

1Y average (weighted) transitions in rating categories for the period from 31st of December 2004 to 31st of December 2019

	AAA	AA	A	BBB	BB	B	CCC/C	Default	Withdraw	TOTAL
AAA										
AA		76.5%	5.9%						17.6%	17
A			77.9%	3.8%				0.8%	17.6%	131
BBB			1.7%	70.3%	5.2%	0.4%			22.4%	232
BB				11.8%	60.6%	1.6%		0.8%	25.2%	127
B					6.3%	65.6%	3.1%		25.0%	32
CCC/C						10.0%	30.0%	10.0%	50.0%	10

1Y average (weighted) transitions in rating notches for the period from 31st of December 2004 to 31st of December 2019

	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC/C	Default	Withdraw	TOTAL
AAA																				
AA+																				
AA			80.0%																20.0%	5
AA-				75.0%	8.3%														16.7%	12
A+					50.0%					25.0%									25.0%	8
A					11.1%	55.6%	5.6%												27.8%	18
A-						1.9%	79.0%	2.9%										1.0%	15.2%	105
BBB+							7.5%	50.0%	7.5%	7.5%	2.5%	2.5%							22.5%	40
BBB							1.1%	10.0%	55.6%	5.6%	1.1%								26.7%	90
BBB-								2.0%	10.8%	58.8%	8.8%			1.0%					18.6%	102
BB+									2.8%	16.9%	52.1%	4.2%		2.8%				1.4%	19.7%	71
BB										3.6%	7.1%	57.1%	7.1%						25.0%	28
BB-												10.7%	50.0%						39.3%	28
B+													10.5%	47.4%	5.3%		5.3%		31.6%	19
B														28.6%	28.6%	14.3%			28.6%	7
B-															16.7%	83.3%				6
CCC/C																10.0%	30.0%	10.0%	50.0%	10

1Y average (weighted) transitions in rating categories for the last 10-year period from 31st of December 2009 to 31st of December 2019

	AAA	AA	A	BBB	BB	B	CCC/C	Default	Withdraw	TOTAL
AAA										
AA		66.7%	11.1%						22.2%	9
A			73.7%	5.3%				1.1%	20.0%	95
BBB			1.3%	71.3%	5.6%	0.6%			21.3%	160
BB				9.9%	64.2%	2.5%		1.2%	22.2%	81
B					4.2%	70.8%	4.2%		20.8%	24
CCC/C						20.0%	20.0%		60.0%	5

1Y average (weighted) transitions in rating notches for the last 10-year period from 31st of December 2009 to 31st of December 2019

	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC/C	Default	Withdraw	TOTAL
AAA																				
AA+																				
AA			80.0%																20.0%	5
AA-				50.0%	25.0%														25.0%	4
A+					50.0%					25.0%									25.0%	8
A					15.4%	38.5%	7.7%												38.5%	13
A-						1.4%	77.0%	4.1%										1.4%	16.2%	74
BBB+							6.7%	50.0%	10.0%	10.0%	3.3%	3.3%							16.7%	30
BBB								12.2%	46.9%	8.2%	2.0%								30.6%	49
BBB-								1.2%	8.6%	64.2%	7.4%			1.2%					17.3%	81
BB+										13.7%	52.9%	5.9%		3.9%				2.0%	21.6%	51
BB										8.3%	8.3%	58.3%	16.7%						8.3%	12
BB-												11.1%	55.6%						33.3%	18
B+													7.7%	46.2%	7.7%		7.7%		30.8%	13
B															40.0%	20.0%	20.0%		20.0%	5
B-																16.7%	83.3%			6
CCC/C																20.0%	20.0%		60.0%	5





1Y Transition matrix 2019 in rating categories (from 31st of December 2018 to 31st of December 2019)

	AAA	AA	A	BBB	BB	B	CCC/C	Default	Withdraw	TOTAL
AAA										
AA										
A			100.0%							5
BBB				90.9%					9.1%	22
BB					90.9%				9.1%	11
B					33.3%	66.7%				3
CCC/C										

1Y Transition matrix 2019 in rating notches (from 31st of December 2018 to 31st of December 2019)

	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC/C	Default	Withdraw	TOTAL
AAA																				
AA+																				
AA																				
AA-																				
A+																				
A																				
A-						20.0%	80.0%													5
BBB+								100.0%												1
BBB								16.7%	83.3%											6
BBB-								6.7%	80.0%										13.3%	15
BB+										100.0%										4
BB											100.0%									4
BB-												66.7%							33.3%	3
B+												50.0%	50.0%							2
B																				
B-																100.0%				1
CCC/C																				