) (March 25)



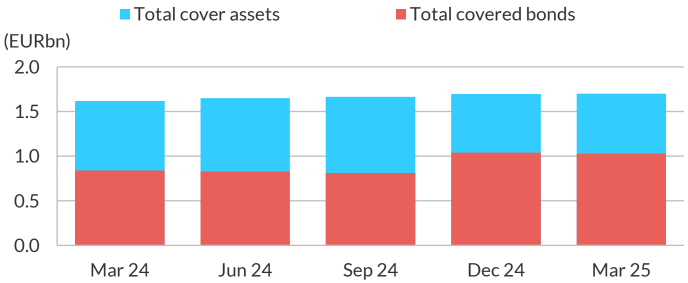
Source: Fitch Ratings, KSKLB

Loan Payment Type (%) (March 25)



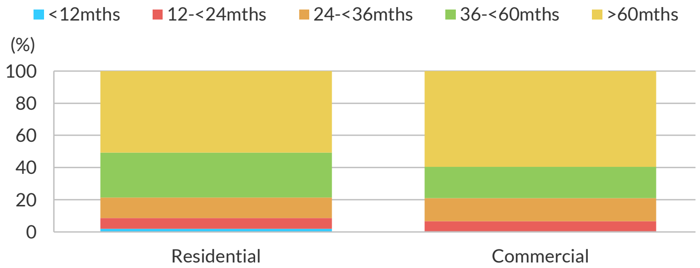
Source: Fitch Ratings, KSKLB

Assets and Liabilities



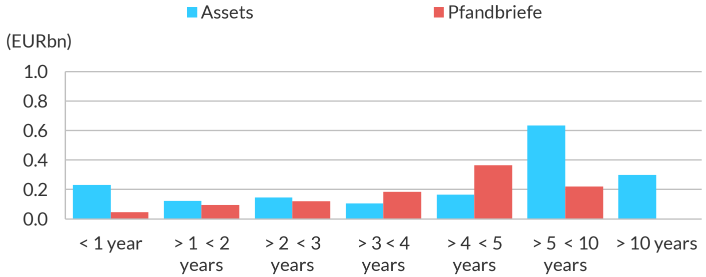
Source: Fitch Ratings, KSKLB

Loan Seasoning (%) (March 25)



Source: Fitch Ratings, KSKLB

Maturity Structure of Assets and Liabilities (March 25)



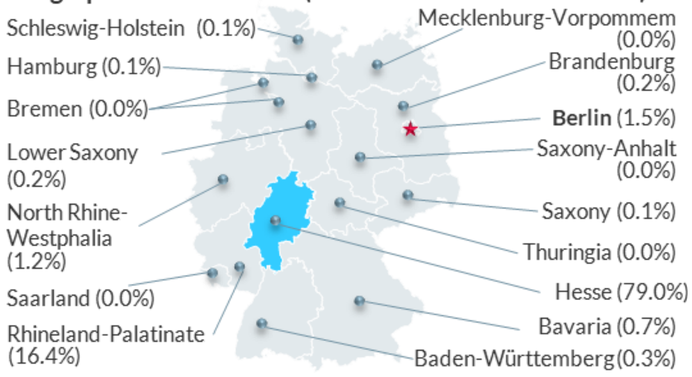
Source: Fitch Ratings, KSKLB

Appendix 1F– Focus on Naspa Mortgage Pfandbrief Programme

Programme Structure

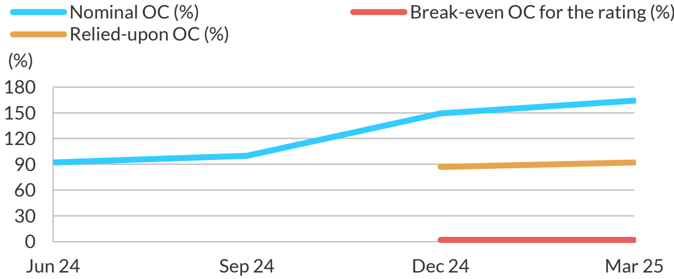
- **Key Rating Drivers:** The ‘AA+’ rating of the Pfandbrief is based on Naspa’s IDR of ‘A+’, a resolution uplift of two notches and a recovery uplift of one notch. The legal minimum overcollateralisation of 2% on a nominal basis is also the break-even OC for the rating. Fitch rates the Pfandbriefe based on a limited rating uplift as the data provided by Naspa does not enable Fitch to perform a full analysis. For this reason, Fitch does not test for timely payment and limits the recovery uplift to one notch. The Stable Outlook mirrors that on Naspa’s Long-Term IDR.
- **Cover Pool Composition:** The Pfandbriefe are secured by German residential and commercial loans with a high geographic concentration in Hessen (79% of assets). At end-March 2025, the cover pool was EUR1.210 billion with a WA CLTV of 56.3% and a WA seasoning of 5.2 years.
- **Rating Sensitivities:** There is a direct link between the rating of the Pfandbriefe and Naspa’s IDR given Fitch’s application of the limited rating uplift approach. Any rating action on the IDR would be reflected in the Pfandbrief rating. Fitch would be able to assign an additional notch of recovery uplift should the issuer deliver data allowing for a full analysis. In that scenario, the Pfandbrief rating could be upgraded to ‘AAA’ and a cushion against downgrade following an issuer downgrade would be provided.

Geographical Distribution (% Total Assets – March 2025)



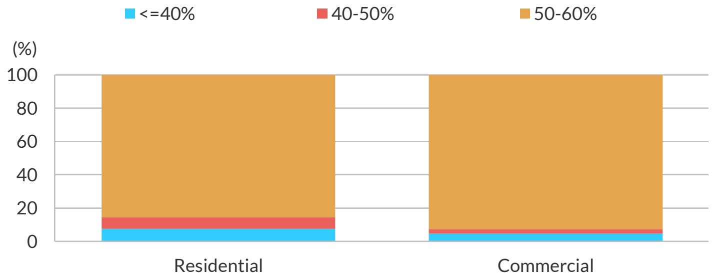
Source: Fitch Ratings, Naspa

Overcollateralisation Breakdown (%)



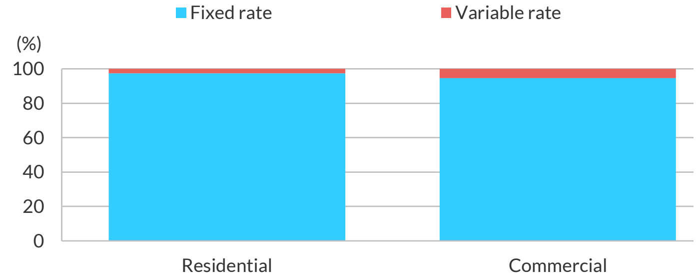
Source: Fitch Ratings, Naspa

Loan to Mortgage Lending Value Breakdown (%) (March 25)



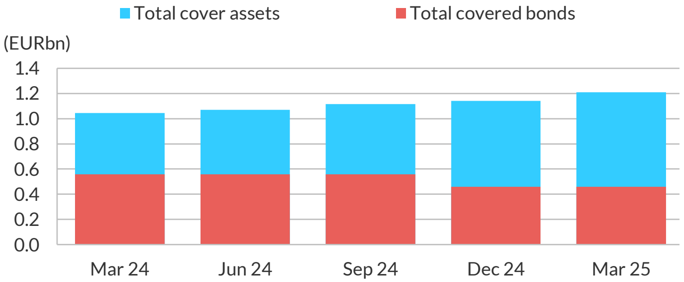
Source: Fitch Ratings, Naspa

Loan Payment Type (%) (March 25)



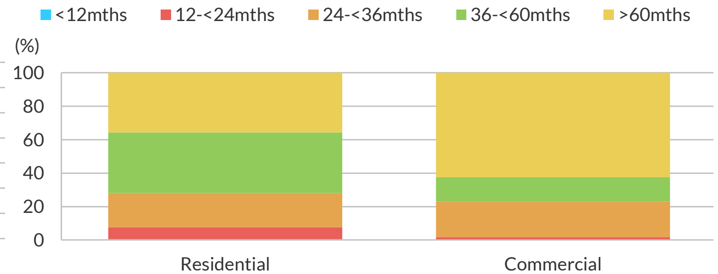
Source: Fitch Ratings, Naspa

Assets and Liabilities



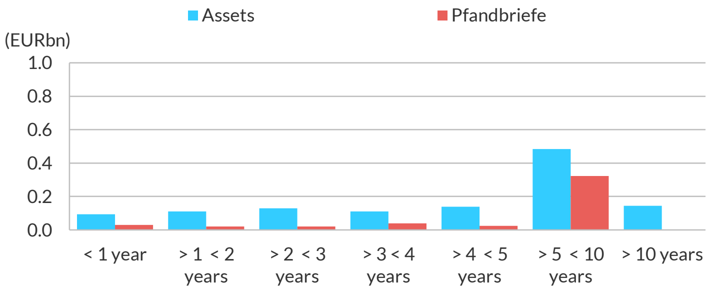
Source: Fitch Ratings, Naspa

Loan Seasoning (%) (March 25)



Source: Fitch Ratings, Naspa

Maturity Structure of Assets and Liabilities (March 25)



Source: Fitch Ratings, Naspa

Appendix G– Focus on SkHolstein Mortgage Pfandbrief Programme

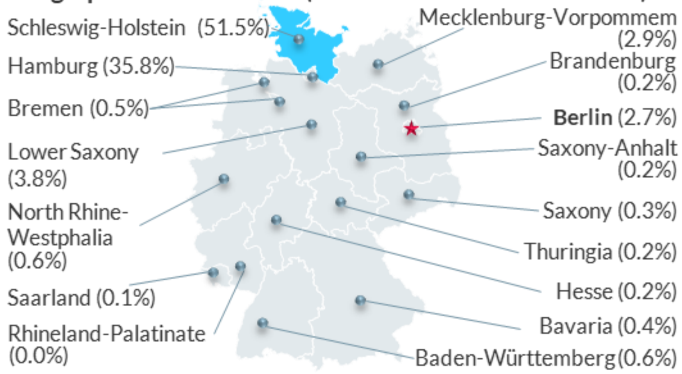
Programme Structure

- **Key Rating Drivers:** The 'AA+' rating of the Pfandbrief is based on SkHolstein's IDR of 'A+', a resolution uplift of two notches and a recovery uplift of one notch. The legal minimum overcollateralisation of 2% on a nominal basis is also the break-even OC for the rating. Fitch rates the Pfandbriefe based on a limited rating uplift as the data provided by SkHolstein does not enable Fitch to perform a full analysis. For this reason, Fitch does not test for timely payment and limits the recovery uplift to one notch. The Stable Outlook mirrors that on SkHolstein's Long-Term IDR.

- **Cover Pool Composition:** The Pfandbriefe are secured by German residential and commercial loans with a high geographic concentration in Schleswig-Holstein (51.5% of assets). At end-March 2025, the cover pool was EUR1.407 billion with a WA CLTV of 53.4% and a WA seasoning of 7.1 years.

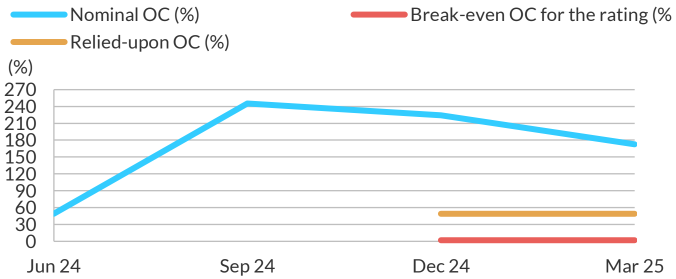
- **Rating Sensitivities:** There is a direct link between the rating of the Pfandbriefe and SkHolstein's IDR given Fitch's application of the limited rating uplift approach. Any rating action on the IDR would be reflected in the Pfandbrief rating. Fitch would be able to assign an additional notch of recovery uplift should the issuer deliver data allowing for a full analysis. In that scenario, the Pfandbrief rating could be upgraded to 'AAA' and a cushion against downgrade following an issuer downgrade would be provided.

Geographical Distribution (% Total Assets – March 2025)



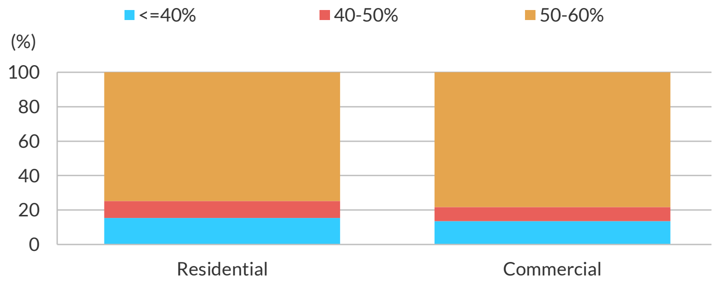
Source: Fitch Ratings, SkHolstein

Overcollateralisation Breakdown (%)



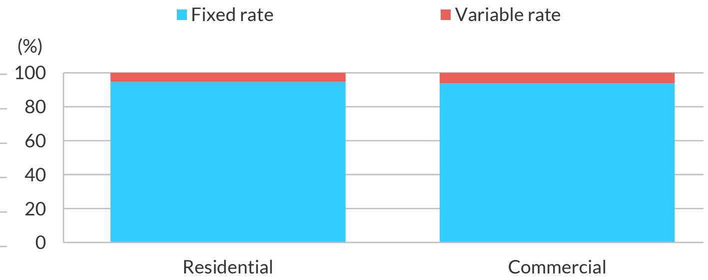
Source: Fitch Ratings, SkHolstein

Loan to Mortgage Lending Value Breakdown (%) (March 25)



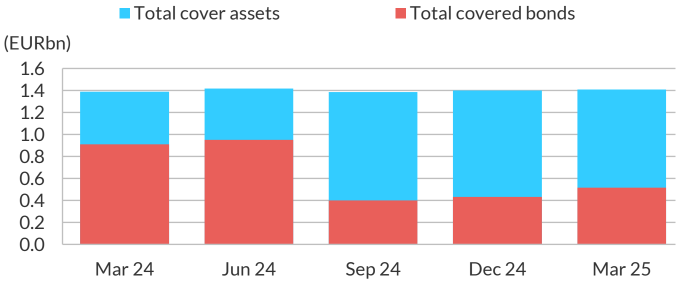
Source: Fitch Ratings, SkHolstein

Loan Payment Type (%) (March 25)



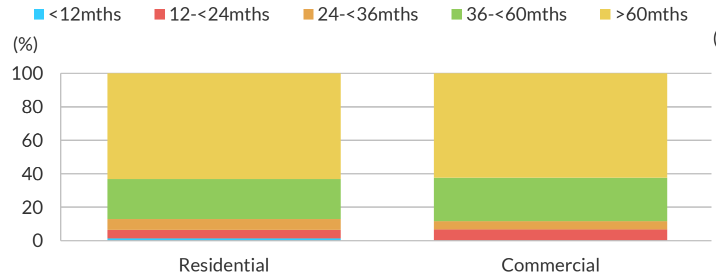
Source: Fitch Ratings, SkHolstein

Assets and Liabilities



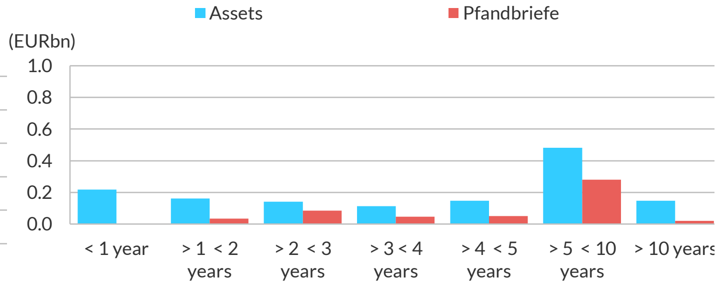
Source: Fitch Ratings, SkHolstein

Loan Seasoning (%) (March 25)



Source: Fitch Ratings, SkHolstein

Maturity Structure of Assets and Liabilities (March 25)



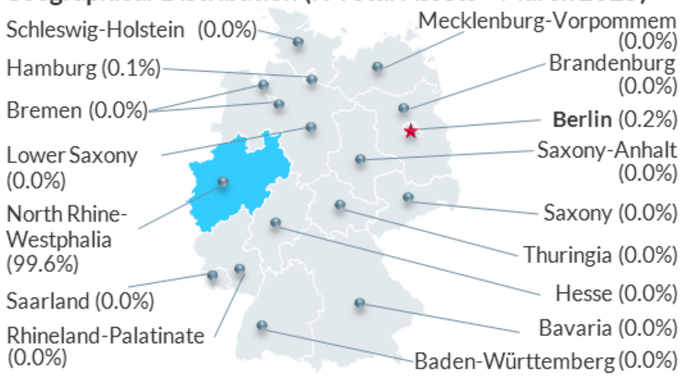
Source: Fitch Ratings, SkHolstein

Appendix 1H– Focus on SkKrefeld Mortgage Pfandbrief Programme

Programme Structure

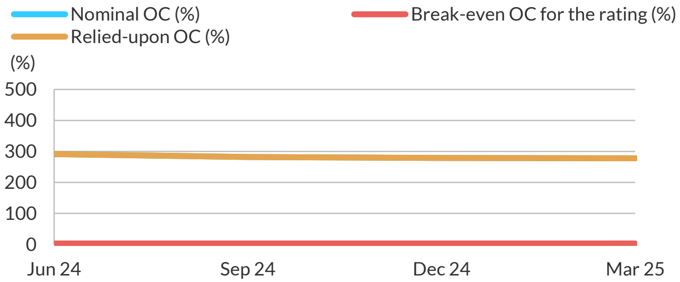
- **Key Rating Drivers:** The 'AA+' rating of the Pfandbrief is based on SkKrefeld's IDR of 'A+', a resolution uplift of two notches and a recovery uplift of one notch. The legal minimum overcollateralisation of 2% on a nominal basis is also the break-even OC for the rating. Fitch rates the Pfandbriefe based on a limited rating uplift as the data provided by SkKrefeld does not enable Fitch to perform a full analysis. The Stable Outlook mirrors that on SkKrefeld's Long-Term IDR.
- **Cover Pool Composition:** The Pfandbriefe are secured by German residential and commercial loans with a high geographic concentration in North Rhine-Westphalia (99.6% of assets). At end-March 2025, the cover pool was EUR868 million with a WA CLTV of 54.5% and a WA seasoning of 6.0 years. The programme has the highest OC level across all six programmes with a current nominal OC of 277.3%.
- **Rating Sensitivities:** There is a direct link between the rating of the Pfandbriefe and SkKrefeld's IDR given Fitch's application of the limited rating uplift approach. Any rating action on the IDR would be reflected in the Pfandbrief rating. Fitch would be able to assign an additional notch of recovery uplift should the issuer deliver data allowing for a full analysis. In that scenario, the Pfandbrief rating could be upgraded to 'AAA' and a cushion against a downgrade following an issuer downgrade would be provided.

Geographical Distribution (% Total Assets – March 2025)



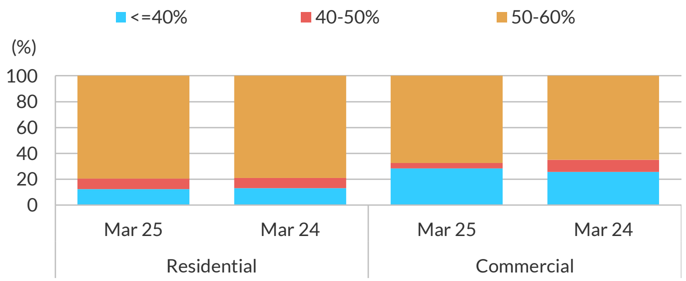
Source: Fitch Ratings, SkKrefeld

Overcollateralisation Breakdown (%)



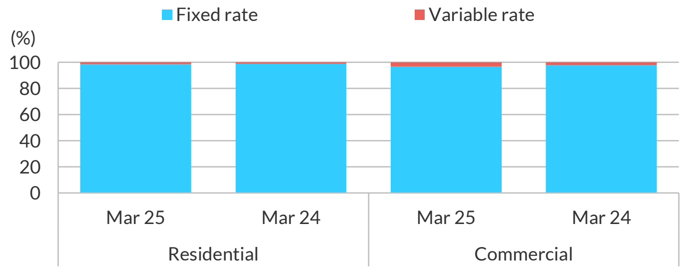
Source: Fitch Ratings, SkKrefeld

Loan to Mortgage Lending Value Breakdown (%)



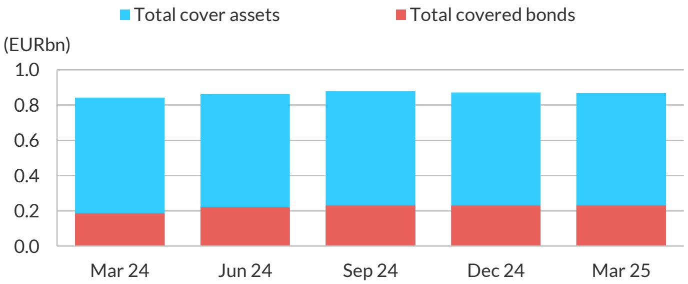
Source: Fitch Ratings, SkKrefeld

Loan Payment Type (%)



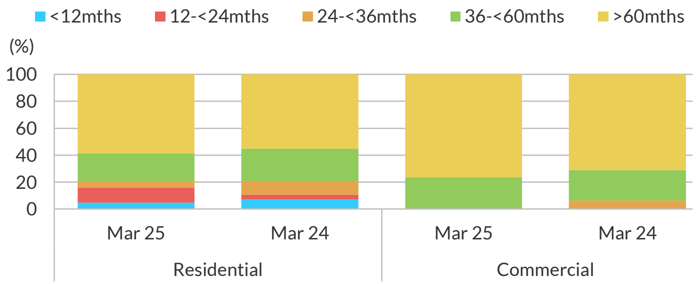
Source: Fitch Ratings, SkKrefeld

Assets and Liabilities



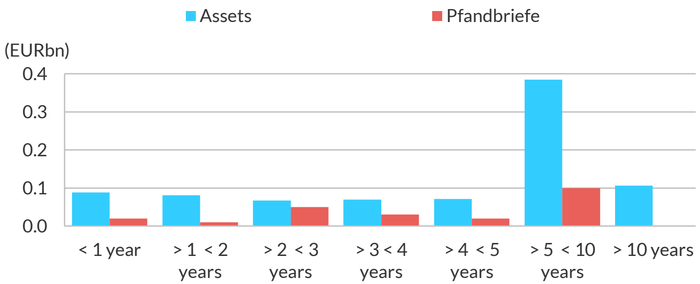
Source: Fitch Ratings, SkKrefeld

Loan Seasoning (%)



Source: Fitch Ratings, SkKrefeld

Maturity Structure of Assets and Liabilities (March 25)



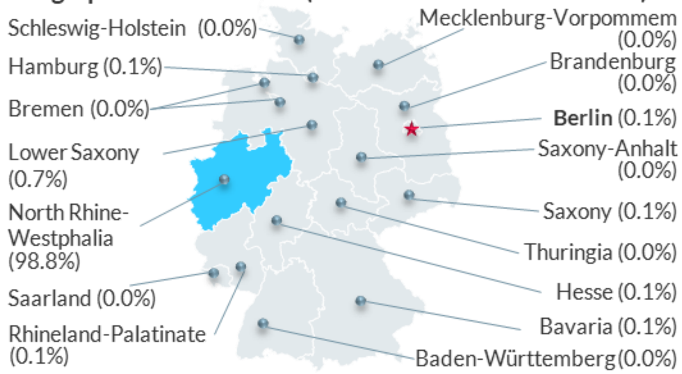
Source: Fitch Ratings, SkKrefeld

Appendix 1I – Focus on SkWML Mortgage Pfandbrief Programme

Programme Structure

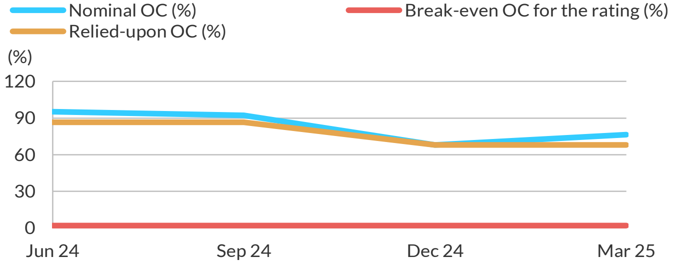
- **Key Rating Drivers:** The 'AA+' rating of the Pfandbrief is based on SkWML's IDR of 'A+', a resolution uplift of two notches and a recovery uplift of one notch. The legal minimum overcollateralisation of 2% on a nominal basis is also the break-even OC for the rating. Fitch rates the Pfandbriefe based on a limited rating uplift as the data provided by SkWML does not enable Fitch to perform a full analysis. For this reason, Fitch does not test for timely payment and limits the recovery uplift to one notch. The Stable Outlook mirrors that on SkWML's Long-Term IDR.
- **Cover Pool Composition**: The Pfandbriefe are secured by German residential fixed-rate mortgage loans with a high geographic concentration in North Rhine-Westphalia (98.8% of assets). At end-March 2025, the cover pool was EUR603 million with a WA CLTV of 49.9% and a WA seasoning of 7.7 years.
- **Rating Sensitivities:** There is a direct link between the rating of the Pfandbriefe and SkWML's IDR given Fitch's application of the limited rating uplift approach. Any rating action on the IDR would be reflected in the Pfandbrief rating. Fitch would be able to assign an additional notch of recovery uplift should the issuer deliver data allowing a full analysis. In that scenario, the Pfandbrief rating could be upgraded to 'AAA' and a cushion against downgrade following an issuer downgrade would be provided.

Geographical Distribution (% Total Assets – March 2025)



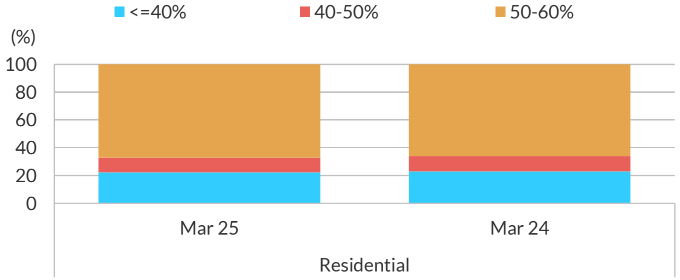
Source: Fitch Ratings, SkWML

Overcollateralisation Breakdown (%)



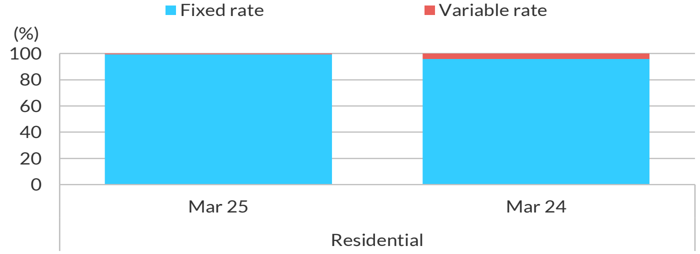
Source: Fitch Ratings, SkWML

Loan to Mortgage Lending Value Breakdown (%)



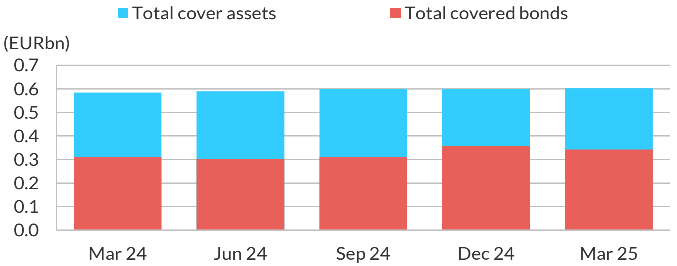
Source: Fitch Ratings, SkWML

Loan Payment Type (%)



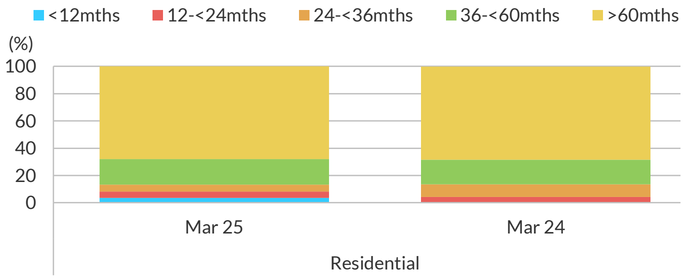
Source: Fitch Ratings, SkWML

Assets and Liabilities



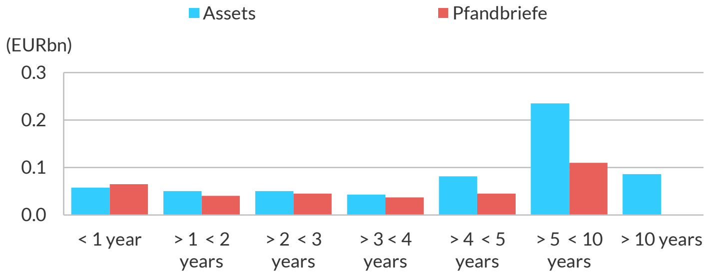
Source: Fitch Ratings, SkWML

Loan Seasoning (%)



Source: Fitch Ratings, SkWML

Maturity Structure of Assets and Liabilities (March 25)



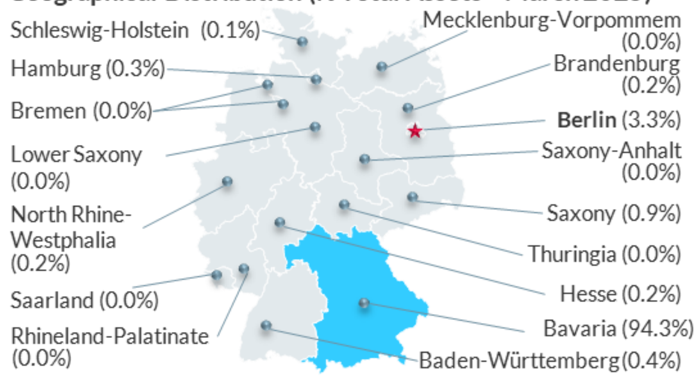
Source: Fitch Ratings, SkWML

Appendix 1J– Focus on SSkM Mortgage Pfandbrief Programme

Programme Structure

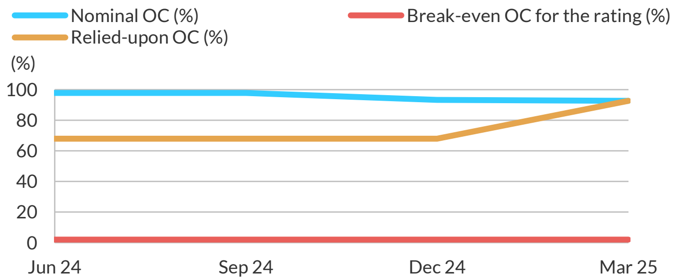
- **Key Rating Drivers:** The 'AA+' rating of the Pfandbrief is based on SSkM's IDR of 'A+', a resolution uplift of two notches and a recovery uplift of one notch. The legal minimum overcollateralisation of 2% on a nominal basis is also the break-even OC for the rating. Fitch rates the Pfandbriefe based on a limited rating uplift as the data provided by SSkM does not enable Fitch to perform a full analysis. For this reason, Fitch does not test for timely payment and limits the recovery uplift to one notch. The Stable Outlook mirrors that on SSkM's Long-Term IDR.
- **Cover Pool Composition:** The Pfandbriefe are secured by German residential and commercial loans with a high geographic concentration in Bavaria (94.3% of assets). At end-March 2025, the cover pool was EUR1.339 billion with a WA CLTV of 50.9% and a WA seasoning of 7.0 years.
- **Rating Sensitivities:** There is a direct link between the rating of the Pfandbriefe and SSkM's IDR given Fitch's application of the limited rating uplift approach. Any rating action on the IDR would be reflected in the Pfandbrief rating. Fitch would be able to assign an additional notch of recovery uplift if the issuer delivered data allowing for a full analysis. The Pfandbrief rating could then be upgraded to 'AAA' and a cushion against downgrade following an issuer downgrade would be provided.

Geographical Distribution (% Total Assets – March 2025)



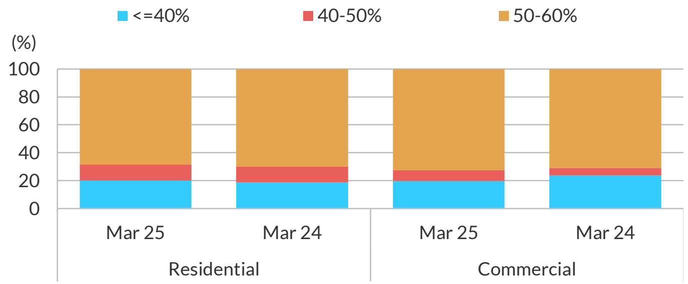
Source: Fitch Ratings, SSkM

Overcollateralisation Breakdown (%)



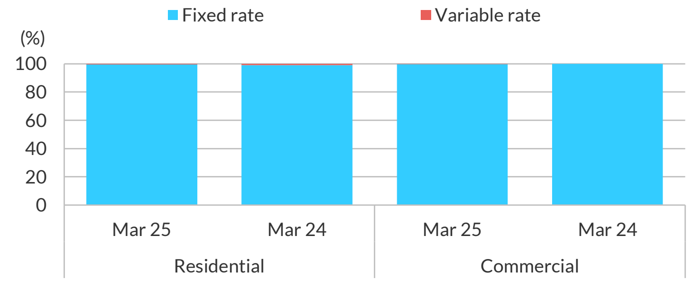
Source: Fitch Ratings, SSkM

Loan to Mortgage Lending Value Breakdown (%)



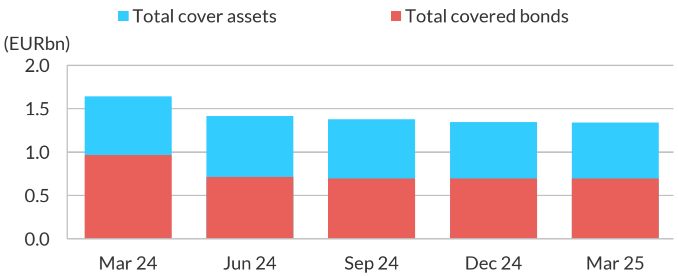
Source: Fitch Ratings, SSkM

Loan Payment Type (%)



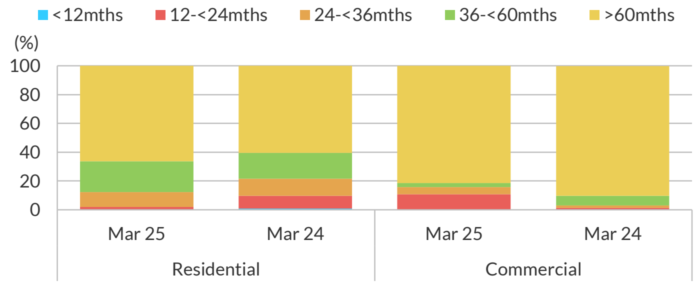
Source: Fitch Ratings, SSkM

Assets and Liabilities



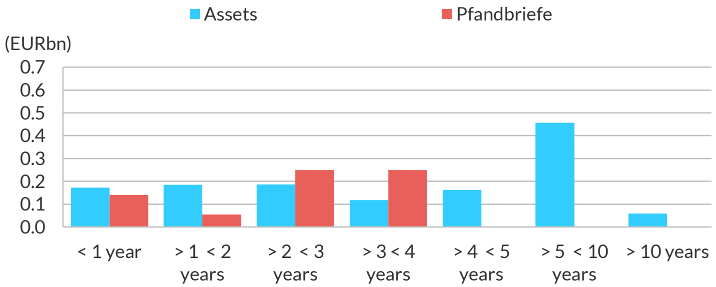
Source: Fitch Ratings, SSkM

Loan Seasoning (%)



Source: Fitch Ratings, SSkM

Maturity Structure of Assets and Liabilities (March 25)



Source: Fitch Ratings, SSkM

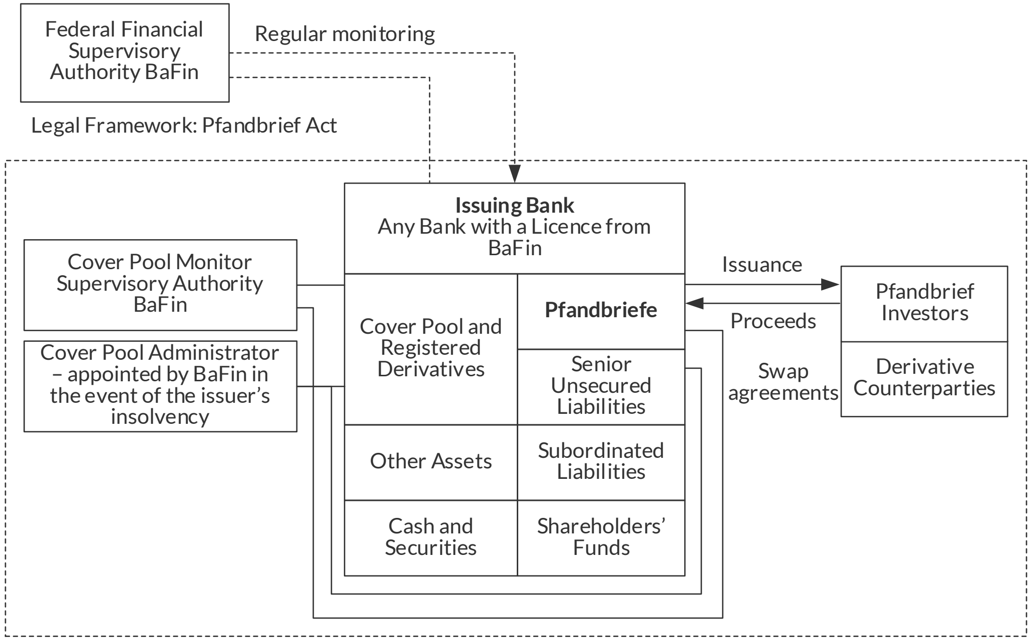
Appendix 2 – Summary of Applicable Covered Bonds Legislation

Main Characteristics of German Legislative Pfandbriefe, German Pfandbrief Act

Issuers	Financial institutions with a licence to issue Pfandbriefe.
Supervision	German Federal Financial Supervisory Authority (BaFin).
Mortgage collateral	• Residential or commercial mortgages; • Geographical scope extended to the EU/EEA, Switzerland, the US, Canada, Japan, Australia, New Zealand or Singapore, the UK (since January 2021); • Up to 20% of the outstanding Pfandbriefe can be substitute assets.
LTV limits for mortgage loans	60% LTV based on the mortgage lending value.
Public-sector assets	• Geographical scope limited to the EU/EEA; • For assets from the US, Canada, Japan, Switzerland and the UK the debtor must be assigned to credit quality step one; • Up to 10% of the outstanding Pfandbriefe can be substitute assets.
Maturity extension	The cover pool administrator is permitted to postpone amounts due on Pfandbriefe if unable to pay. Initially, payments of interest and principal may be postponed by up to four weeks on appointment of the cover pool administrator. Principal payments could then be extended by up to 12 months in total, while interest would remain payable.
180 days liquidity buffer	The mandatory inclusion of liquid assets in the cover pool matching the maximum negative cumulative cash flows over the next 180 days, calculated not considering any maturity extensions on the bonds.
Transfer of assets	Integrated template, assets remain on the issuer's balance sheet.
Cover register	A cover register is required for the respective cover pool.
Cover pool monitor	Independent cover pool monitor (Treuhänder) appointed by BaFin.
Alternative manager (Sachwalter)	A dedicated alternative manager would take over the management of the cover assets and outstanding liabilities after the default of the issuer. The manager would be appointed by a court at the request of BaFin, at the latest on the issuer's insolvency.
Minimum OC	• 2% nominal value; • 2% stressed net present value. The net present value calculation is detailed in a specific net present value regulation (Barwertverordnung) including procedures, stress scenarios and risk models. The approach can be static or dynamic, or based on internal models.
Treatment of swap counterparties	Derivative counterparties rank pari passu with the claims of the covered bond holders.
Pfandbriefbank with limited business activity (PBwLBA)	The cover pool constitutes an insolvency-free asset and continues to exist after issuer default as a PBwLBA to ensure the timely payment of the liability obligations. The PBwLBA would be managed by the alternative manager.

Source: Fitch Ratings, Pfandbrief Act

Diagram of a Pfandbrief Programme



Source: Fitch Ratings

Appendix 3 – Related Research & Definitions of Terms Used

Related Research

Details of the latest rating action for the programmes and related research can be found in the following publications.

Sparkassen-Finanzgruppe (Sparkassen) (April 2025)

Sparkassen-Finanzgruppe (Sparkassen) - Ratings Navigator (April 2025)

Fitch Affirms Sparkasse Westmuensterland's Mortgage Pfandbriefe at 'AA+'; Outlook Stable (March 2025)

Fitch Affirms Stadtsparkasse Muenchen's Mortgage Pfandbriefe at 'AA+'; Outlook Stable (March 2025)

Fitch Affirms Die Sparkasse Bremen AG's Mortgage Pfandbriefe at 'AA+'; Outlook Stable (March 2025)

Fitch Affirms Sparkassen-Finanzgruppe at 'A+'; Outlook Stable (March 2025)

Global Covered Bonds Monitor: 1Q25 (April 2025)

Global Covered Bonds Monitor: 1Q25 - Data File (April 2025)

What Investors Want to Know: Commercial Real Estate Exposure in German Pfandbriefe (March 2024)

Fitch Affirms Sparkasse Krefeld's Mortgage Pfandbriefe at 'AA+'; Outlook Stable (January 2025)

Fitch Affirms Sparkasse Pforzheim Calw's Mortgage Pfandbriefe at 'AAA'; Outlook Stable (December 2024)

Global Housing and Mortgage Outlook 2025 (December 2024)

Fitch Affirms Sparkasse Hannover's Mortgage Pfandbriefe at 'AAA'; Outlook Stable (December 2024)

Fitch Affirms Sparkasse Dortmund's Mortgage Pfandbriefe 'AAA'; Outlook Stable (November 2024)

Fitch Affirms Kreissparkasse Ludwigsburg's Mortgage Pfandbriefe at 'AA+'; Outlook Stable (March 2025)

Fitch Rates Nassauische Sparkasse's Mortgage Pfandbriefe at 'AA+'; Outlook Stable (March 2025)

Fitch Rates Sparkasse Holstein's Mortgage Pfandbriefe at 'AA+'; Outlook Stable (April 2025)

Abbreviations

CVB	Covered bonds
LT IDR	Long-Term Issuer Default Rating
IDR	Issuer Default Rating
PCU	Payment continuity uplift
RRP	Resolution reference point
WA	Weighted average
OC	Overcollateralisation
LTV	Loan-to-value
ESG	Environmental, social and governance
SkDort	Sparkasse Dortmund
SkH	Sparkasse Hannover
SkPfCw	Sparkasse Pforzheim Calw
SkBremen	Die Sparkasse Bremen AG
SkKrefeld	Sparkasse Krefeld
SkWML	Sparkasse Westmuensterland
KSKLB	Kreissparkasse Ludwigsburg
Naspa	Nassauische Sparkasse
SkHolstein	Sparkasse Holstein
SSkM	Stadtsparkasse Muenchen
BaFin	German Federal Financial Supervisory Authority
PBwLBA	Pfandbriefbank with limited business activity

Source: Fitch Ratings

DISCLAIMER & DISCLOSURES