|  |  | The Sample size ranges from 8 to 15. |  | The Sample size ranges from 16 to 35. |  | The Sample size ranges from 36 to 72. |  | The Sample size ranges from 73 to 100 and beyond. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | LEGEND: <br> The median approximation is represented by black crosses, Formula (4) is represented by blue boxes, and Formula (5) by red diamonds. |  |  |  |  | 0.09-1 |  | 0.11 0 |  |
|  | Median |  | 5.71 \% |  | 4.94 \% |  | 4.50 \% |  | 4.42 \% |
|  | Formula (4) |  | 4.05 \% |  | 5.92 \% |  | 8.00 \% |  | 9.99 \% |
|  | Formula (5) |  | 3.61 \% |  | 5.58 \% |  | 7.78 \% |  | 9.83 \% |
|  | Conclusion |  | mula (5) is within $4 \%$ of the ctual sample mean and is ming the best. Formula (4)is ost indistinguishable from mula (5), and the median is very close behind. |  | ee of these formulas a very close ale is within $6 \%$ ), but the median imation starts being better when sample size reaches about 22. |  | median continues to be the best mator, separating itself from the two formulas for the sample sizes in this range. |  | erages stabilize and remain fairly dy as the sample size increases. |
|  | LEGEND: <br> The Formula (12) is shown using black crosses, Formula (16) is represented by blue boxes; Range/4 by the green circles, and Range/6 by brown diamonds. | 0.1 |  | 0.0 |  | 0.45 |  | 0.5. ${ }^{0.5}$ |  |
| 눙 | Formula (12) |  | 11.62 \% |  | 15.83 \% |  | 24.24 \% |  | 32.35 \% |
| . | Formula (16) |  | 8.87 \% |  | 19.88 \% |  | 37.25 \% |  | 49.94 \% |
| 들 00 | Range/4 |  | 14.94 \% |  | 9.88 \% |  | 17.90 \% |  | 27.64 \% |
| 砋 $\exists$ 可 | Range/6 |  | 42.93 \% |  | 32.23 \% |  | 22.28 \% |  | 16.37 \% |
|  | Conclusion |  | mula (16) is the best estimator the standard deviation in this range of sample sizes. |  | Range/4 formula takes over as the best estimate for the variance |  | Range/4 formula is slowly losing vantage, and the Range/6 formula is closing in. |  | e Range/6 takes over the lead in uracy, and keeps it as the sample sizes increase. |

TABLE 2: Log-Normal Distribution with parameters $\mu=4$ and $\sigma=0.3$.

