Batch 1: Closed form solution: Call: 2.13337, Put: 5.84628

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Call | | NT | | |
| 100 | 500 | 1000 |
| NSIM | 1000 | 2.14877 | 2.17492 | 2.10416 |
| 10000 | 2.10932 | 2.12329 | 2.12827 |
| 100000 | 2.13295 | 2.14885 | 2.13874 |
| 1000000 | 2.13288 | 2.13429 | 2.13658 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Put | | NT | | |
| 100 | 500 | 1000 |
| NSIM | 1000 | 5.88702 | 6.13859 | 6.0248 |
| 10000 | 5.88443 | 5.94285 | 5.93043 |
| 100000 | 5.8726 | 5.83729 | 5.86757 |
| 1000000 | 5.85106 | 5.84333 | 5.83817 |

Batch 2: Closed form solution: Call: 7.96557, Put: 7.96557

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Call | | NT | | |
| 100 | 500 | 1000 |
| NSIM | 1000 | 7.99503 | 7.93263 | 7.68701 |
| 10000 | 7.88566 | 7.90847 | 7.90417 |
| 100000 | 7.96187 | 8.0094 | 7.9618 |
| 1000000 | 7.96603 | 7.96404 | 7.97794 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Put | | NT | | |
| 100 | 500 | 1000 |
| NSIM | 1000 | 8.04441 | 8.46301 | 8.15226 |
| 10000 | 8.02358 | 8.13933 | 8.09396 |
| 100000 | 8.01715 | 7.95242 | 7.99353 |
| 1000000 | 7.97643 | 7.9595 | 7.95289 |

Batch 4: Closed form solution: Call: 92.17570, Put: 1.24750

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Call | | NT | | |
| 100 | 500 | 1000 |
| NSIM | 1000 | 92.715 | 95.9689 | 87.3424 |
| 10000 | 87.7119 | 91.1309 | 90.5849 |
| 100000 | 90.1399 | 93.0212 | 92.3483 |
| 1000000 | 89.7998 | 91.9222 | 91.9457 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Put | | NT | | |
| 100 | 500 | 1000 |
| NSIM | 1000 | 1.3291 | 1.36193 | 1.27867 |
| 10000 | 1.31043 | 1.30124 | 1.28144 |
| 100000 | 1.29849 | 1.25552 | 1.25723 |
| 1000000 | 1.29253 | 1.25418 | 1.24882 |

(b) 100->500 NT generally improves accuracy, but 500->1000 does not. NT is generally enough at 500.

Increase in NSIM will generally improve accuracy, esp. < 100,000. To obtain high accuracy, we suggest NSIM>1,000,000 and NT>500.

(c) Similar comment about how NT affects the accuracy. For NSIM, we have to go at least 1,000,000 to achieve 2 d.p. accuracy (which is not even enough for the call).

To obtain high accuracy, we suggest NSIM>5,000,000 and NT>1,000.