

Table 1: Result of SimExact x SimSA-VaR<sub>99%</sub>

Inst	$n$	$\delta$	SimExact		SimSA-VaR <sub>99%</sub>						GAP <sub>b × a</sub>
			V-RPD <sup>a</sup>	T(s)	D-RPD	V-RPD <sup>b</sup>	SD	T(s)	$\rho_S$	$\rho_L$	
1	25	0.1	30.75	209.08	2.72	29.04	7182.73	36.01	358	3318	-5.54%
2	25	0.1	30.61	197.62	1.95	28.25	6039.89	17.58	322	3128	-7.70%
3	25	0.1	34.22	144.43	1.52	31.91	7338.86	19.01	410	3695	-6.76%
4	25	0.1	30.60	381.34	0.82	30.54	7729.59	18.88	329	3565	-0.22%
5	25	0.1	31.31	276.61	1.19	29.04	7105.99	13.28	350	3324	-7.23%
6	25	0.1	35.46	245.69	1.07	31.20	6827.51	18.12	362	3350	-12.02%
7	25	0.1	30.40	3616.33	0.23	27.34	7183.99	7.59	350	3184	-10.08%
8	25	0.1	30.00	389.70	1.68	27.13	7354.67	21.92	364	3337	-9.58%
9	25	0.1	31.80	359.97	0.42	27.58	7535.87	40.94	208	2708	-13.27%
10	25	0.1	39.17	280.55	1.40	33.27	7168.48	25.26	182	3052	-15.08%
11	25	0.1	36.57	379.78	1.98	29.44	7496.51	23.54	216	3104	-19.50%
12	25	0.1	34.55	182.83	0.01	26.05	7008.39	22.14	168	2748	-24.59%
13	25	0.1	39.08	293.77	1.44	26.31	5590.46	20.14	161	2404	-32.68%
14	25	0.1	40.56	355.26	4.19	33.77	4338.76	26.90	223	2950	-16.74%
15	25	0.1	30.54	268.58	1.91	29.86	5880.78	21.18	191	2588	-2.23%
16	25	0.1	36.37	400.42	2.21	29.98	4998.12	21.99	194	2638	-17.58%
17	25	0.1	33.28	256.59	1.65	28.83	6986.98	23.09	253	2838	-13.38%
18	25	0.1	42.55	231.16	1.58	31.96	6558.00	23.48	156	3142	-24.88%
19	25	0.1	29.17	251.62	1.56	28.45	6533.32	23.29	176	2716	-2.45%
20	25	0.1	29.23	378.27	3.01	29.05	7868.92	24.27	196	2924	-0.63%
21	25	0.1	33.49	3619.26	0.95	27.25	7503.32	22.73	198	2666	-18.65%
22	25	0.1	43.24	316.73	4.16	35.72	4623.74	25.88	278	3624	-17.39%
23	25	0.1	29.37	333.54	0.31	27.61	6413.99	23.02	181	2764	-6.00%
24	25	0.1	32.74	205.36	1.29	26.77	6934.35	18.72	167	2640	-18.23%
25	25	0.1	28.68	371.05	0.49	25.72	7063.15	19.57	194	2572	-10.31%
26	25	0.5	70.11	251.45	0.36	63.91	15224.67	197.80	1602	13952	-8.85%
27	25	0.5	74.80	252.87	2.10	69.38	14172.83	211.64	1660	15547	-7.24%
28	25	0.5	71.53	178.96	1.16	70.51	15967.51	212.49	1884	15964	-1.42%
29	25	0.5	69.52	432.73	0.43	68.55	16846.81	204.40	1763	15303	-1.40%
30	25	0.5	71.30	334.87	2.08	69.05	15483.83	188.80	1533	14635	-3.15%
31	25	0.5	77.78	312.38	1.07	74.42	15357.72	213.48	1730	15370	-4.33%
32	25	0.5	69.13	3669.71	0.45	65.43	15883.98	187.44	1604	14398	-5.35%
33	25	0.5	69.82	445.44	1.79	67.04	16633.65	259.60	1731	15664	-3.99%
34	25	0.5	65.99	350.55	2.21	65.77	17500.94	77.41	969	13320	-0.32%
35	25	0.5	75.62	317.85	2.11	74.18	16390.77	120.02	993	14242	-1.91%
36	25	0.5	72.02	426.79	1.76	67.43	16179.37	98.71	894	13304	-6.37%
37	25	0.5	71.84	214.11	0.53	69.38	16354.89	99.68	904	13400	-3.43%
38	25	0.5	76.87	329.00	0.35	66.54	13538.05	86.65	860	12786	-13.44%
39	25	0.5	93.51	457.85	3.97	91.48	11204.71	169.58	1111	17478	-2.17%
40	25	0.5	74.56	328.24	1.87	73.51	14159.94	98.18	910	13634	-1.40%
41	25	0.5	79.60	470.94	2.54	75.95	12301.01	113.69	1063	14334	-4.58%
42	25	0.5	70.51	294.05	1.69	68.05	15484.15	86.82	976	12844	-3.49%
43	25	0.5	73.88	259.82	0.88	73.47	14631.72	96.10	1022	14050	-0.55%
44	25	0.5	69.64	307.34	0.87	69.39	15473.95	102.53	1079	13912	-0.35%
45	25	0.5	67.79	431.59	3.01	65.18	17170.16	68.02	891	12864	-3.85%
46	25	0.5	66.95	3648.80	0.94	66.61	17024.01	91.78	938	12576	-0.51%
47	25	0.5	90.31	419.00	4.10	89.53	10950.54	164.52	1234	17808	-0.86%
48	25	0.5	70.69	389.06	0.88	63.28	14138.86	79.28	916	12520	-10.49%
49	25	0.5	73.63	251.17	1.56	65.35	16113.85	74.32	936	13102	-11.25%
50	25	0.5	67.70	424.59	0.66	67.65	16503.88	85.44	909	12844	-0.08%
51	25	2.0	132.89	894.14	0.05	132.69	29822.23	1921.68	5174	46637	-0.16%
52	25	2.0	141.78	1056.18	1.96	141.48	27421.92	2557.36	5709	51991	-0.21%
53	25	2.0	141.98	755.58	1.64	140.46	30051.80	2566.29	5702	50900	-1.07%
54	25	2.0	133.37	1144.27	0.52	131.10	31268.66	2424.13	5506	48459	-1.70%
55	25	2.0	134.88	1098.47	1.05	133.99	29587.54	2311.54	5439	48473	-0.66%
56	25	2.0	141.51	1100.14	1.01	134.98	28515.24	2246.55	5296	47749	-4.61%
57	25	2.0	130.60	4410.68	0.40	129.07	29813.22	2077.70	5213	45680	-1.17%
58	25	2.0	134.06	1201.34	1.08	133.56	31134.61	2820.94	5362	49657	-0.37%

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Table 1: Result of SimExact x SimSA-VaR<sub>99%</sub> (continued)

Inst	$n$	$\delta$	SimExact		SimSA-VaR <sub>99%</sub>						GAP <sub>b × a</sub>
			V-RPD <sup>a</sup>	T(s)	D-RPD	V-RPD <sup>b</sup>	SD	T(s)	$\rho_S$	$\rho_L$	
59	25	2.0	131.97	864.16	0.44	131.86	32820.73	987.11	2961	41696	-0.09%
60	25	2.0	137.54	879.07	1.84	137.20	30510.05	1049.46	3264	44640	-0.25%
61	25	2.0	139.13	1075.27	0.94	137.21	31377.33	980.13	3100	44644	-1.38%
62	25	2.0	138.31	778.14	0.35	135.08	31110.08	1021.20	2953	44024	-2.33%
63	25	2.0	142.08	843.60	2.11	140.25	26750.06	1091.88	2965	44156	-1.28%
64	25	2.0	193.86	2239.75	4.86	188.05	22812.79	2205.33	4197	60920	-2.99%
65	25	2.0	145.43	1245.02	3.75	142.57	27814.22	1083.32	3125	46490	-1.97%
66	25	2.0	164.68	1610.54	2.24	164.50	24915.94	1437.89	3507	50604	-0.11%
67	25	2.0	134.44	906.17	1.87	133.91	29164.87	866.03	2855	41476	-0.39%
68	25	2.0	151.21	783.33	1.66	146.24	27851.16	795.69	3162	45292	-3.29%
69	25	2.0	144.69	1192.42	1.82	139.17	29460.86	1077.93	3074	44464	-3.82%
70	25	2.0	130.70	1123.46	0.15	127.42	31887.32	871.52	2806	40598	-2.52%
71	25	2.0	130.12	4106.05	0.90	126.76	31721.62	809.29	2785	39776	-2.58%
72	25	2.0	190.22	2096.17	4.68	182.94	21724.64	2094.73	4074	59334	-3.83%
73	25	2.0	133.89	1167.98	0.24	133.65	27670.31	675.34	2936	42704	-0.18%
74	25	2.0	136.70	897.52	1.52	133.64	30763.71	753.31	2852	42270	-2.25%
75	25	2.0	133.58	1156.51	0.55	129.22	31267.17	810.17	3041	41394	-3.27%
76*	50	0.1	30.74	3630.31	2.24	28.93	6060.19	45.07	163	2706	-5.89%
77*	50	0.1	31.41	3629.56	1.81	31.26	6810.09	38.98	221	3060	-0.46%
78*	50	0.1	30.77	3630.50	0.53	27.98	7663.21	26.15	197	2954	-9.06%
79*	50	0.1	32.52	3630.11	2.14	29.45	5647.84	26.18	182	2696	-9.44%
80*	50	0.1	26.13	3631.53	0.48	25.58	7060.72	39.10	203	2632	-2.11%
81*	50	0.1	28.63	3629.64	1.14	26.15	6516.06	44.48	160	2512	-8.68%
82*	50	0.1	28.66	3631.00	1.31	28.37	6453.07	45.45	195	2688	-1.01%
83*	50	0.1	29.11	3631.29	1.05	27.87	7018.26	44.20	202	2886	-4.26%
84*	50	0.1	29.79	3630.00	1.38	27.77	7019.35	43.03	168	2762	-6.81%
85*	50	0.1	33.64	3630.23	3.16	31.72	6176.21	50.91	202	2874	-5.69%
86*	50	0.1	29.19	3628.29	1.24	29.04	7417.79	54.16	165	2736	-0.55%
87*	50	0.1	31.80	3630.65	1.04	27.31	7000.49	44.23	137	2534	-14.13%
88*	50	0.1	32.78	3629.23	1.79	29.02	6818.44	37.09	206	2910	-11.47%
89*	50	0.1	27.54	3631.50	1.39	27.28	7502.70	32.82	220	2922	-0.92%
90*	50	0.1	30.66	3631.02	1.75	29.76	6377.07	44.40	186	2812	-2.92%
91*	50	0.1	31.58	3630.58	1.47	27.46	7027.65	45.82	167	2560	-13.05%
92*	50	0.1	30.01	3630.68	1.29	27.16	7105.32	46.29	173	2826	-9.50%
93*	50	0.1	30.97	3629.82	1.58	26.89	7047.45	46.86	171	2662	-13.16%
94*	50	0.1	29.72	3631.44	2.05	28.47	6195.96	33.26	179	2632	-4.18%
95*	50	0.1	26.97	3632.06	1.21	26.56	7480.74	34.92	171	2604	-1.52%
96*	50	0.1	30.93	3632.77	2.18	30.25	6432.54	46.73	214	2876	-2.17%
97*	50	0.1	29.69	3631.00	1.86	26.32	6371.36	46.74	196	2452	-11.33%
98*	50	0.1	29.18	3631.14	0.77	24.45	6216.57	39.56	200	2796	-16.20%
99*	50	0.1	28.35	3619.11	1.44	26.66	6562.79	33.08	151	2504	-5.96%
100*	50	0.1	29.42	3619.63	0.80	28.70	7156.16	32.77	190	2956	-2.46%
101*	50	0.5	70.86	3691.40	2.34	68.26	14066.19	119.45	952	13174	-3.67%
102*	50	0.5	76.31	3701.87	1.70	74.25	15250.22	119.00	921	14068	-2.69%
103*	50	0.5	70.58	3693.11	0.46	65.73	17056.79	66.70	919	13478	-6.88%
104*	50	0.5	74.09	3695.26	2.98	73.64	13246.55	110.12	921	13426	-0.60%
105*	50	0.5	66.54	3698.51	0.46	65.60	16353.87	111.52	928	12718	-1.40%
106*	50	0.5	70.51	3691.56	0.90	67.01	15567.09	132.35	933	13236	-4.97%
107*	50	0.5	71.10	3701.60	1.20	70.85	15123.30	126.32	939	13400	-0.34%
108*	50	0.5	69.32	3700.53	0.69	68.97	16403.13	120.44	1028	14154	-0.51%
109*	50	0.5	69.15	3693.62	1.54	67.86	15897.39	121.89	818	13036	-1.86%
110*	50	0.5	75.94	3695.31	2.34	75.53	14203.77	132.53	969	13662	-0.54%
111*	50	0.5	69.73	3689.99	1.20	69.51	17497.15	128.40	942	14130	-0.31%
112*	50	0.5	69.94	3687.81	0.96	69.77	16897.69	116.37	977	13504	-0.23%
113*	50	0.5	72.36	3688.00	1.64	70.51	15674.08	103.65	962	14020	-2.56%
114*	50	0.5	70.73	3701.87	0.95	70.20	16859.68	129.86	937	13642	-0.75%
115*	50	0.5	72.53	3698.00	1.95	72.24	14831.72	141.58	890	13810	-0.41%
116*	50	0.5	71.24	3693.92	2.09	70.13	16812.26	133.67	964	13448	-1.55%

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Table 1: Result of SimExact x SimSA-VaR<sub>99%</sub> (continued)

Inst	$n$	$\delta$	SimExact		SimSA-VaR <sub>99%</sub>						GAP <sub><math>b \times a</math></sub>
			V-RPD <sup>a</sup>	T(s)	D-RPD	V-RPD <sup>b</sup>	SD	T(s)	$\rho_S$	$\rho_L$	
117*	50	0.5	74.42	3691.77	1.19	71.21	16693.69	122.99	980	14128	-4.31%
118*	50	0.5	71.69	3695.75	1.40	68.23	16257.37	110.65	913	12944	-4.83%
119*	50	0.5	72.27	3702.59	2.08	71.93	14632.68	83.14	818	13306	-0.47%
120*	50	0.5	68.92	3690.70	0.63	66.52	17595.43	99.69	876	13190	-3.48%
121*	50	0.5	75.45	3705.25	1.89	68.75	14840.87	114.81	892	13904	-8.88%
122*	50	0.5	69.91	3696.22	2.09	66.43	15158.78	103.54	862	12586	-4.98%
123*	50	0.5	70.69	3691.08	0.70	67.51	14709.54	134.44	917	14140	-4.50%
124*	50	0.5	69.74	3646.83	1.66	68.35	15855.85	108.66	941	13342	-1.98%
125*	50	0.5	70.13	3641.99	0.74	68.16	16187.65	111.55	1016	13788	-2.81%
126*	50	2.0	143.39	4494.43	2.25	138.51	26670.88	913.18	3004	42778	-3.40%
127*	50	2.0	146.86	4617.19	2.01	142.25	28929.85	761.03	3090	45390	-3.14%
128*	50	2.0	134.83	4487.87	0.55	131.88	32176.52	675.57	2959	42982	-2.19%
129*	50	2.0	146.55	4554.07	2.28	145.16	25858.77	884.75	3120	45416	-0.95%
130*	50	2.0	131.89	4478.45	0.41	131.59	31383.28	1013.07	3162	42378	-0.22%
131*	50	2.0	135.57	4476.31	0.82	135.23	29693.40	853.18	2976	44068	-0.25%
132*	50	2.0	139.67	4599.14	1.31	135.44	28531.88	1069.35	3107	43262	-3.03%
133*	50	2.0	141.09	4642.70	0.76	138.92	30737.39	1120.47	3189	44810	-1.54%
134*	50	2.0	136.90	4505.26	1.60	131.74	29854.94	1008.92	2865	41654	-3.76%
135*	50	2.0	151.46	4628.07	2.21	149.58	28059.34	1276.78	3359	47700	-1.24%
136*	50	2.0	133.59	4458.52	1.31	132.92	31464.47	939.12	2880	41418	-0.51%
137*	50	2.0	136.52	4457.67	0.98	134.63	32007.60	969.13	3035	43818	-1.38%
138*	50	2.0	147.52	4554.44	1.70	144.59	29920.05	1153.29	3212	45426	-1.99%
139*	50	2.0	138.75	4557.57	1.17	137.97	31608.55	1071.35	2988	42900	-0.56%
140*	50	2.0	148.18	4655.48	2.02	144.10	28066.84	1139.90	3055	44448	-2.75%
141*	50	2.0	142.15	4480.91	1.43	140.85	32313.40	1079.01	3110	43732	-0.92%
142*	50	2.0	142.85	4575.03	1.31	138.23	31310.81	1140.89	3295	44896	-3.24%
143*	50	2.0	140.47	4549.38	1.66	138.73	31371.72	1043.55	2954	42832	-1.24%
144*	50	2.0	150.02	4702.10	1.75	148.92	29032.79	1065.65	3257	46756	-0.73%
145*	50	2.0	130.92	4379.22	1.25	129.96	32514.20	789.32	2699	41226	-0.73%
146*	50	2.0	146.87	4656.51	1.77	145.16	28842.28	999.90	3138	46110	-1.16%
147*	50	2.0	135.25	4542.94	1.44	134.99	30432.30	992.38	3052	44734	-0.19%
148*	50	2.0	143.30	4011.50	0.86	137.55	28215.44	1093.35	3108	46286	-4.01%
149*	50	2.0	141.66	3882.66	1.49	138.54	30724.56	1053.04	3174	44502	-2.20%
150*	50	2.0	135.16	3840.16	0.77	133.69	29835.05	650.11	2988	42274	-1.09%
151*	75	0.1	29.71	3627.29	1.72	29.39	7014.65	41.35	193	2710	-1.07%
152*	75	0.1	31.21	3623.12	1.70	30.42	6419.85	66.01	251	2926	-2.50%
153*	75	0.1	29.08	3625.34	1.08	27.47	6407.70	73.17	186	2764	-5.55%
154*	75	0.1	27.12	3624.57	0.04	25.47	6459.13	54.99	155	2590	-6.06%
155*	75	0.1	29.70	3625.54	2.10	29.52	6679.27	68.64	158	2684	-0.63%
156*	75	0.1	27.09	3625.07	0.79	26.89	6907.90	77.13	211	2818	-0.73%
157*	75	0.1	30.06	3624.51	1.73	27.58	6655.44	79.93	217	2808	-8.24%
158*	75	0.1	30.63	3625.24	1.40	26.51	6204.30	60.40	211	2678	-13.46%
159*	75	0.1	27.95	3625.34	1.50	26.87	7199.42	57.68	165	2720	-3.89%
160*	75	0.1	28.35	3625.46	2.11	28.24	6255.98	44.25	213	2732	-0.38%
161*	75	0.1	29.51	3623.68	1.92	29.26	6095.88	63.96	170	2804	-0.85%
162*	75	0.1	30.18	3625.13	1.04	27.45	6727.49	52.61	198	2662	-9.04%
163*	75	0.1	27.79	3623.73	0.58	27.56	6962.04	66.83	203	2746	-0.81%
164*	75	0.1	30.46	3625.49	1.30	27.07	6780.45	76.30	184	2768	-11.12%
165*	75	0.1	30.19	3625.53	2.09	29.98	6546.77	36.12	230	3068	-0.69%
166*	75	0.1	31.63	3624.68	1.26	27.34	6754.29	40.76	168	2650	-13.56%
167*	75	0.1	29.14	3625.88	1.81	27.96	6786.53	41.02	195	2864	-4.06%
168*	75	0.1	28.81	3626.39	2.09	28.41	6241.81	38.48	194	2568	-1.38%
169*	75	0.1	32.74	3624.77	1.15	27.35	6523.18	41.42	161	2672	-16.48%
170*	75	0.1	33.41	3625.94	1.91	31.03	6689.95	40.69	195	2814	-7.13%
171*	75	0.1	28.54	3626.12	2.49	27.66	6436.65	39.78	158	2516	-3.09%
172*	75	0.1	30.02	3623.52	1.43	29.43	7614.68	41.18	237	3010	-1.99%
173*	75	0.1	31.43	3626.27	2.48	29.75	6412.66	33.05	150	2668	-5.35%
174*	75	0.1	30.80	3625.35	1.27	26.25	7022.30	23.63	182	2594	-14.78%

Continued on the next page

Table 1: Result of SimExact x SimSA-VaR<sub>99%</sub> (continued)

Inst	$n$	$\delta$	SimExact		SimSA-VaR <sub>99%</sub>						GAP <sub>b × a</sub>
			V-RPD <sup>a</sup>	T(s)	D-RPD	V-RPD <sup>b</sup>	SD	T(s)	$\rho_S$	$\rho_L$	
175*	75	0.1	29.42	3624.28	1.36	28.99	6241.49	40.43	204	2962	-1.45%
176*	75	0.5	68.98	3650.35	1.65	68.81	16305.09	89.29	925	13562	-0.24%
177*	75	0.5	74.51	3653.62	1.71	73.67	14929.32	162.63	1024	14248	-1.13%
178*	75	0.5	72.20	3659.63	1.03	71.91	15595.85	136.59	1028	14592	-0.41%
179*	75	0.5	70.27	3655.58	0.09	65.91	15224.46	127.03	911	13004	-6.21%
180*	75	0.5	69.84	3660.23	1.87	68.18	15311.72	146.22	927	12816	-2.39%
181*	75	0.5	70.30	3659.24	0.82	70.16	16036.68	160.16	1033	13788	-0.20%
182*	75	0.5	70.40	3653.63	1.52	70.11	15516.71	130.86	910	13858	-0.40%
183*	75	0.5	69.97	3658.78	1.46	69.55	13985.18	116.55	856	12504	-0.60%
184*	75	0.5	69.46	3656.67	1.10	66.35	16387.45	106.39	856	12994	-4.47%
185*	75	0.5	72.59	3658.31	2.12	69.99	14551.84	104.83	965	13406	-3.58%
186*	75	0.5	74.62	3662.65	1.61	73.78	14513.80	137.65	947	14458	-1.12%
187*	75	0.5	71.52	3661.38	1.21	70.37	16383.87	123.01	959	14246	-1.61%
188*	75	0.5	66.47	3655.08	0.66	66.34	15903.23	165.94	873	13140	-0.20%
189*	75	0.5	70.89	3658.92	1.02	67.93	15594.24	161.09	833	13288	-4.18%
190*	75	0.5	72.76	3660.92	2.44	69.56	14319.32	71.36	965	13368	-4.40%
191*	75	0.5	70.43	3656.11	1.31	70.19	16160.60	79.62	1040	13800	-0.34%
192*	75	0.5	72.49	3661.06	1.82	71.06	15471.54	82.13	907	13630	-1.98%
193*	75	0.5	70.06	3659.74	1.96	69.70	15036.23	77.89	913	13610	-0.51%
194*	75	0.5	75.15	3656.41	1.13	69.00	15334.52	81.63	1005	13464	-8.19%
195*	75	0.5	75.33	3660.65	1.93	72.75	15682.29	81.53	1016	14074	-3.43%
196*	75	0.5	73.88	3662.00	2.24	70.08	15452.52	76.48	909	13330	-5.15%
197*	75	0.5	70.71	3657.42	1.50	69.69	16745.13	79.65	974	13336	-1.44%
198*	75	0.5	75.16	3663.46	2.20	71.30	15107.58	68.22	950	13462	-5.14%
199*	75	0.5	70.15	3658.72	1.02	65.97	16434.38	77.40	863	13108	-5.96%
200*	75	0.5	73.15	3659.51	1.29	72.93	14131.97	83.50	1023	13842	-0.29%
201*	75	2.0	143.49	3852.70	1.34	135.78	30478.00	755.87	2875	42912	-5.37%
202*	75	2.0	149.30	3896.04	1.75	147.97	28579.92	1216.33	3179	46966	-0.89%
203*	75	2.0	146.07	3953.76	1.08	143.39	29070.31	913.97	3251	45238	-1.83%
204*	75	2.0	139.45	3883.43	0.07	134.90	29163.24	1005.02	3140	43230	-3.26%
205*	75	2.0	140.52	3920.68	1.59	140.35	30671.27	1172.99	3234	45592	-0.12%
206*	75	2.0	139.25	3906.44	0.68	138.60	30601.63	789.67	2952	45564	-0.47%
207*	75	2.0	144.71	3880.91	1.66	141.72	29707.64	1122.60	3130	45410	-2.07%
208*	75	2.0	140.53	3894.08	1.41	136.66	27073.79	881.86	3009	42564	-2.75%
209*	75	2.0	134.13	3865.74	1.12	134.07	31052.93	666.01	2946	42182	-0.04%
210*	75	2.0	147.23	3915.02	2.04	140.70	27471.14	720.80	3152	43418	-4.44%
211*	75	2.0	147.59	3978.65	2.10	146.72	27490.68	976.00	3376	45968	-0.59%
212*	75	2.0	146.21	3903.56	1.23	141.24	30828.26	1092.61	3201	45300	-3.39%
213*	75	2.0	140.08	3897.10	0.48	131.77	29591.78	950.59	2772	41552	-5.93%
214*	75	2.0	138.84	3892.84	1.29	133.62	29287.22	736.07	3025	42356	-3.76%
215*	75	2.0	142.41	3925.52	2.70	141.06	27127.57	480.85	3058	43316	-0.95%
216*	75	2.0	139.33	3884.92	1.24	138.99	29984.18	476.39	2968	43136	-0.25%
217*	75	2.0	142.73	3916.87	1.85	138.29	29236.51	471.13	3056	43382	-3.11%
218*	75	2.0	138.93	3897.91	2.10	138.52	28671.90	374.23	3048	44546	-0.30%
219*	75	2.0	146.60	3899.50	1.15	144.08	30171.75	395.47	3092	46006	-1.72%
220*	75	2.0	147.11	3914.66	2.10	145.02	29786.24	506.11	3276	44986	-1.42%
221*	75	2.0	142.03	3914.69	2.44	137.76	28999.55	471.26	3017	42392	-3.01%
222*	75	2.0	139.70	3901.81	1.50	137.10	31693.33	367.90	3038	43114	-1.86%
223*	75	2.0	147.83	3955.01	2.66	147.51	29408.04	430.99	3206	45098	-0.21%
224*	75	2.0	138.29	3903.67	1.08	134.83	31239.41	399.63	2782	42508	-2.51%
225*	75	2.0	151.02	3940.44	1.54	148.19	27493.91	592.11	3340	46620	-1.87%
226*	100	0.1	31.16	3628.33	2.26	30.72	6252.14	50.91	181	2716	-1.42%
227*	100	0.1	30.30	3628.47	2.09	29.08	6554.97	57.48	226	2780	-4.04%
228*	100	0.1	29.60	3629.94	1.25	27.33	6317.85	53.82	199	2628	-7.64%
229*	100	0.1	29.24	3630.06	2.26	27.15	6636.48	56.74	195	2666	-7.14%
230*	100	0.1	30.59	3630.66	1.83	26.69	7270.77	53.95	214	2734	-12.77%
231*	100	0.1	28.42	3628.87	1.46	25.37	6433.31	53.54	210	2596	-10.73%
232*	100	0.1	30.96	3631.19	1.92	29.17	6863.27	53.45	235	2970	-5.79%

Continued on the next page

Table 1: Result of SimExact x SimSA-VaR<sub>99%</sub> (continued)

Inst	$n$	$\delta$	SimExact		SimSA-VaR <sub>99%</sub>						GAP <sub>b × a</sub>
			V-RPD <sup>a</sup>	T(s)	D-RPD	V-RPD <sup>b</sup>	SD	T(s)	$\rho_S$	$\rho_L$	
233*	100	0.1	28.64	3630.93	1.95	28.37	6992.70	55.98	207	2884	-0.95%
234*	100	0.1	29.51	3631.16	2.25	28.07	6800.11	52.40	219	2624	-4.91%
235*	100	0.1	28.70	3631.18	1.75	25.09	6713.71	58.66	192	2572	-12.56%
236*	100	0.1	29.83	3630.30	1.04	28.92	6236.58	58.84	216	2822	-3.03%
237*	100	0.1	29.08	3629.99	1.24	27.77	7019.71	54.51	201	2716	-4.51%
238*	100	0.1	31.05	3631.77	1.70	30.73	7106.99	58.64	196	2974	-1.05%
239*	100	0.1	29.82	3629.92	2.07	27.45	6720.33	52.03	133	2592	-7.96%
240*	100	0.1	30.29	3629.86	1.95	28.22	6490.84	53.57	194	2594	-6.83%
241*	100	0.1	28.96	3628.61	2.44	26.56	6030.42	59.55	202	2580	-8.31%
242*	100	0.1	30.62	3630.22	1.65	30.52	6695.84	70.19	189	2924	-0.33%
243*	100	0.1	31.35	3630.59	2.10	29.16	6547.51	53.68	158	2570	-6.99%
244*	100	0.1	28.76	3630.46	2.68	28.54	6639.04	52.26	192	2640	-0.76%
245*	100	0.1	29.16	3629.88	1.61	29.01	6574.74	52.85	190	2918	-0.52%
246*	100	0.1	29.12	3630.41	2.50	28.84	6274.68	62.31	217	2692	-0.98%
247*	100	0.1	26.25	3629.40	1.68	25.96	6422.27	55.47	176	2346	-1.10%
248*	100	0.1	29.54	3630.22	2.01	29.18	6560.08	54.94	190	2938	-1.22%
249*	100	0.1	27.35	3629.62	1.22	26.67	7313.92	57.66	188	2806	-2.47%
250*	100	0.1	29.09	3629.04	1.75	28.95	6861.90	64.93	194	2700	-0.50%
251*	100	0.5	74.54	3670.73	2.55	73.94	15143.09	110.04	1040	14384	-0.80%
252*	100	0.5	72.80	3669.59	1.86	71.70	15214.22	97.14	945	13754	-1.51%
253*	100	0.5	69.64	3666.34	1.37	69.28	14771.90	90.04	976	13122	-0.52%
254*	100	0.5	73.23	3671.62	2.52	70.59	15420.05	82.67	942	13114	-3.60%
255*	100	0.5	71.75	3671.32	1.82	68.09	16510.10	87.81	952	12906	-5.10%
256*	100	0.5	71.35	3669.33	0.96	69.39	15272.33	95.89	958	13340	-2.75%
257*	100	0.5	74.08	3676.05	1.91	73.18	15433.99	100.15	968	13714	-1.21%
258*	100	0.5	72.36	3673.19	2.43	69.11	15439.61	90.10	986	12944	-4.49%
259*	100	0.5	71.53	3675.25	2.16	71.37	16184.42	84.14	985	13680	-0.22%
260*	100	0.5	71.37	3675.47	1.97	71.29	16046.07	103.23	989	13486	-0.12%
261*	100	0.5	75.67	3671.44	0.92	75.52	15023.25	115.68	1080	14864	-0.20%
262*	100	0.5	70.45	3671.76	1.25	69.25	16270.23	95.15	963	13374	-1.70%
263*	100	0.5	74.99	3673.91	1.61	71.82	16187.16	98.53	1024	14052	-4.23%
264*	100	0.5	71.89	3670.28	1.94	71.72	16311.84	102.09	1036	13862	-0.23%
265*	100	0.5	73.65	3672.20	1.91	72.11	15637.19	99.35	990	13688	-2.09%
266*	100	0.5	74.07	3668.73	2.26	72.72	14606.56	108.26	959	13794	-1.83%
267*	100	0.5	71.22	3680.27	1.54	69.76	15214.03	96.35	863	13798	-2.05%
268*	100	0.5	71.76	3672.65	2.00	70.45	15417.90	81.86	940	13096	-1.83%
269*	100	0.5	73.69	3670.80	2.40	73.40	16036.81	66.73	924	14080	-0.40%
270*	100	0.5	72.48	3670.96	1.71	71.21	14971.45	94.73	993	13712	-1.74%
271*	100	0.5	73.85	3671.13	2.11	70.81	14444.81	90.88	826	13024	-4.11%
272*	100	0.5	72.57	3670.81	1.67	69.30	15983.78	106.05	975	13308	-4.51%
273*	100	0.5	73.70	3671.96	2.03	71.30	14746.50	97.37	992	13504	-3.25%
274*	100	0.5	68.98	3667.29	1.22	68.31	16458.82	100.50	812	13032	-0.96%
275*	100	0.5	68.72	3668.29	1.73	68.59	15899.57	110.27	946	13110	-0.20%
276*	100	2.0	146.65	3949.97	2.54	146.47	28265.14	560.90	3010	44828	-0.12%
277*	100	2.0	144.24	3926.60	2.22	142.44	29319.40	589.72	3285	46230	-1.25%
278*	100	2.0	141.89	3908.45	1.55	140.63	28307.23	517.46	3098	43522	-0.89%
279*	100	2.0	140.96	3925.18	2.19	140.64	29784.73	573.76	3082	43878	-0.23%
280*	100	2.0	136.50	3915.92	1.80	134.23	31222.35	484.33	2880	41902	-1.67%
281*	100	2.0	142.16	3924.11	0.93	138.49	29011.19	548.11	3015	43884	-2.58%
282*	100	2.0	145.04	3991.09	1.94	140.64	28930.21	516.45	2971	43644	-3.04%
283*	100	2.0	141.84	3951.91	1.93	138.57	29452.58	494.75	2946	43016	-2.31%
284*	100	2.0	143.21	3964.62	2.09	142.94	30573.92	519.45	2981	44196	-0.19%
285*	100	2.0	141.20	3974.14	1.55	137.66	29959.95	479.26	2883	42524	-2.50%
286*	100	2.0	152.42	3981.04	0.95	150.76	29211.76	692.33	3428	49960	-1.09%
287*	100	2.0	139.36	3944.69	1.63	136.39	30617.39	481.22	2932	42652	-2.13%
288*	100	2.0	145.88	3953.05	1.50	145.63	30926.50	548.34	3134	45718	-0.17%
289*	100	2.0	140.06	3920.50	2.13	138.67	29926.91	513.28	3006	42608	-0.99%
290*	100	2.0	142.14	3963.06	2.01	141.82	29637.68	551.81	3006	44308	-0.22%

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Table 1: Result of SimExact x SimSA-VaR<sub>99%</sub> (continued)

Inst	$n$	$\delta$	SimExact		SimSA-VaR <sub>99%</sub>						GAP <sub><math>b \times a</math></sub>
			V-RPD <sup>a</sup>	T(s)	D-RPD	V-RPD <sup>b</sup>	SD	T(s)	$\rho_S$	$\rho_L$	
291*	100	2.0	146.43	3943.37	2.44	146.17	28319.87	718.58	3228	46226	-0.17%
292*	100	2.0	140.98	3931.38	1.37	138.38	28271.59	485.27	3041	43338	-1.84%
293*	100	2.0	140.55	3928.42	2.34	140.21	29785.75	521.70	3189	43810	-0.24%
294*	100	2.0	146.77	3946.25	2.38	146.38	30558.30	520.27	3190	45622	-0.27%
295*	100	2.0	140.69	3926.84	1.57	140.38	28628.79	529.50	3079	44826	-0.22%
296*	100	2.0	141.99	3945.21	2.50	141.78	28301.08	573.26	3235	44650	-0.15%
297*	100	2.0	143.83	3930.84	1.59	137.39	29844.84	470.80	2771	42142	-4.48%
298*	100	2.0	146.30	3955.18	1.95	141.38	28165.96	513.24	2835	44046	-3.37%
299*	100	2.0	140.80	3932.68	1.28	134.76	31622.46	545.77	2932	43822	-4.29%
300*	100	2.0	139.63	3921.59	1.66	135.67	30144.77	537.49	3052	42652	-2.83%