

## Cumulative Average Default Rates By Rating Modifier, 1981 - 2007 (%)

—Time horizon (years)—

Rating	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
AAA	0.00	0.00	0.09	0.18	0.28	0.41	0.48	0.59	0.63	0.67	0.67	0.67	0.67	0.73	0.79
AA+	0.00	0.06	0.06	0.13	0.20	0.28	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
AA	0.00	0.00	0.00	0.09	0.18	0.25	0.35	0.48	0.60	0.72	0.81	0.88	1.03	1.10	1.14
AA-	0.02	0.09	0.20	0.32	0.45	0.61	0.76	0.86	0.96	1.08	1.21	1.35	1.41	1.53	1.60
A+	0.05	0.10	0.25	0.45	0.61	0.77	0.95	1.10	1.29	1.46	1.66	1.88	2.08	2.31	2.51
A	0.07	0.18	0.30	0.42	0.60	0.80	1.00	1.21	1.42	1.73	1.98	2.12	2.26	2.35	2.61
A-	0.06	0.20	0.32	0.49	0.73	1.02	1.44	1.71	1.95	2.12	2.19	2.32	2.42	2.53	2.65
BBB+	0.15	0.46	0.91	1.30	1.74	2.22	2.58	2.91	3.36	3.71	4.07	4.27	4.62	5.14	5.72
BBB	0.23	0.54	0.85	1.39	1.95	2.47	2.95	3.48	3.93	4.44	5.00	5.44	5.93	6.12	6.50
BBB-	0.31	1.02	1.78	2.78	3.74	4.60	5.25	5.87	6.33	6.91	7.42	7.94	8.54	9.37	10.03
BB+	0.52	1.41	2.85	4.20	5.41	6.71	7.88	8.41	9.36	10.21	10.82	11.41	11.85	12.35	13.07
BB	0.81	2.50	4.62	6.53	8.38	10.13	11.52	12.79	13.82	14.62	15.71	16.63	17.10	17.19	17.28
BB-	1.44	4.16	7.04	9.90	12.32	14.66	16.52	18.35	19.87	21.03	21.93	22.62	23.51	24.22	24.87
B+	2.53	6.97	11.22	14.92	17.65	19.74	21.64	23.29	24.70	26.11	27.32	28.29	29.29	30.31	31.19
B	6.27	12.74	17.75	21.27	23.84	26.03	27.44	28.52	29.43	30.43	31.40	32.36	33.42	34.20	35.04
B-	9.06	16.94	22.75	26.66	29.44	31.56	33.38	34.53	35.25	35.73	36.26	36.64	36.84	37.07	37.32
CCC/C	25.59	34.06	39.04	41.86	44.50	45.62	46.67	47.25	48.86	49.76	50.50	51.26	51.87	52.50	52.50
Investment grade	0.10	0.30	0.52	0.81	1.11	1.42	1.69	1.95	2.19	2.44	2.66	2.85	3.05	3.24	3.47
Speculative grade	2.81	6.54	10.00	12.92	15.23	17.23	18.87	20.25	21.46	22.54	23.52	24.34	25.12	25.79	26.43
All rated	0.98	2.30	3.53	4.62	5.52	6.32	6.98	7.56	8.06	8.53	8.96	9.31	9.66	9.98	10.32

Sources: Standard & Poor's Global Fixed Income Research and Standard & Poor's CreditPro®.