

Credit Rating Transition and Default Study 2022



This report is an update of the transition and default study for Scope Ratings GmbH and Scope Ratings UK Limited (both referred to as 'Scope Ratings'), presenting credit rating transition matrices and default rates for Scope Ratings' rated universe.

Transition and default rates are presented on an aggregated basis in the report (all sectors combined) and broken down by sectors in the appendices.

Table of Contents

Scope Ratings' credit rating universe	2
Transition matrices – long-term credit ratings – all sectors	3
Transition matrices – short-term credit ratings, all sectors	5
Default rates – all sectors.....	6
Appendix I – Methodology used for rating transitions and default rates	7
Appendix II – Credit rating transition matrices by sectors: long-term credit ratings.....	8
Appendix III – Credit Rating transition matrices by sectors: short-term credit ratings	14
Disclaimer	15

Authors

Mak Kulo
m.kulo@scoperatings.com

Annick Poulain
a.poulain@scoperatings.com

Scope Ratings GmbH

Lennéstraße 5
 10785 Berlin

Phone +49 30 27891 0

Fax +49 30 27891 100

Scope Ratings UK Limited

52 Grosvenor Gardens
 London SW1W 0AU

Phone +44 20 7824 5180

info@scoperatings.com

www.scoperatings.com



Bloomberg: RESP SCOP

Scope Ratings' credit rating universe

This report covers issuer credit ratings from the following categories: Corporates, Financial Institutions, Covered Bonds, Structured Finance, the Sovereign and Public Sector (sovereigns, sub-sovereigns, supranational entities, and government related entities¹) and Project Finance. Credit ratings are counted and tracked at the issuer level apart from Structured Finance and Project Finance, for which Scope Ratings includes all the tranche credit ratings from a given financial structure. Scope Ratings includes long-term and short-term credit ratings, both public and subscription. For Covered Bonds, Scope Ratings includes the credit rating of the covered bonds programme.

Rating coverage has grown by around 43% on average p.a. since 2014

The report covers Scope Ratings' ten years of credit rating history (from 31.12.2012 to 31.12.2022) and includes credit ratings assigned by Scope Ratings GmbH². Prior to 2017, statistics also reflect sovereign credit ratings assigned by Feri Euro Ratings (Feri) acquired in August 2016.

Table 1: Scope Ratings' credit rating universe by sectors (long-term and short-term credit ratings)

Ratings	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Financial Institutions	156	149	146	134	114	57	55	57	52	0
Corporates (non-financial)	703	665	587	356	231	42	23	10	9	9
Covered Bonds	40	40	39	40	39	26	23	21	0	0
Structured Finance	240	217	180	163	127	64	44	31	4	3
Public Finance ³	195	160	146	126	116	69	60	60	59	59
Project Finance	40	8	2	1	1	1	0	0	0	0
Total	1374	1239	1100	820	628	259	205	179	124	71

Table 2: Credit rating distribution

Rating categories	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Long-term ratings:										
AAA	133	135	123	114	102	51	45	37	9	9
AA	80	72	73	63	50	31	24	18	16	14
A	257	213	191	163	122	45	41	41	29	11
BBB	322	282	241	154	116	26	17	14	22	18
BB	72	64	52	45	21	14	22	17	13	15
B	71	63	48	28	18	10	9	11	4	3
CCC	10	13	7	3	2	0	3	3	3	1
CC	6	4	6	2	2	2	4	3	1	0
C	3	4	2	2	2	3	4	4	0	0
D	0	0	1	0	0	2	2	3	1	0
Total long-term rating	954	850	744	574	435	184	171	151	98	71
Short-term ratings:										
S-1+	127	113	106	90	83	43	4	2	1	0
S-1	105	89	80	62	40	14	26	23	21	0
S-2	174	179	163	89	66	14	4	3	4	0
S-3	11	7	6	5	3	3	0	0	0	0
S-4	3	1	1	0	1	1	0	0	0	0
Total short-term rating	420	389	356	246	193	75	34	28	26	0

¹ GREs rated top-down as per our Government Related Entities Rating Methodology

² Note that as of 01.01.2021, credit ratings are also issued by Scope Ratings UK Limited.

³ Encompasses sovereigns, sub-sovereigns, supranational and government related entities.

Transition matrices – long-term credit ratings – all sectors

The credit ratings transition matrices presented in this section combine all sectors and track ratings as of 31 December of each year. The credit rating transition matrices presented by individual sectors are provided in the appendices.

Credit ratings which were in default intra-period are kept at default at the end of the period. Further, once defaulted, the credit rating is maintained as default throughout the remaining periods. If the rating was subsequently upgraded, the record is duplicated, and a “dummy” identifier is assigned to it in order to further track its performance post default status. The original record is kept in default status.

Table 3: One-year transition matrix (31.12.2021 to 31.12.2022 stock basis)

		2022												No. of ratings
		AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default	
2021	AAA	89%	0%	0%	0%	0%	0%	0%	0%	0%	0%	11%	0%	135
	AA	6%	92%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	72
	A	0%	1%	93%	1%	0%	0%	0%	0%	0%	3%	1%	0%	213
	BBB	0%	0%	4%	90%	2%	0%	0%	0%	0%	1%	1%	0%	282
	BB	0%	0%	0%	3%	83%	6%	0%	0%	0%	3%	5%	0%	64
	B	0%	0%	0%	0%	5%	79%	3%	2%	0%	10%	0%	2%	63
	CCC	0%	0%	0%	0%	0%	0%	62%	8%	0%	0%	31%	0%	13
	CC	0%	0%	0%	0%	0%	0%	0%	75%	0%	25%	0%	0%	4
C	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	50%	0%	4	

Table 4: Three-year transition matrix (31.12.2019 to 31.12.2022 stock basis)

		2022												No. of ratings
		AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default	
2019	AAA	78%	0%	0%	0%	0%	0%	0%	0%	0%	4%	18%	0%	114
	AA	2%	71%	6%	0%	0%	0%	0%	0%	0%	2%	19%	0%	63
	A	1%	3%	75%	7%	0%	0%	0%	0%	0%	8%	6%	0%	163
	BBB	2%	0%	6%	68%	5%	3%	0%	1%	0%	6%	8%	0%	154
	BB	0%	0%	0%	9%	56%	9%	4%	0%	0%	7%	16%	0%	45
	B	0%	0%	0%	0%	14%	36%	18%	7%	7%	14%	0%	4%	28
	CCC	0%	0%	0%	0%	0%	0%	33%	0%	0%	0%	67%	0%	3
	CC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	2
C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	2	

Table 5: Five-year transition matrix (31.12.2017 to 31.12.2022 stock basis)

		2022												No. of ratings
		AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default	
2017	AAA	65%	0%	0%	0%	0%	0%	0%	0%	0%	6%	29%	0%	51
	AA	13%	48%	10%	0%	0%	0%	0%	0%	0%	6%	23%	0%	31
	A	0%	7%	69%	4%	0%	0%	0%	0%	0%	7%	13%	0%	45
	BBB	4%	0%	0%	50%	0%	0%	4%	4%	0%	12%	27%	0%	26
	BB	0%	0%	0%	7%	14%	7%	0%	0%	0%	21%	50%	0%	14
	B	0%	0%	0%	0%	20%	10%	0%	10%	10%	30%	20%	0%	10
	CCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	CC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	2
	C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	3

Table 6: Average annual transition matrix (31.12.2012 to 31.12.2022 static pool)

	AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default	No. of ratings
AAA	92%	0%	0%	0%	0%	0%	0%	0%	0%	1%	7%	0%	625
AA	7%	86%	2%	0%	0%	0%	0%	0%	0%	3%	2%	0%	361
A	1%	3%	89%	3%	0%	0%	0%	0%	0%	3%	1%	0%	857
BBB	0%	0%	5%	87%	2%	0%	0%	0%	0%	3%	2%	0%	892
BB	0%	0%	0%	6%	75%	6%	0%	0%	0%	9%	4%	0%	264
B	0%	0%	0%	1%	7%	73%	5%	2%	0%	10%	1%	3%	194
CCC	0%	0%	0%	0%	0%	0%	67%	8%	0%	8%	14%	3%	36
CC	0%	0%	0%	0%	0%	4%	13%	67%	8%	4%	0%	4%	24
C	0%	0%	0%	0%	0%	0%	0%	0%	81%	0%	19%	0%	21

Transition matrices – short-term credit ratings, all sectors

Table 7: One-year transition matrix (31.12.2021 to 31.12.2022 stock basis)

		2022								No. of ratings
		S-1+	S-1	S-2	S-3	S-4	WR	Paid-off	Default	
2021	S-1+	98%	1%	0%	0%	0%	1%	0%	0%	113
	S-1	3%	90%	2%	0%	0%	4%	0%	0%	89
	S-2	0%	4%	93%	1%	0%	1%	0%	0%	179
	S-3	0%	0%	14%	71%	0%	14%	0%	0%	7
	S-4	0%	0%	0%	0%	100%	0%	0%	0%	1

Data for the three-year transition matrix (on a stock basis) below mainly relates to sovereign and public sector credit ratings as well as financial institution and corporate credit ratings.

Table 8: Three-year transition matrix (31.12.2019 to 31.12.2022 stock basis)

		2022								No. of ratings
		S-1+	S-1	S-2	S-3	S-4	WR	Paid-off	Default	
2019	S-1+	93%	2%	0%	0%	0%	4%	0%	0%	90
	S-1	0%	81%	10%	0%	0%	10%	0%	0%	62
	S-2	0%	3%	87%	1%	0%	9%	0%	0%	89
	S-3	0%	0%	20%	60%	20%	0%	0%	0%	5
	S-4	0%	0%	0%	0%	0%	0%	0%	0%	0

Table 9: Average annual transition matrix (31.12.2012 to 31.12.2022 static pool)

	S-1+	S-1	S-2	S-3	S-4	WR	Paid-off	Default	No. of ratings
S-1+	98%	0%	0%	0%	0%	2%	0%	0%	442
S-1	6%	87%	4%	0%	0%	3%	0%	0%	355
S-2	0%	3%	93%	1%	0%	2%	0%	0%	522
S-3	0%	0%	13%	75%	4%	8%	0%	0%	24
S-4	0%	0%	0%	25%	75%	0%	0%	0%	4

Default rates – all sectors

Default rates presented in this section combine credit ratings from all sectors.

In Table 10 below, default rates are calculated on a stock basis as the ratio between the stock of defaulted credit ratings outstanding as of 31.12.2021 and the stock of credit ratings that were not in the default category of 31 December one year, and three years before.

Table 10: Default rates (stock basis)

	One-year (31.12.2021 – 31.12.2022)			Three-year (31.12.2019 – 31.12.2022)		
	One-year default rate %	No. of defaults	Total no. of ratings	Three-year default rate %	No. of defaults	Total no. of ratings
Investment grade ratings (AAA to BBB)	0%	0	702	0%	0	494
BB	0%	0	64	0%	0	45
B	2%	1	63	4%	1	28
CCC	0%	0	13	0%	0	3
CC	0%	0	4	0%	0	2
C	0%	0	4	0%	0	2
Short-term ratings	0%	0	389	0%	0	246

Table 11: Average one-year default rate (static pool basis)

	Ten-year (31.12.2012 – 31.12.2022)		
	Default rate %	No. of defaults	Total no. of ratings
Investment grade ratings (AAA to BBB)	0%	0	2735
BB	0%	0	264
B	3%	5	194
CCC	3%	1	36
CC	4%	1	24
C	0%	0	21
Short-term ratings	0%	0	1347

In Table 11 above, one-year default rates are calculated on a static pool basis for the ten-year period from 31.12.2012 to 31.12.2022. Seven issuers were in default (D), five corporates and two sovereigns.

Appendix I – Methodology used for rating transitions and default rates

Credit rating transition tracks the evolution of credit ratings between two different dates and will not track intra-period credit rating changes. A credit rating that is 'A' at the beginning of the period and 'BBB' at the end of the period will be displayed as a credit rating change. Consequently, a credit rating that was 'A' at the beginning of the period, changed to 'BBB' and changed back to 'A' during the same period will not be displayed as a credit rating change. Two separate credit rating changes within one period (e.g. from 'A' to 'BBB' and later on from 'BBB' to 'BB') will be displayed only as one credit rating change, i.e. from 'A' to 'BB'. The exception is the treatment of defaults and selective defaults. If the credit rating was in default or selective default intra-period, it will be kept as defaulted at the end of the period. Further, once defaulted, the credit rating will be kept as defaulted throughout the remaining periods. If the rating was subsequently upgraded, the record is duplicated, and a "dummy" identifier is assigned to it in order to further track its performance.

Credit rating transitions and default rates are calculated under **two distinct methodologies**:

- The first method is based on a **stock concept**, i.e. a comparison of credit ratings between two different dates. Hence the five-year transition matrix 2017-2022 simply shows the credit ratings which were outstanding as of 31.12.2017 and their final position as of 31.12.2022. Under this method, the 2017-2022 five-year default rate for the B credit rating category is the ratio between issuers in default on 31.12.2022 and the number of issuers rated B on 31.12.2017.
- The second method is by **static pools or cohorts**. This is done by creating static pools of credit ratings that are outstanding at the beginning of a period and by tracking the evolution of credit ratings through multiple time horizons. For example, all credit ratings outstanding as of 31.12.2012 form the 2013 static pool, all surviving credit ratings of the 2013 static pool as of 31.12.2013, together with all new credit ratings assigned in 2014 from the 2014 static pool. The evolution of the credit ratings from the 2013, 2014 and 2015 static pools are combined in the average annual transition 2012-2021 (Table 6).

Issuers may be placed in multiple static pools as their credit ratings are outstanding over several years. For example, an issuer rated during 2013 and withdrawn during 2016, will be included in the 2014, 2015 and 2016 static pool.

Similarly, for the calculation of default rates on a static pool basis, when an issuer defaults, the default is assigned back to all the static pools to which the issuer belonged. This allows defaults to be calculated across a multi-year horizon.

Appendix II – Credit rating transition matrices by sectors: long-term credit ratings

Corporates

Table 12: One-year transition matrix (31.12.2021 to 31.12.2022 stock basis)

		2022												No. of ratings
		AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default	
2021	AAA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	AA	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	17
	A	0%	0%	94%	2%	0%	0%	0%	0%	0%	4%	0%	0%	112
	BBB	0%	0%	3%	96%	1%	0%	0%	0%	0%	1%	0%	0%	178
	BB	0%	0%	0%	0%	95%	3%	0%	0%	0%	3%	0%	0%	39
	B	0%	0%	0%	0%	5%	81%	0%	0%	0%	12%	0%	2%	42
	CCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	CC	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	1
	C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0

Table 13: Three-year transition matrix (31.12.2019 to 31.12.2022 stock basis)

		2022												No. of ratings
		AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default	
2019	AAA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	
	AA	0%	91%	0%	0%	0%	0%	0%	0%	0%	9%	0%	0%	11
	A	0%	0%	78%	13%	0%	0%	0%	0%	0%	10%	0%	0%	80
	BBB	0%	0%	1%	91%	0%	0%	0%	0%	0%	8%	0%	0%	74
	BB	0%	0%	0%	4%	71%	13%	0%	0%	0%	13%	0%	0%	24
	B	0%	0%	0%	0%	14%	50%	0%	0%	0%	29%	0%	7%	14
	CCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	CC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0

Table 14: Average annual transition matrix (31.12.2012 to 31.12.2022 static pool)

	AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default	No. of ratings
AAA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
AA	0%	98%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	55
A	0%	0%	92%	4%	0%	0%	0%	0%	0%	4%	0%	0%	367
BBB	0%	0%	3%	94%	1%	0%	0%	0%	0%	2%	0%	0%	471
BB	0%	0%	0%	1%	82%	5%	1%	0%	0%	12%	0%	0%	125
B	0%	0%	0%	0%	4%	78%	0%	0%	0%	15%	0%	3%	102
CCC	0%	0%	0%	0%	0%	0%	25%	25%	0%	25%	0%	25%	4
CC	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	50%	2
C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0

Covered Bonds

Table 15: One-year transition matrix (31.12.2021 to 31.12.2022 stock basis)

		2022												No. of ratings	
		AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default		
2021	AAA	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	40
	AA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	A	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	BBB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	BB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	B	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	CCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	CC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0

Table 16: Three-year transition matrix (31.12.2019 to 31.12.2022 stock basis)

		2022												No. of ratings
		AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default	
2019	AAA	93%	0%	0%	0%	0%	0%	0%	0%	0%	5%	3%	0%	40
	AA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	A	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	BBB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	BB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	B	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	CCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	CC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0

Table 17: Average annual transition matrix (31.12.2012 to 31.12.2022 static pool)

	AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default	No. of ratings
AAA	98%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	224
AA	50%	25%	0%	0%	0%	0%	0%	0%	0%	25%	0%	0%	4
A	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
BBB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
BB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
B	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
CCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
CC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0

Financial Institutions

Table 18: One-year transition matrix (31.12.2021 to 31.12.2022 stock basis)

		2022												No. of ratings
		AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default	
2021	AAA	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3
	AA	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	26
	A	0%	0%	98%	0%	0%	0%	0%	0%	0%	2%	0%	0%	62
	BBB	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	23
	BB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	B	0%	0%	0%	0%	0%	50%	0%	0%	0%	50%	0%	0%	2
	CCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	CC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0

Table 19: Three-year transition matrix (31.12.2019 to 31.12.2022 stock basis)

		2022												No. of ratings
		AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default	
2019	AAA	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1
	AA	0%	82%	14%	0%	0%	0%	0%	0%	0%	0%	4%	0%	28
	A	0%	4%	91%	0%	0%	0%	0%	0%	0%	6%	0%	0%	53
	BBB	0%	0%	14%	71%	0%	0%	0%	0%	0%	14%	0%	0%	21
	BB	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	1
	B	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	CCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	CC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0

Table 20: Average annual transition matrix (31.12.2012 to 31.12.2022 static pool)

	AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default	No. of ratings
AAA	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	11
AA	0%	95%	3%	0%	0%	0%	0%	0%	0%	1%	1%	0%	122
A	0%	4%	93%	1%	0%	0%	0%	0%	0%	2%	0%	0%	292
BBB	0%	0%	10%	86%	0%	0%	0%	0%	0%	4%	0%	0%	97
BB	0%	0%	0%	67%	33%	0%	0%	0%	0%	0%	0%	0%	3
B	0%	0%	0%	0%	0%	75%	0%	0%	0%	25%	0%	0%	4
CCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
CC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0

Sovereign and Public Sector

Table 21: One-year transition matrix (31.12.2021 to 31.12.2022 stock basis)

		2022												No. of ratings	
		AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default		
2021	AAA	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	35
	AA	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	12
	A	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	13
	BBB	0%	0%	12%	82%	0%	0%	0%	0%	0%	0%	6%	0%	0%	17
	BB	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	2
	B	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	1
	CCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	CC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	

Table 22: Three-year transition matrix (31.12.2019 to 31.12.2022 stock basis)

		2022												No. of ratings	
		AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default		
2019	AAA	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	28
	AA	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	6
	A	0%	17%	75%	0%	0%	0%	0%	0%	0%	0%	8%	0%	0%	12
	BBB	0%	0%	14%	79%	0%	0%	0%	0%	0%	0%	7%	0%	0%	14
	BB	0%	0%	0%	0%	67%	33%	0%	0%	0%	0%	0%	0%	0%	3
	B	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	CCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	CC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	

Table 23: Average annual transition matrix (31.12.2012 to 31.12.2022 static pool)

	AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default	No. of ratings
AAA	98%	1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	165
AA	1%	88%	2%	0%	0%	0%	0%	0%	0%	8%	0%	0%	95
A	0%	3%	89%	5%	0%	0%	0%	0%	0%	3%	0%	0%	100
BBB	0%	0%	8%	82%	4%	0%	0%	0%	0%	5%	0%	0%	112
BB	0%	0%	0%	8%	73%	4%	0%	0%	0%	15%	0%	0%	52
B	0%	0%	0%	0%	8%	58%	8%	0%	0%	8%	0%	17%	12
CCC	0%	0%	0%	0%	0%	0%	40%	20%	0%	40%	0%	0%	5
CC	0%	0%	0%	0%	0%	50%	0%	50%	0%	0%	0%	0%	2
C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0

Structured Finance

Table 24: One-year transition matrix (31.12.2021 to 31.12.2022 stock basis)

		2022												No. of ratings
		AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default	
2021	AAA	74%	0%	0%	0%	0%	0%	0%	0%	0%	0%	26%	0%	57
	AA	24%	65%	12%	0%	0%	0%	0%	0%	0%	0%	0%	0%	17
	A	4%	8%	71%	4%	0%	0%	0%	0%	0%	0%	13%	0%	24
	BBB	2%	0%	7%	75%	7%	2%	0%	0%	0%	3%	5%	0%	60
	BB	0%	0%	0%	9%	64%	14%	0%	0%	0%	0%	14%	0%	22
	B	0%	0%	0%	0%	6%	76%	12%	6%	0%	0%	0%	0%	17
	CCC	0%	0%	0%	0%	0%	0%	62%	8%	0%	0%	31%	0%	13
	CC	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	3
C	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	50%	0%	4	

Table 25: Three-year transition matrix (31.12.2019 to 31.12.2022 stock basis)

		2022												No. of ratings
		AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default	
2019	AAA	51%	0%	0%	0%	0%	0%	0%	0%	0%	4%	44%	0%	45
	AA	6%	33%	0%	0%	0%	0%	0%	0%	0%	0%	61%	0%	18
	A	12%	6%	24%	6%	0%	0%	0%	0%	0%	0%	53%	0%	17
	BBB	7%	0%	9%	27%	18%	9%	0%	2%	0%	0%	29%	0%	45
	BB	0%	0%	0%	12%	35%	0%	12%	0%	0%	0%	41%	0%	17
	B	0%	0%	0%	0%	14%	21%	36%	14%	14%	0%	0%	0%	14
	CCC	0%	0%	0%	0%	0%	0%	33%	0%	0%	0%	67%	0%	3
	CC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	2
	C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	2

Table 26: Average annual transition matrix (31.12.2020 to 31.12.2022 static pool)

	AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default	No. of ratings
AAA	81%	0%	0%	0%	0%	0%	0%	0%	0%	1%	18%	0%	225
AA	26%	64%	2%	0%	0%	0%	0%	0%	0%	0%	8%	0%	85
A	5%	12%	68%	2%	0%	0%	0%	0%	0%	2%	11%	0%	93
BBB	0%	0%	7%	75%	7%	1%	0%	0%	0%	2%	8%	0%	207
BB	0%	0%	0%	10%	68%	9%	0%	0%	0%	0%	13%	0%	82
B	0%	0%	0%	1%	12%	67%	11%	5%	0%	3%	1%	0%	75
CCC	0%	0%	0%	0%	0%	0%	78%	4%	0%	0%	19%	0%	27
CC	0%	0%	0%	0%	0%	0%	15%	75%	10%	0%	0%	0%	20
C	0%	0%	0%	0%	0%	0%	0%	0%	81%	0%	19%	0%	21

Project Finance

Table 27: One-year transition matrix (31.12.2021 to 31.12.2022 stock basis)

		2022												No. of ratings
		AAA	AA	A	BBB	BB	B	CCC	CC	C	WR	Paid-off	Default	
2021	AAA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	AA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	A	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2
	BBB	0%	0%	0%	75%	0%	0%	0%	0%	0%	0%	25%	0%	4
	BB	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	1
	B	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	1
	CCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	CC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0	

Appendix III – Credit Rating transition matrices by sectors: short-term credit ratings

Corporates

Table 28: One-year transition matrix (31.12.2021 to 31.12.2022 static pool)

	S-1+	S-1	S-2	S-3	S-4	WR	Paid-off	Default	No. of ratings
S-1+	97%	0%	0%	0%	0%	3%	0%	0%	36
S-1	4%	88%	3%	0%	0%	5%	0%	0%	78
S-2	0%	4%	94%	1%	0%	1%	0%	0%	157
S-3	0%	0%	20%	60%	0%	20%	0%	0%	5
S-4	0%	0%	0%	0%	0%	0%	0%	0%	0

Financial Institutions

Table 29: One-year transition matrix (31.12.2021 to 31.12.2022 static pool)

	S-1+	S-1	S-2	S-3	S-4	WR	Paid-off	Default	No. of ratings
S-1+	96%	4%	0%	0%	0%	0%	0%	0%	24
S-1	0%	100%	0%	0%	0%	0%	0%	0%	4
S-2	0%	0%	100%	0%	0%	0%	0%	0%	5
S-3	0%	0%	0%	0%	0%	0%	0%	0%	0
S-4	0%	0%	0%	0%	0%	0%	0%	0%	0

Table 30: Three-year transition matrix (31.12.2019 to 31.12.2022 static pool)

	S-1+	S-1	S-2	S-3	S-4	WR	Paid-off	Default	No. of ratings
S-1+	96%	4%	0%	0%	0%	0%	0%	0%	23
S-1	0%	100%	0%	0%	0%	0%	0%	0%	4
S-2	0%	0%	67%	0%	0%	33%	0%	0%	3
S-3	0%	0%	0%	0%	0%	0%	0%	0%	0
S-4	0%	0%	0%	0%	0%	0%	0%	0%	0

Sovereign and Public Sector

Table 31: One-year transition matrix (31.12.2021 to 31.12.2022 static pool)

	S-1+	S-1	S-2	S-3	S-4	WR	Paid-off	Default	No. of ratings
S-1+	100%	0%	0%	0%	0%	0%	0%	0%	53
S-1	0%	100%	0%	0%	0%	0%	0%	0%	7
S-2	0%	12%	82%	0%	0%	6%	0%	0%	17
S-3	0%	0%	0%	100%	0%	0%	0%	0%	2
S-4	0%	0%	0%	0%	100%	0%	0%	0%	1



Credit Rating Transition and Default Study 2022

Scope Ratings GmbH

Headquarters Berlin

Lennéstraße 5
D-10785 Berlin

Phone +49 30 27891 0

Oslo

Karenslyst allé 53
N-0279 Oslo

Phone +47 21 09 38 35

Frankfurt am Main

Neue Mainzer Straße 66-68
D-60311 Frankfurt am Main

Phone +49 69 66 77 389 0

Madrid

Paseo de la Castellana 141
E-28046 Madrid

Phone +34 91 572 67 11

Paris

10 avenue de Messine
FR - 75008 Paris

Phone +33 6 6289 3512

Milan

Via Nino Bixio, 31
20129 Milano MI

Phone +39 02 30315 814

Scope Ratings UK Limited

London

52 Grosvenor Gardens
London SW1W 0AU

Phone +44 20 7824 5180

info@scoperatings.com

www.scoperatings.com

Disclaimer

© 2023 Scope SE & Co. KGaA and all its subsidiaries including Scope Ratings GmbH, Scope Ratings UK Limited, Scope Fund Analysis GmbH, Scope Innovation Lab GmbH, Scope ESG Analysis GmbH and Scope Hamburg GmbH (collectively, Scope). All rights reserved. The information and data supporting Scope's ratings, rating reports, rating opinions and related research and credit opinions originate from sources Scope considers to be reliable and accurate. Scope does not, however, independently verify the reliability and accuracy of the information and data. Scope's ratings, rating reports, rating opinions, or related research and credit opinions are provided 'as is' without any representation or warranty of any kind. In no circumstance shall Scope or its directors, officers, employees and other representatives be liable to any party for any direct, indirect, incidental or other damages, expenses of any kind, or losses arising from any use of Scope's ratings, rating reports, rating opinions, related research or credit opinions. Ratings and other related credit opinions issued by Scope are, and have to be viewed by any party as, opinions on relative credit risk and not a statement of fact or recommendation to purchase, hold or sell securities. Past performance does not necessarily predict future results. Any report issued by Scope is not a prospectus or similar document related to a debt security or issuing entity. Scope issues credit ratings and related research and opinions with the understanding and expectation that parties using them will assess independently the suitability of each security for investment or transaction purposes. Scope's credit ratings address relative credit risk, they do not address other risks such as market, liquidity, legal, or volatility. The information and data included herein is protected by copyright and other laws. To reproduce, transmit, transfer, disseminate, translate, resell, or store for subsequent use for any such purpose the information and data contained herein, contact Scope Ratings GmbH at Lennéstraße 5 D-10785 Berlin