

Table 1: Result of SimExact x SimSA-VaR_{90%}

| Inst | n | δ | SimExact | | SimSA-VaR _{90%} | | | | | | GAP _{$b \times a$} |
|------|-----|----------|--------------------|---------|--------------------------|--------------------|----------|---------|----------|----------|--|
| | | | V-RPD ^a | T(s) | D-RPD | V-RPD ^b | SD | T(s) | ρ_S | ρ_L | |
| 1 | 25 | 0.1 | 17.64 | 209.08 | 0.31 | 16.07 | 7120.75 | 19.65 | 366 | 3594 | -8.91% |
| 2 | 25 | 0.1 | 17.82 | 197.62 | 2.25 | 16.23 | 6081.68 | 10.34 | 345 | 3671 | -8.91% |
| 3 | 25 | 0.1 | 23.67 | 144.43 | 1.34 | 22.08 | 7431.14 | 12.17 | 342 | 3791 | -6.72% |
| 4 | 25 | 0.1 | 17.12 | 381.34 | 1.01 | 15.61 | 7551.74 | 11.66 | 376 | 3790 | -8.82% |
| 5 | 25 | 0.1 | 18.03 | 276.61 | 1.18 | 16.56 | 6768.93 | 10.69 | 341 | 3491 | -8.18% |
| 6 | 25 | 0.1 | 22.71 | 245.69 | 1.23 | 21.26 | 6798.85 | 9.40 | 396 | 3611 | -6.39% |
| 7 | 25 | 0.1 | 18.40 | 3616.33 | 0.51 | 17.05 | 7189.54 | 10.63 | 364 | 3309 | -7.34% |
| 8 | 25 | 0.1 | 17.44 | 389.70 | 1.33 | 16.15 | 7372.71 | 11.61 | 350 | 3809 | -7.41% |
| 9 | 25 | 0.1 | 22.54 | 359.97 | 0.42 | 21.24 | 7724.43 | 11.26 | 341 | 3745 | -5.77% |
| 10 | 25 | 0.1 | 29.76 | 280.55 | 2.12 | 28.20 | 7161.21 | 10.60 | 375 | 3755 | -5.26% |
| 11 | 25 | 0.1 | 24.47 | 379.78 | 2.12 | 23.12 | 7311.13 | 10.13 | 320 | 3842 | -5.49% |
| 12 | 25 | 0.1 | 24.24 | 182.83 | 0.79 | 22.90 | 7101.05 | 9.18 | 365 | 3799 | -5.54% |
| 13 | 25 | 0.1 | 29.86 | 293.77 | 1.26 | 28.18 | 5804.72 | 8.84 | 331 | 3588 | -5.61% |
| 14 | 25 | 0.1 | 23.77 | 355.26 | 4.28 | 21.47 | 4250.87 | 9.22 | 352 | 3795 | -9.68% |
| 15 | 25 | 0.1 | 17.69 | 268.58 | 2.06 | 16.10 | 5909.83 | 8.91 | 364 | 3650 | -8.98% |
| 16 | 25 | 0.1 | 20.28 | 400.42 | 2.68 | 18.37 | 5262.58 | 10.48 | 319 | 3540 | -9.43% |
| 17 | 25 | 0.1 | 22.52 | 256.59 | 1.72 | 21.14 | 6801.49 | 8.83 | 305 | 3592 | -6.14% |
| 18 | 25 | 0.1 | 33.39 | 231.16 | 1.83 | 31.86 | 6272.85 | 9.68 | 320 | 3666 | -4.57% |
| 19 | 25 | 0.1 | 17.97 | 251.62 | 1.39 | 16.38 | 6675.96 | 10.71 | 368 | 3592 | -8.82% |
| 20 | 25 | 0.1 | 17.76 | 378.27 | 0.32 | 16.55 | 7661.52 | 9.21 | 387 | 3703 | -6.82% |
| 21 | 25 | 0.1 | 23.86 | 3619.26 | 0.80 | 22.63 | 7493.54 | 9.33 | 366 | 3797 | -5.18% |
| 22 | 25 | 0.1 | 25.18 | 316.73 | 4.47 | 22.73 | 4762.52 | 13.40 | 328 | 3411 | -9.72% |
| 23 | 25 | 0.1 | 17.69 | 333.54 | 1.21 | 16.10 | 6304.61 | 10.86 | 325 | 3276 | -9.01% |
| 24 | 25 | 0.1 | 21.22 | 205.36 | 1.61 | 19.77 | 7132.37 | 11.98 | 326 | 3715 | -6.87% |
| 25 | 25 | 0.1 | 16.32 | 371.05 | 0.90 | 15.04 | 7230.54 | 10.65 | 358 | 3779 | -7.84% |
| 26 | 25 | 0.5 | 37.98 | 251.45 | 0.54 | 37.16 | 15316.94 | 114.03 | 1589 | 15280 | -2.15% |
| 27 | 25 | 0.5 | 39.33 | 252.87 | 2.53 | 38.29 | 14147.34 | 117.85 | 1425 | 15534 | -2.64% |
| 28 | 25 | 0.5 | 42.23 | 178.96 | 1.98 | 41.40 | 16019.42 | 116.88 | 1418 | 16013 | -1.97% |
| 29 | 25 | 0.5 | 36.77 | 432.73 | 0.91 | 35.99 | 16156.17 | 96.59 | 1631 | 14963 | -2.12% |
| 30 | 25 | 0.5 | 38.76 | 334.87 | 1.19 | 37.86 | 15529.74 | 90.98 | 1579 | 15650 | -2.32% |
| 31 | 25 | 0.5 | 44.15 | 312.38 | 1.52 | 43.25 | 15139.95 | 100.59 | 1700 | 14010 | -2.04% |
| 32 | 25 | 0.5 | 36.61 | 3669.71 | 0.49 | 35.80 | 15882.81 | 98.66 | 1403 | 14121 | -2.22% |
| 33 | 25 | 0.5 | 37.61 | 445.44 | 1.24 | 36.78 | 16294.92 | 116.32 | 1423 | 17408 | -2.21% |
| 34 | 25 | 0.5 | 38.05 | 350.55 | 0.61 | 37.34 | 17181.95 | 96.59 | 1418 | 15792 | -1.89% |
| 35 | 25 | 0.5 | 44.37 | 317.85 | 1.80 | 43.54 | 15691.37 | 115.69 | 1457 | 14123 | -1.88% |
| 36 | 25 | 0.5 | 41.19 | 426.79 | 2.14 | 40.36 | 16158.74 | 101.60 | 1500 | 16724 | -2.02% |
| 37 | 25 | 0.5 | 41.05 | 214.11 | 0.34 | 40.18 | 16528.91 | 108.89 | 1540 | 16301 | -2.11% |
| 38 | 25 | 0.5 | 47.61 | 329.00 | 2.43 | 46.69 | 13542.89 | 93.91 | 1433 | 16578 | -1.93% |
| 39 | 25 | 0.5 | 49.49 | 457.85 | 4.22 | 48.13 | 10806.69 | 150.66 | 1420 | 16397 | -2.76% |
| 40 | 25 | 0.5 | 39.69 | 328.24 | 2.09 | 38.69 | 13879.34 | 100.39 | 1545 | 14170 | -2.53% |
| 41 | 25 | 0.5 | 44.25 | 470.94 | 2.43 | 43.13 | 12475.14 | 127.71 | 1606 | 14199 | -2.53% |
| 42 | 25 | 0.5 | 39.68 | 294.05 | 2.17 | 38.78 | 15266.47 | 103.25 | 1644 | 16087 | -2.25% |
| 43 | 25 | 0.5 | 45.90 | 259.82 | 1.77 | 44.89 | 14492.62 | 107.42 | 1464 | 16296 | -2.18% |
| 44 | 25 | 0.5 | 39.28 | 307.34 | 1.50 | 38.39 | 15242.87 | 110.44 | 1644 | 16783 | -2.25% |
| 45 | 25 | 0.5 | 36.66 | 431.59 | 0.23 | 35.84 | 16814.10 | 94.86 | 1610 | 15825 | -2.22% |
| 46 | 25 | 0.5 | 40.12 | 3648.80 | 0.73 | 39.29 | 17129.47 | 87.84 | 1685 | 14384 | -2.06% |
| 47 | 25 | 0.5 | 50.49 | 419.00 | 4.76 | 49.04 | 10886.77 | 189.81 | 1485 | 17501 | -2.88% |
| 48 | 25 | 0.5 | 37.81 | 389.06 | 1.41 | 36.84 | 14404.83 | 97.87 | 1418 | 17300 | -2.55% |
| 49 | 25 | 0.5 | 41.58 | 251.17 | 1.42 | 40.80 | 15803.97 | 90.17 | 1454 | 17091 | -1.89% |
| 50 | 25 | 0.5 | 36.65 | 424.59 | 0.83 | 35.81 | 16583.65 | 98.54 | 1638 | 14431 | -2.29% |
| 51 | 25 | 2.0 | 67.14 | 894.14 | 0.27 | 66.89 | 29879.17 | 1252.72 | 5514 | 44305 | -0.37% |
| 52 | 25 | 2.0 | 74.63 | 1056.18 | 1.94 | 74.41 | 27005.86 | 1314.68 | 5243 | 47655 | -0.30% |
| 53 | 25 | 2.0 | 73.39 | 755.58 | 1.07 | 73.19 | 29875.02 | 1290.69 | 5356 | 47774 | -0.27% |
| 54 | 25 | 2.0 | 69.71 | 1144.27 | 0.87 | 69.55 | 31051.68 | 1020.54 | 5611 | 44571 | -0.23% |
| 55 | 25 | 2.0 | 69.93 | 1098.47 | 1.92 | 69.75 | 29812.06 | 1037.16 | 5560 | 42428 | -0.25% |
| 56 | 25 | 2.0 | 74.97 | 1100.14 | 1.49 | 74.83 | 28964.41 | 1229.30 | 5391 | 43271 | -0.19% |
| 57 | 25 | 2.0 | 66.98 | 4410.68 | 0.64 | 66.85 | 29755.54 | 1009.43 | 5661 | 46058 | -0.19% |
| 58 | 25 | 2.0 | 68.58 | 1201.34 | 1.33 | 68.40 | 31026.65 | 1221.65 | 5232 | 48245 | -0.27% |

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Table 1: Result of SimExact x SimSA-VaR_{90%} (continued)

| Inst | n | δ | SimExact | | SimSA-VaR _{90%} | | | | | | GAP _{$b \times \alpha$} |
|------|-----|----------|--------------------|---------|--------------------------|--------------------|----------|---------|----------|----------|---|
| | | | V-RPD ^a | T(s) | D-RPD | V-RPD ^b | SD | T(s) | ρ_S | ρ_L | |
| 59 | 25 | 2.0 | 67.05 | 864.16 | 0.21 | 66.91 | 32602.66 | 1004.19 | 5227 | 45454 | -0.21% |
| 60 | 25 | 2.0 | 71.97 | 879.07 | 2.08 | 71.71 | 29218.92 | 1164.42 | 5565 | 43775 | -0.36% |
| 61 | 25 | 2.0 | 71.85 | 1075.27 | 1.22 | 71.64 | 31056.31 | 1227.61 | 5390 | 42614 | -0.29% |
| 62 | 25 | 2.0 | 72.13 | 778.14 | 0.32 | 71.93 | 31167.00 | 1149.73 | 5361 | 42895 | -0.27% |
| 63 | 25 | 2.0 | 74.61 | 843.60 | 1.97 | 74.25 | 26289.85 | 1156.16 | 5515 | 44924 | -0.48% |
| 64 | 25 | 2.0 | 91.59 | 2239.75 | 4.38 | 91.21 | 22464.09 | 2288.95 | 5334 | 43519 | -0.41% |
| 65 | 25 | 2.0 | 75.47 | 1245.02 | 3.89 | 75.22 | 27470.04 | 1418.60 | 5633 | 45280 | -0.33% |
| 66 | 25 | 2.0 | 81.20 | 1610.54 | 2.40 | 80.66 | 24780.49 | 1629.38 | 5734 | 43973 | -0.67% |
| 67 | 25 | 2.0 | 70.00 | 906.17 | 2.26 | 69.82 | 29180.67 | 1119.10 | 5282 | 44645 | -0.27% |
| 68 | 25 | 2.0 | 77.18 | 783.33 | 1.35 | 77.03 | 27454.55 | 1272.99 | 5755 | 48735 | -0.20% |
| 69 | 25 | 2.0 | 73.18 | 1192.42 | 0.92 | 72.84 | 29621.86 | 1225.94 | 5309 | 48485 | -0.47% |
| 70 | 25 | 2.0 | 67.11 | 1123.46 | 0.16 | 66.80 | 32109.49 | 709.38 | 5561 | 47906 | -0.47% |
| 71 | 25 | 2.0 | 69.42 | 4106.05 | 0.91 | 69.25 | 31790.40 | 1023.10 | 5538 | 48478 | -0.24% |
| 72 | 25 | 2.0 | 90.60 | 2096.17 | 4.52 | 90.20 | 21357.40 | 2524.59 | 5238 | 45361 | -0.44% |
| 73 | 25 | 2.0 | 68.28 | 1167.98 | 1.03 | 68.13 | 27706.91 | 1162.36 | 5726 | 47825 | -0.22% |
| 74 | 25 | 2.0 | 70.93 | 897.52 | 1.34 | 70.74 | 30208.18 | 1145.96 | 5323 | 44098 | -0.26% |
| 75 | 25 | 2.0 | 68.25 | 1156.51 | 0.59 | 67.89 | 31296.56 | 1186.72 | 5758 | 44737 | -0.53% |
| 76* | 50 | 0.1 | 19.87 | 3630.31 | 2.45 | 18.14 | 6275.27 | 16.35 | 369 | 3396 | -8.72% |
| 77* | 50 | 0.1 | 18.77 | 3629.56 | 2.00 | 17.27 | 14001.63 | 112.47 | 329 | 3698 | -8.01% |
| 78* | 50 | 0.1 | 16.51 | 3630.50 | 0.63 | 15.07 | 26926.17 | 1138.93 | 379 | 3320 | -8.69% |
| 79* | 50 | 0.1 | 20.78 | 3630.11 | 3.03 | 18.96 | 6554.73 | 19.64 | 318 | 3730 | -8.77% |
| 80* | 50 | 0.1 | 15.96 | 3631.53 | 0.74 | 14.72 | 14900.07 | 144.94 | 401 | 3305 | -7.80% |
| 81* | 50 | 0.1 | 17.34 | 3629.64 | 0.88 | 15.76 | 29267.73 | 1554.93 | 398 | 3463 | -9.12% |
| 82* | 50 | 0.1 | 16.71 | 3631.00 | 1.49 | 15.07 | 7634.81 | 18.13 | 366 | 3565 | -9.79% |
| 83* | 50 | 0.1 | 16.42 | 3631.29 | 0.76 | 15.02 | 17137.78 | 124.05 | 346 | 3737 | -8.55% |
| 84* | 50 | 0.1 | 18.27 | 3630.00 | 1.64 | 16.80 | 32507.89 | 1131.71 | 346 | 3741 | -8.06% |
| 85* | 50 | 0.1 | 21.73 | 3630.23 | 2.51 | 20.02 | 5668.13 | 15.86 | 375 | 3620 | -7.83% |
| 86* | 50 | 0.1 | 16.85 | 3628.29 | 1.44 | 15.61 | 13219.03 | 115.06 | 400 | 3593 | -7.34% |
| 87* | 50 | 0.1 | 19.24 | 3630.65 | 1.29 | 17.95 | 25969.59 | 1920.60 | 325 | 3512 | -6.68% |
| 88* | 50 | 0.1 | 20.03 | 3629.23 | 1.96 | 18.62 | 7323.97 | 43.45 | 304 | 3687 | -7.02% |
| 89* | 50 | 0.1 | 16.72 | 3631.50 | 1.70 | 15.34 | 16205.61 | 288.19 | 355 | 3602 | -8.24% |
| 90* | 50 | 0.1 | 18.33 | 3631.02 | 1.91 | 16.80 | 31251.37 | 2757.84 | 303 | 3358 | -8.33% |
| 91* | 50 | 0.1 | 19.48 | 3630.58 | 1.61 | 18.06 | 7034.37 | 16.95 | 321 | 3378 | -7.27% |
| 92* | 50 | 0.1 | 18.57 | 3630.68 | 1.34 | 17.20 | 15422.63 | 104.41 | 314 | 3583 | -7.38% |
| 93* | 50 | 0.1 | 18.30 | 3629.82 | 1.74 | 16.96 | 29779.78 | 2255.49 | 307 | 3660 | -7.29% |
| 94* | 50 | 0.1 | 18.50 | 3631.44 | 1.97 | 16.82 | 6434.06 | 17.32 | 323 | 3597 | -9.06% |
| 95* | 50 | 0.1 | 16.21 | 3632.06 | 1.38 | 14.88 | 14778.13 | 116.49 | 312 | 3566 | -8.20% |
| 96* | 50 | 0.1 | 19.11 | 3632.77 | 2.44 | 17.43 | 28716.88 | 1348.18 | 385 | 3681 | -8.81% |
| 97* | 50 | 0.1 | 17.59 | 3631.00 | 1.55 | 16.02 | 6721.20 | 18.44 | 309 | 3393 | -8.88% |
| 98* | 50 | 0.1 | 18.93 | 3631.14 | 0.88 | 17.24 | 16213.97 | 127.82 | 357 | 3407 | -8.96% |
| 99* | 50 | 0.1 | 16.46 | 3619.11 | 1.62 | 14.91 | 30579.85 | 1214.86 | 359 | 3536 | -9.38% |
| 100* | 50 | 0.1 | 19.16 | 3619.63 | 1.04 | 17.75 | 7134.37 | 15.90 | 377 | 3675 | -7.34% |
| 101* | 50 | 0.5 | 39.10 | 3691.40 | 2.55 | 38.15 | 15878.55 | 116.15 | 1549 | 14889 | -2.41% |
| 102* | 50 | 0.5 | 39.60 | 3701.87 | 1.97 | 38.74 | 30060.24 | 1112.86 | 1578 | 17212 | -2.16% |
| 103* | 50 | 0.5 | 36.82 | 3693.11 | 0.72 | 35.99 | 5888.01 | 18.96 | 1621 | 17616 | -2.24% |
| 104* | 50 | 0.5 | 40.47 | 3695.26 | 2.60 | 39.40 | 14344.28 | 147.41 | 1470 | 16779 | -2.62% |
| 105* | 50 | 0.5 | 36.81 | 3698.51 | 0.68 | 36.01 | 27481.59 | 1556.46 | 1694 | 16530 | -2.17% |
| 106* | 50 | 0.5 | 36.65 | 3691.56 | 0.83 | 35.79 | 7328.63 | 17.81 | 1623 | 15585 | -2.34% |
| 107* | 50 | 0.5 | 37.42 | 3701.60 | 1.74 | 36.48 | 16931.52 | 122.30 | 1435 | 14750 | -2.53% |
| 108* | 50 | 0.5 | 36.86 | 3700.53 | 0.81 | 35.96 | 31381.31 | 1051.40 | 1536 | 14316 | -2.44% |
| 109* | 50 | 0.5 | 37.34 | 3693.62 | 1.70 | 36.54 | 7217.17 | 16.83 | 1692 | 16440 | -2.14% |
| 110* | 50 | 0.5 | 42.26 | 3695.31 | 2.52 | 41.24 | 16772.25 | 115.07 | 1589 | 17635 | -2.40% |
| 111* | 50 | 0.5 | 36.83 | 3689.99 | 1.35 | 36.07 | 31692.77 | 1180.65 | 1534 | 16378 | -2.07% |
| 112* | 50 | 0.5 | 38.23 | 3687.81 | 1.40 | 37.36 | 6799.65 | 19.60 | 1623 | 14439 | -2.26% |
| 113* | 50 | 0.5 | 38.99 | 3688.00 | 2.00 | 38.07 | 15406.86 | 125.73 | 1425 | 16315 | -2.37% |
| 114* | 50 | 0.5 | 37.77 | 3701.87 | 1.40 | 36.91 | 29784.18 | 1473.84 | 1556 | 14465 | -2.28% |
| 115* | 50 | 0.5 | 38.66 | 3698.00 | 1.88 | 37.72 | 7258.04 | 15.93 | 1693 | 15248 | -2.43% |
| 116* | 50 | 0.5 | 40.38 | 3693.92 | 1.62 | 39.51 | 16624.10 | 103.21 | 1547 | 17618 | -2.16% |

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Table 1: Result of SimExact x SimSA-VaR_{90%} (continued)

| Inst | n | δ | SimExact | | SimSA-VaR _{90%} | | | | | | GAP _{b × a} |
|------|-----|----------|--------------------|---------|--------------------------|--------------------|----------|---------|----------|----------|----------------------|
| | | | V-RPD ^a | T(s) | D-RPD | V-RPD ^b | SD | T(s) | ρ_S | ρ_L | |
| 117* | 50 | 0.5 | 39.28 | 3691.77 | 1.66 | 38.47 | 31773.75 | 1216.19 | 1438 | 16822 | -2.07% |
| 118* | 50 | 0.5 | 37.82 | 3695.75 | 1.54 | 37.01 | 6464.55 | 17.12 | 1435 | 15280 | -2.14% |
| 119* | 50 | 0.5 | 39.75 | 3702.59 | 2.35 | 38.75 | 14536.64 | 124.26 | 1646 | 14840 | -2.51% |
| 120* | 50 | 0.5 | 35.57 | 3690.70 | 1.32 | 34.85 | 28261.87 | 1308.72 | 1570 | 15675 | -2.03% |
| 121* | 50 | 0.5 | 39.47 | 3705.25 | 2.02 | 38.58 | 7191.84 | 17.45 | 1550 | 17643 | -2.27% |
| 122* | 50 | 0.5 | 37.74 | 3696.22 | 2.17 | 36.91 | 16638.15 | 115.91 | 1684 | 14380 | -2.22% |
| 123* | 50 | 0.5 | 39.32 | 3691.08 | 1.28 | 38.43 | 32042.85 | 1164.14 | 1407 | 16176 | -2.28% |
| 124* | 50 | 0.5 | 37.07 | 3646.83 | 1.78 | 36.15 | 7102.08 | 16.07 | 1402 | 14810 | -2.47% |
| 125* | 50 | 0.5 | 37.15 | 3641.99 | 0.88 | 36.33 | 16025.21 | 117.84 | 1432 | 17363 | -2.21% |
| 126* | 50 | 2.0 | 71.57 | 4494.43 | 2.29 | 71.36 | 31380.17 | 1430.33 | 5201 | 43337 | -0.30% |
| 127* | 50 | 2.0 | 71.94 | 4617.19 | 1.74 | 71.69 | 6836.67 | 17.13 | 5382 | 47783 | -0.36% |
| 128* | 50 | 2.0 | 68.49 | 4487.87 | 0.62 | 68.33 | 16478.31 | 112.02 | 5453 | 45995 | -0.23% |
| 129* | 50 | 2.0 | 73.04 | 4554.07 | 2.76 | 72.67 | 31517.47 | 1202.27 | 5277 | 46178 | -0.51% |
| 130* | 50 | 2.0 | 65.61 | 4478.45 | 0.63 | 65.43 | 6071.15 | 15.81 | 5246 | 46339 | -0.27% |
| 131* | 50 | 2.0 | 67.29 | 4476.31 | 0.94 | 66.98 | 14496.26 | 109.13 | 5445 | 46950 | -0.47% |
| 132* | 50 | 2.0 | 69.02 | 4599.14 | 1.78 | 68.66 | 28569.36 | 1256.29 | 5582 | 44375 | -0.51% |
| 133* | 50 | 2.0 | 69.50 | 4642.70 | 0.79 | 69.36 | 7656.87 | 16.26 | 5633 | 46031 | -0.20% |
| 134* | 50 | 2.0 | 67.68 | 4505.26 | 1.78 | 67.41 | 17148.72 | 101.69 | 5777 | 42535 | -0.40% |
| 135* | 50 | 2.0 | 74.16 | 4628.07 | 2.51 | 73.94 | 33076.55 | 1089.22 | 5691 | 44270 | -0.29% |
| 136* | 50 | 2.0 | 67.84 | 4458.52 | 1.46 | 67.63 | 6678.15 | 17.81 | 5712 | 46271 | -0.31% |
| 137* | 50 | 2.0 | 67.36 | 4457.67 | 1.24 | 67.02 | 14803.69 | 129.82 | 5400 | 42392 | -0.50% |
| 138* | 50 | 2.0 | 72.04 | 4554.44 | 1.90 | 71.81 | 28535.79 | 1517.75 | 5239 | 43667 | -0.31% |
| 139* | 50 | 2.0 | 68.00 | 4557.57 | 1.37 | 67.72 | 6567.71 | 17.13 | 5624 | 46025 | -0.42% |
| 140* | 50 | 2.0 | 72.51 | 4655.48 | 1.87 | 72.20 | 15368.05 | 116.84 | 5663 | 45999 | -0.42% |
| 141* | 50 | 2.0 | 70.56 | 4480.91 | 1.68 | 70.22 | 29953.82 | 1335.72 | 5588 | 47309 | -0.49% |
| 142* | 50 | 2.0 | 71.94 | 4575.03 | 1.44 | 71.57 | 6277.86 | 16.46 | 5510 | 44072 | -0.52% |
| 143* | 50 | 2.0 | 70.03 | 4549.38 | 1.36 | 69.79 | 14692.39 | 125.85 | 5749 | 44645 | -0.35% |
| 144* | 50 | 2.0 | 72.13 | 4702.10 | 2.32 | 71.80 | 28184.17 | 1368.07 | 5749 | 45539 | -0.45% |
| 145* | 50 | 2.0 | 64.60 | 4379.22 | 0.94 | 64.25 | 6967.30 | 22.05 | 5578 | 44167 | -0.54% |
| 146* | 50 | 2.0 | 73.56 | 4656.51 | 2.11 | 73.28 | 15975.02 | 129.48 | 5233 | 42881 | -0.37% |
| 147* | 50 | 2.0 | 69.63 | 4542.94 | 2.87 | 69.48 | 30347.83 | 1417.13 | 5412 | 45814 | -0.21% |
| 148* | 50 | 2.0 | 70.11 | 4011.50 | 1.54 | 69.72 | 7073.23 | 18.99 | 5415 | 45721 | -0.56% |
| 149* | 50 | 2.0 | 68.43 | 3882.66 | 1.78 | 68.16 | 15857.48 | 122.36 | 5659 | 42492 | -0.39% |
| 150* | 50 | 2.0 | 67.19 | 3840.16 | 1.02 | 66.87 | 29903.66 | 791.15 | 5287 | 44710 | -0.47% |
| 151* | 75 | 0.1 | 18.71 | 3627.29 | 1.86 | 17.37 | 6863.53 | 25.29 | 317 | 3728 | -7.13% |
| 152* | 75 | 0.1 | 17.73 | 3623.12 | 1.98 | 16.26 | 16025.19 | 128.62 | 332 | 3484 | -8.32% |
| 153* | 75 | 0.1 | 16.59 | 3625.34 | 1.26 | 15.15 | 30306.25 | 1181.98 | 308 | 3394 | -8.69% |
| 154* | 75 | 0.1 | 16.24 | 3624.57 | 0.18 | 14.68 | 6017.27 | 24.91 | 316 | 3557 | -9.62% |
| 155* | 75 | 0.1 | 16.63 | 3625.54 | 1.91 | 15.22 | 14812.55 | 133.53 | 325 | 3411 | -8.48% |
| 156* | 75 | 0.1 | 16.05 | 3625.07 | 0.93 | 14.64 | 28659.40 | 1468.91 | 320 | 3332 | -8.78% |
| 157* | 75 | 0.1 | 19.63 | 3624.51 | 1.86 | 18.13 | 6635.63 | 30.96 | 362 | 3285 | -7.63% |
| 158* | 75 | 0.1 | 17.04 | 3625.24 | 2.07 | 15.50 | 15221.39 | 147.36 | 336 | 3784 | -9.01% |
| 159* | 75 | 0.1 | 17.45 | 3625.34 | 2.16 | 16.19 | 29255.77 | 1200.13 | 343 | 3698 | -7.23% |
| 160* | 75 | 0.1 | 17.64 | 3625.46 | 2.26 | 15.93 | 6795.58 | 20.77 | 385 | 3631 | -9.70% |
| 161* | 75 | 0.1 | 17.49 | 3623.68 | 2.09 | 15.87 | 15354.06 | 108.12 | 399 | 3480 | -9.25% |
| 162* | 75 | 0.1 | 18.77 | 3625.13 | 1.12 | 17.38 | 29224.08 | 1058.35 | 379 | 3547 | -7.39% |
| 163* | 75 | 0.1 | 16.56 | 3623.73 | 0.82 | 15.25 | 6433.99 | 24.64 | 328 | 3578 | -7.90% |
| 164* | 75 | 0.1 | 18.28 | 3625.49 | 1.45 | 16.74 | 15619.14 | 115.90 | 348 | 3390 | -8.41% |
| 165* | 75 | 0.1 | 18.39 | 3625.53 | 2.64 | 16.81 | 29748.59 | 1093.89 | 313 | 3307 | -8.58% |
| 166* | 75 | 0.1 | 17.73 | 3624.68 | 1.86 | 16.34 | 6778.99 | 23.20 | 312 | 3708 | -7.83% |
| 167* | 75 | 0.1 | 17.36 | 3625.88 | 2.01 | 15.74 | 15884.92 | 115.87 | 303 | 3659 | -9.34% |
| 168* | 75 | 0.1 | 16.75 | 3626.39 | 2.32 | 15.32 | 30064.35 | 1124.89 | 352 | 3515 | -8.53% |
| 169* | 75 | 0.1 | 20.45 | 3624.77 | 1.22 | 18.82 | 6798.68 | 22.02 | 361 | 3387 | -7.98% |
| 170* | 75 | 0.1 | 20.24 | 3625.94 | 2.12 | 18.77 | 15436.93 | 149.44 | 379 | 3501 | -7.25% |
| 171* | 75 | 0.1 | 16.35 | 3626.12 | 2.59 | 14.82 | 29627.30 | 2953.09 | 328 | 3790 | -9.39% |
| 172* | 75 | 0.1 | 17.19 | 3623.52 | 1.63 | 15.90 | 6168.01 | 22.25 | 360 | 3659 | -7.49% |
| 173* | 75 | 0.1 | 17.61 | 3626.27 | 2.20 | 15.94 | 14102.91 | 105.61 | 401 | 3289 | -9.45% |
| 174* | 75 | 0.1 | 17.80 | 3625.35 | 1.26 | 16.48 | 27065.44 | 1142.64 | 339 | 3363 | -7.39% |

Continued on the next page

Table 1: Result of SimExact x SimSA-VaR_{90%} (continued)

| Inst | n | δ | SimExact | | SimSA-VaR _{90%} | | | | | | GAP _{b × a} |
|------|-----|----------|--------------------|---------|--------------------------|--------------------|----------|---------|----------|----------|----------------------|
| | | | V-RPD ^a | T(s) | D-RPD | V-RPD ^b | SD | T(s) | ρ_S | ρ_L | |
| 175* | 75 | 0.1 | 16.78 | 3624.28 | 1.59 | 15.04 | 7278.52 | 21.08 | 393 | 3783 | -10.40% |
| 176* | 75 | 0.5 | 37.08 | 3650.35 | 1.99 | 36.27 | 16742.87 | 128.22 | 1587 | 15431 | -2.18% |
| 177* | 75 | 0.5 | 38.84 | 3653.62 | 1.86 | 37.85 | 31496.09 | 1126.07 | 1504 | 15893 | -2.53% |
| 178* | 75 | 0.5 | 38.26 | 3659.63 | 1.34 | 37.34 | 6320.11 | 21.14 | 1525 | 15142 | -2.40% |
| 179* | 75 | 0.5 | 35.98 | 3655.58 | 0.41 | 35.04 | 14579.36 | 110.33 | 1611 | 16744 | -2.60% |
| 180* | 75 | 0.5 | 36.85 | 3660.23 | 1.84 | 35.94 | 27839.45 | 1138.52 | 1429 | 15875 | -2.47% |
| 181* | 75 | 0.5 | 37.39 | 3659.24 | 1.06 | 36.48 | 5872.00 | 23.59 | 1400 | 14287 | -2.44% |
| 182* | 75 | 0.5 | 39.83 | 3653.63 | 1.87 | 38.97 | 14180.56 | 127.40 | 1488 | 16381 | -2.16% |
| 183* | 75 | 0.5 | 37.53 | 3658.78 | 1.67 | 36.53 | 27423.35 | 1185.80 | 1519 | 15361 | -2.67% |
| 184* | 75 | 0.5 | 37.48 | 3656.67 | 1.22 | 36.67 | 6693.99 | 21.33 | 1518 | 16785 | -2.14% |
| 185* | 75 | 0.5 | 38.08 | 3658.31 | 2.30 | 37.09 | 16016.40 | 117.65 | 1410 | 17028 | -2.61% |
| 186* | 75 | 0.5 | 39.48 | 3662.65 | 2.15 | 38.57 | 30401.29 | 1077.05 | 1442 | 17601 | -2.29% |
| 187* | 75 | 0.5 | 39.17 | 3661.38 | 1.23 | 38.34 | 6809.45 | 18.51 | 1450 | 15471 | -2.12% |
| 188* | 75 | 0.5 | 35.84 | 3655.08 | 1.10 | 34.97 | 16072.97 | 99.05 | 1485 | 16222 | -2.42% |
| 189* | 75 | 0.5 | 39.05 | 3658.92 | 1.20 | 38.17 | 30613.87 | 1033.43 | 1546 | 16156 | -2.25% |
| 190* | 75 | 0.5 | 38.76 | 3660.92 | 3.22 | 37.77 | 6768.87 | 22.17 | 1567 | 15080 | -2.54% |
| 191* | 75 | 0.5 | 37.95 | 3656.11 | 1.49 | 37.13 | 15490.71 | 105.90 | 1435 | 14536 | -2.16% |
| 192* | 75 | 0.5 | 38.10 | 3661.06 | 2.05 | 37.17 | 29581.13 | 1044.76 | 1598 | 16918 | -2.42% |
| 193* | 75 | 0.5 | 37.13 | 3659.74 | 2.39 | 36.20 | 6108.24 | 21.21 | 1656 | 14614 | -2.51% |
| 194* | 75 | 0.5 | 41.14 | 3656.41 | 1.41 | 40.27 | 14277.85 | 120.71 | 1527 | 15283 | -2.11% |
| 195* | 75 | 0.5 | 40.51 | 3660.65 | 2.43 | 39.59 | 27111.85 | 1143.08 | 1444 | 14509 | -2.26% |
| 196* | 75 | 0.5 | 38.32 | 3662.00 | 2.15 | 37.48 | 6902.94 | 21.76 | 1457 | 16399 | -2.17% |
| 197* | 75 | 0.5 | 36.89 | 3657.42 | 1.55 | 36.09 | 15857.24 | 83.77 | 1547 | 15931 | -2.17% |
| 198* | 75 | 0.5 | 39.26 | 3663.46 | 2.44 | 38.36 | 30146.54 | 1045.37 | 1473 | 15261 | -2.29% |
| 199* | 75 | 0.5 | 36.39 | 3658.72 | 1.18 | 35.52 | 6810.95 | 23.59 | 1543 | 15806 | -2.38% |
| 200* | 75 | 0.5 | 39.50 | 3659.51 | 1.74 | 38.52 | 15521.54 | 124.51 | 1417 | 17209 | -2.46% |
| 201* | 75 | 2.0 | 68.27 | 3852.70 | 1.58 | 68.04 | 29312.11 | 1150.85 | 5359 | 45633 | -0.34% |
| 202* | 75 | 2.0 | 72.42 | 3896.04 | 1.87 | 72.20 | 6471.91 | 22.78 | 5261 | 44863 | -0.30% |
| 203* | 75 | 2.0 | 71.19 | 3953.76 | 1.33 | 70.86 | 14947.41 | 87.50 | 5546 | 46010 | -0.47% |
| 204* | 75 | 2.0 | 66.26 | 3883.43 | 0.29 | 66.08 | 28221.08 | 1157.02 | 5691 | 48508 | -0.28% |
| 205* | 75 | 2.0 | 67.79 | 3920.68 | 1.81 | 67.62 | 6578.37 | 21.62 | 5406 | 46899 | -0.24% |
| 206* | 75 | 2.0 | 68.41 | 3906.44 | 0.96 | 68.22 | 15445.68 | 117.02 | 5538 | 47596 | -0.27% |
| 207* | 75 | 2.0 | 68.82 | 3880.91 | 1.63 | 68.45 | 29355.28 | 1137.36 | 5524 | 45282 | -0.53% |
| 208* | 75 | 2.0 | 66.09 | 3894.08 | 1.69 | 65.69 | 6773.20 | 25.95 | 5389 | 42725 | -0.61% |
| 209* | 75 | 2.0 | 66.02 | 3865.74 | 1.75 | 65.87 | 15585.36 | 131.70 | 5444 | 48334 | -0.23% |
| 210* | 75 | 2.0 | 70.20 | 3915.02 | 2.26 | 69.86 | 29394.60 | 1239.36 | 5238 | 48079 | -0.48% |
| 211* | 75 | 2.0 | 70.72 | 3978.65 | 1.64 | 70.53 | 6512.38 | 22.53 | 5370 | 43461 | -0.27% |
| 212* | 75 | 2.0 | 71.09 | 3903.56 | 1.28 | 70.88 | 15260.39 | 118.40 | 5209 | 47742 | -0.29% |
| 213* | 75 | 2.0 | 66.12 | 3897.10 | 1.32 | 65.79 | 29274.00 | 1079.25 | 5575 | 42561 | -0.50% |
| 214* | 75 | 2.0 | 67.26 | 3892.84 | 1.18 | 66.93 | 7216.75 | 19.78 | 5209 | 46722 | -0.49% |
| 215* | 75 | 2.0 | 70.63 | 3925.52 | 2.79 | 70.30 | 16635.79 | 107.19 | 5553 | 48095 | -0.47% |
| 216* | 75 | 2.0 | 67.63 | 3884.92 | 1.56 | 67.23 | 31701.78 | 1106.82 | 5698 | 46739 | -0.58% |
| 217* | 75 | 2.0 | 70.83 | 3916.87 | 1.98 | 70.59 | 6318.75 | 21.05 | 5569 | 45483 | -0.35% |
| 218* | 75 | 2.0 | 68.16 | 3897.91 | 2.28 | 67.95 | 15304.93 | 118.41 | 5299 | 44394 | -0.31% |
| 219* | 75 | 2.0 | 70.99 | 3899.50 | 1.43 | 70.70 | 29492.33 | 1277.25 | 5539 | 48073 | -0.41% |
| 220* | 75 | 2.0 | 70.69 | 3914.66 | 2.18 | 70.33 | 7237.22 | 22.37 | 5390 | 42635 | -0.51% |
| 221* | 75 | 2.0 | 68.61 | 3914.69 | 2.52 | 68.42 | 16555.90 | 104.09 | 5616 | 42714 | -0.28% |
| 222* | 75 | 2.0 | 67.71 | 3901.81 | 2.02 | 67.46 | 31464.74 | 1069.10 | 5669 | 44077 | -0.37% |
| 223* | 75 | 2.0 | 71.11 | 3955.01 | 2.13 | 70.82 | 6148.71 | 21.97 | 5315 | 46127 | -0.41% |
| 224* | 75 | 2.0 | 66.64 | 3903.67 | 1.57 | 66.36 | 14221.95 | 127.29 | 5662 | 45660 | -0.42% |
| 225* | 75 | 2.0 | 71.95 | 3940.44 | 1.51 | 71.55 | 27742.54 | 1501.03 | 5698 | 45765 | -0.56% |
| 226* | 100 | 0.1 | 18.30 | 3628.33 | 2.61 | 16.62 | 6278.42 | 30.88 | 373 | 3797 | -9.17% |
| 227* | 100 | 0.1 | 18.27 | 3628.47 | 2.06 | 16.80 | 14977.83 | 158.28 | 370 | 3570 | -8.02% |
| 228* | 100 | 0.1 | 18.29 | 3629.94 | 1.40 | 16.75 | 28505.15 | 1394.45 | 312 | 3479 | -8.42% |
| 229* | 100 | 0.1 | 16.98 | 3630.06 | 2.55 | 15.50 | 6483.80 | 30.45 | 337 | 3608 | -8.75% |
| 230* | 100 | 0.1 | 17.19 | 3630.66 | 1.99 | 15.78 | 14838.44 | 126.90 | 399 | 3373 | -8.21% |
| 231* | 100 | 0.1 | 16.97 | 3628.87 | 1.22 | 15.41 | 28491.56 | 1146.55 | 399 | 3749 | -9.20% |
| 232* | 100 | 0.1 | 17.43 | 3631.19 | 2.06 | 16.00 | 6226.39 | 28.32 | 382 | 3462 | -8.24% |

Continued on the next page

Table 1: Result of SimExact x SimSA-VaR_{90%} (continued)

| Inst | n | δ | SimExact | | SimSA-VaR _{90%} | | | | | | GAP _{b × α} |
|------|-----|----------|--------------------|---------|--------------------------|--------------------|----------|---------|----------|----------|----------------------|
| | | | V-RPD ^a | T(s) | D-RPD | V-RPD ^b | SD | T(s) | ρ_S | ρ_L | |
| 233* | 100 | 0.1 | 16.11 | 3630.93 | 2.11 | 14.63 | 14675.82 | 123.79 | 304 | 3849 | -9.22% |
| 234* | 100 | 0.1 | 16.98 | 3631.16 | 2.17 | 15.44 | 28698.45 | 1285.67 | 339 | 3547 | -9.04% |
| 235* | 100 | 0.1 | 16.52 | 3631.18 | 2.11 | 15.19 | 6907.19 | 30.48 | 313 | 3579 | -8.01% |
| 236* | 100 | 0.1 | 17.02 | 3630.30 | 1.39 | 15.43 | 15611.01 | 134.84 | 349 | 3370 | -9.30% |
| 237* | 100 | 0.1 | 16.98 | 3629.99 | 1.75 | 15.56 | 29559.18 | 1044.77 | 398 | 3549 | -8.34% |
| 238* | 100 | 0.1 | 19.16 | 3631.77 | 1.93 | 17.65 | 7181.25 | 28.95 | 392 | 3337 | -7.91% |
| 239* | 100 | 0.1 | 17.39 | 3629.92 | 2.44 | 16.00 | 16642.98 | 127.07 | 380 | 3564 | -7.96% |
| 240* | 100 | 0.1 | 16.47 | 3629.86 | 1.82 | 14.95 | 31077.04 | 1037.56 | 322 | 3771 | -9.25% |
| 241* | 100 | 0.1 | 17.00 | 3628.61 | 2.72 | 15.31 | 6584.87 | 28.72 | 341 | 3455 | -9.94% |
| 242* | 100 | 0.1 | 18.31 | 3630.22 | 1.97 | 16.84 | 15055.67 | 120.61 | 311 | 3654 | -8.05% |
| 243* | 100 | 0.1 | 18.06 | 3630.59 | 2.38 | 16.52 | 29104.20 | 1110.19 | 340 | 3771 | -8.50% |
| 244* | 100 | 0.1 | 17.00 | 3630.46 | 2.45 | 15.51 | 6667.09 | 30.18 | 339 | 3331 | -8.72% |
| 245* | 100 | 0.1 | 17.31 | 3629.88 | 1.78 | 15.87 | 15483.80 | 130.88 | 364 | 3815 | -8.33% |
| 246* | 100 | 0.1 | 17.15 | 3630.41 | 2.53 | 15.50 | 28957.23 | 1342.10 | 325 | 3551 | -9.60% |
| 247* | 100 | 0.1 | 16.46 | 3629.40 | 1.56 | 14.94 | 6720.14 | 29.56 | 323 | 3363 | -9.22% |
| 248* | 100 | 0.1 | 17.87 | 3630.22 | 2.28 | 16.41 | 15718.53 | 138.05 | 304 | 3485 | -8.17% |
| 249* | 100 | 0.1 | 16.26 | 3629.62 | 1.58 | 14.85 | 29901.52 | 1184.95 | 342 | 3709 | -8.65% |
| 250* | 100 | 0.1 | 16.95 | 3629.04 | 1.97 | 15.45 | 6772.56 | 30.38 | 353 | 3591 | -8.84% |
| 251* | 100 | 0.5 | 39.81 | 3670.73 | 2.70 | 38.85 | 15998.75 | 128.93 | 1514 | 15881 | -2.43% |
| 252* | 100 | 0.5 | 38.94 | 3669.59 | 2.08 | 38.02 | 30218.89 | 1156.73 | 1428 | 14643 | -2.36% |
| 253* | 100 | 0.5 | 38.05 | 3666.34 | 1.37 | 37.12 | 6865.09 | 27.48 | 1670 | 14201 | -2.43% |
| 254* | 100 | 0.5 | 37.83 | 3671.62 | 2.39 | 36.94 | 15866.08 | 122.32 | 1671 | 17196 | -2.35% |
| 255* | 100 | 0.5 | 37.59 | 3671.32 | 2.00 | 36.77 | 29578.29 | 1153.16 | 1603 | 15048 | -2.17% |
| 256* | 100 | 0.5 | 37.28 | 3669.33 | 1.19 | 36.39 | 6277.68 | 30.82 | 1614 | 14684 | -2.39% |
| 257* | 100 | 0.5 | 38.76 | 3676.05 | 2.13 | 37.84 | 14986.51 | 153.08 | 1414 | 14652 | -2.37% |
| 258* | 100 | 0.5 | 36.59 | 3673.19 | 2.18 | 35.65 | 28975.78 | 1514.46 | 1459 | 16269 | -2.55% |
| 259* | 100 | 0.5 | 38.32 | 3675.25 | 2.33 | 37.41 | 6968.50 | 30.06 | 1583 | 14991 | -2.37% |
| 260* | 100 | 0.5 | 37.15 | 3675.47 | 2.20 | 36.30 | 16410.31 | 151.15 | 1512 | 15039 | -2.29% |
| 261* | 100 | 0.5 | 38.74 | 3671.44 | 1.24 | 37.77 | 30862.15 | 1350.23 | 1623 | 16790 | -2.51% |
| 262* | 100 | 0.5 | 37.38 | 3671.76 | 1.67 | 36.57 | 6837.50 | 32.48 | 1509 | 16410 | -2.17% |
| 263* | 100 | 0.5 | 39.54 | 3673.91 | 1.83 | 38.64 | 16108.96 | 137.13 | 1509 | 14225 | -2.28% |
| 264* | 100 | 0.5 | 38.28 | 3670.28 | 2.18 | 37.47 | 30382.77 | 1362.09 | 1577 | 16696 | -2.13% |
| 265* | 100 | 0.5 | 38.65 | 3672.20 | 1.87 | 37.79 | 7178.14 | 32.10 | 1693 | 14512 | -2.23% |
| 266* | 100 | 0.5 | 38.78 | 3668.73 | 2.58 | 37.89 | 16166.55 | 121.36 | 1678 | 15470 | -2.29% |
| 267* | 100 | 0.5 | 37.68 | 3680.27 | 1.72 | 36.71 | 30442.93 | 1051.87 | 1638 | 16361 | -2.56% |
| 268* | 100 | 0.5 | 38.89 | 3672.65 | 2.23 | 38.00 | 6536.64 | 29.49 | 1567 | 17224 | -2.28% |
| 269* | 100 | 0.5 | 37.55 | 3670.80 | 2.38 | 36.69 | 15417.69 | 130.61 | 1506 | 15820 | -2.27% |
| 270* | 100 | 0.5 | 37.43 | 3670.96 | 1.71 | 36.55 | 29362.77 | 1174.82 | 1630 | 15659 | -2.36% |
| 271* | 100 | 0.5 | 38.92 | 3671.13 | 2.51 | 38.05 | 6021.10 | 28.76 | 1488 | 16541 | -2.24% |
| 272* | 100 | 0.5 | 37.25 | 3670.81 | 1.88 | 36.41 | 14655.40 | 126.39 | 1432 | 15244 | -2.27% |
| 273* | 100 | 0.5 | 39.61 | 3671.96 | 2.07 | 38.70 | 28304.27 | 2441.53 | 1634 | 14269 | -2.30% |
| 274* | 100 | 0.5 | 36.20 | 3667.29 | 1.44 | 35.44 | 6547.44 | 65.12 | 1634 | 14916 | -2.12% |
| 275* | 100 | 0.5 | 37.05 | 3668.29 | 1.89 | 36.16 | 15234.77 | 299.75 | 1657 | 14513 | -2.41% |
| 276* | 100 | 2.0 | 70.57 | 3949.97 | 2.58 | 70.20 | 28939.23 | 2618.97 | 5381 | 43661 | -0.53% |
| 277* | 100 | 2.0 | 67.91 | 3926.60 | 2.76 | 67.56 | 6775.70 | 62.04 | 5239 | 44356 | -0.52% |
| 278* | 100 | 2.0 | 66.84 | 3908.45 | 1.46 | 66.52 | 15647.60 | 266.87 | 5519 | 47215 | -0.49% |
| 279* | 100 | 2.0 | 68.22 | 3925.18 | 2.36 | 67.85 | 29578.68 | 2565.33 | 5238 | 46470 | -0.54% |
| 280* | 100 | 2.0 | 66.26 | 3915.92 | 2.04 | 66.09 | 6590.67 | 58.62 | 5204 | 46361 | -0.25% |
| 281* | 100 | 2.0 | 67.00 | 3924.11 | 1.21 | 66.79 | 15539.96 | 294.08 | 5787 | 46953 | -0.32% |
| 282* | 100 | 2.0 | 70.05 | 3991.09 | 2.14 | 69.88 | 29795.57 | 2613.40 | 5575 | 42432 | -0.25% |
| 283* | 100 | 2.0 | 66.64 | 3951.91 | 2.20 | 66.32 | 6271.02 | 62.79 | 5606 | 42733 | -0.49% |
| 284* | 100 | 2.0 | 68.67 | 3964.62 | 2.41 | 68.34 | 14772.64 | 273.66 | 5587 | 42331 | -0.48% |
| 285* | 100 | 2.0 | 65.55 | 3974.14 | 2.13 | 65.41 | 28418.49 | 2933.47 | 5571 | 45278 | -0.21% |
| 286* | 100 | 2.0 | 70.72 | 3981.04 | 1.20 | 70.52 | 6341.96 | 64.41 | 5672 | 42259 | -0.28% |
| 287* | 100 | 2.0 | 66.56 | 3944.69 | 1.73 | 66.22 | 14952.17 | 347.31 | 5708 | 48968 | -0.51% |
| 288* | 100 | 2.0 | 69.70 | 3953.05 | 1.98 | 69.54 | 28629.73 | 3017.56 | 5497 | 43777 | -0.24% |
| 289* | 100 | 2.0 | 68.43 | 3920.50 | 2.43 | 68.13 | 6601.79 | 59.77 | 5720 | 46249 | -0.44% |
| 290* | 100 | 2.0 | 68.10 | 3963.06 | 1.93 | 67.84 | 16156.65 | 302.46 | 5239 | 45187 | -0.38% |

Continued on the next page

Table 1: Result of SimExact x SimSA-VaR_{90%} (continued)

| Inst | n | δ | SimExact | | SimSA-VaR _{90%} | | | | | | GAP _{$b \times a$} |
|------|-----|----------|--------------------|---------|--------------------------|--------------------|----------|---------|----------|----------|--|
| | | | V-RPD ^a | T(s) | D-RPD | V-RPD ^b | SD | T(s) | ρ_S | ρ_L | |
| 291* | 100 | 2.0 | 69.26 | 3943.37 | 2.58 | 68.90 | 30202.21 | 4323.28 | 5645 | 44343 | -0.52% |
| 292* | 100 | 2.0 | 68.12 | 3931.38 | 1.77 | 67.87 | 6367.56 | 126.56 | 5586 | 46549 | -0.37% |
| 293* | 100 | 2.0 | 68.47 | 3928.42 | 2.18 | 68.27 | 15095.65 | 858.18 | 5380 | 46598 | -0.29% |
| 294* | 100 | 2.0 | 68.80 | 3946.25 | 2.30 | 68.57 | 29092.11 | 3883.76 | 5791 | 44957 | -0.33% |
| 295* | 100 | 2.0 | 68.05 | 3926.84 | 2.16 | 67.89 | 7064.94 | 42.93 | 5352 | 44629 | -0.23% |
| 296* | 100 | 2.0 | 69.11 | 3945.21 | 2.43 | 68.89 | 16651.29 | 224.70 | 5711 | 43171 | -0.31% |
| 297* | 100 | 2.0 | 66.22 | 3930.84 | 1.51 | 66.07 | 31525.44 | 2323.51 | 5487 | 44326 | -0.21% |
| 298* | 100 | 2.0 | 71.04 | 3955.18 | 2.19 | 70.80 | 6949.50 | 62.33 | 5370 | 48729 | -0.34% |
| 299* | 100 | 2.0 | 65.72 | 3932.68 | 1.48 | 65.59 | 15943.98 | 268.20 | 5583 | 44789 | -0.20% |
| 300* | 100 | 2.0 | 67.33 | 3921.59 | 1.91 | 67.00 | 30651.67 | 2458.66 | 5355 | 48410 | -0.49% |