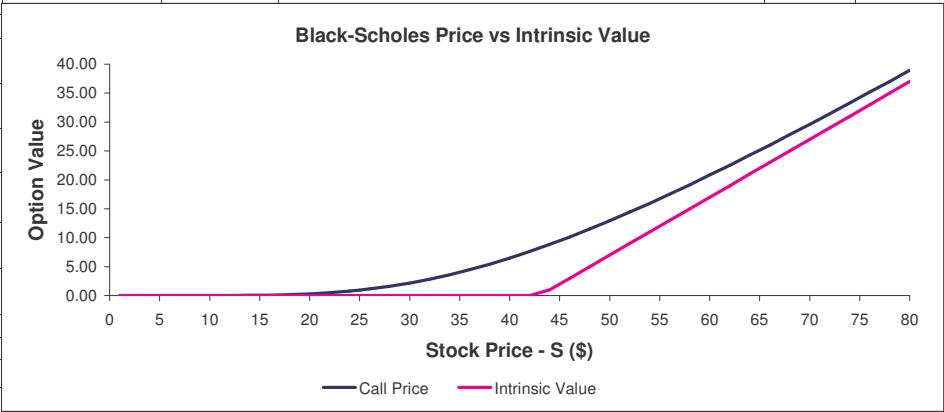


| | AB | C | D | E | F | G | H | I | J |
|----|----|---|--|------------|-----------------|---|---|---|---|
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | Black-Scholes Option-Pricing Model | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | Inputs | | | | | | | |
| 6 | | Option Type (graph): | Call | | | | | | |
| 7 | | Current Stock Price (S) | 50 | | | | | | |
| 8 | | Exercise or Strike Price (X) | 43.00 | | | | | | |
| 9 | | Risk Free Rate - Annual (k_{rf}) | 3.25% | | | | | | |
| 10 | | Time to Expiration - Yrs (T) | 0.7 | | | | | | |
| 11 | | Standard Deviation - Annual (sigma) | 55.00% | | | | | | |
| 12 | | | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | d_1 | 0.6073 | | | | | | |
| 15 | | d_2 | 0.1471 | | | | | | |
| 16 | | | | | | | | | |
| 17 | | | | | | | | | |
| 18 | | $N(d_1)$ | 0.7282 | | | | | | |
| 19 | | $N(d_2)$ | 0.5585 | | | | | | |
| 20 | | | | | | | | | |
| 21 | | | | | | | | | |
| 22 | | Call Price | \$ 12.934 | | | | | | |
| 23 | | Put Price | \$ 4.967 | | | | | | |
| 24 | | | | | | | | | |
| 25 | | | | | | | | | |
| 26 | | | call price = $C = S [N(d_1)] - (X / e^{rt}) [N(d_2)]$ | | | | | | |
| 27 | | | | | | | | | |
| 28 | | | $d_1 = [\ln (S/ X) + (k_{rf} + .5 \text{ var }) t] / [\text{stdev } x t^{1/2}]$ | | | | | | |
| 29 | | | | | | | | | |
| 30 | | | $d_2 = d_1 - \text{stdev } x t^{1/2}$ | | | | | | |
| 31 | | | | | | | | | |
| 32 | | | put price = $P = x / e^{rt} - S + C$ | | | | | | |
| 33 | | | | | | | | | |
| 34 | | | | | | | | | |
| 35 | | | Stock Price | Call Price | Intrinsic Value | | | | |
| 36 | | | | 12.93 | | | | | |
| 37 | | | 1 | 0.00 | 0 | | | | |
| 38 | | | 5 | 0.00 | 0 | | | | |
| 39 | | | 10 | 0.00 | 0 | | | | |
| 40 | | | 12 | 0.01 | 0 | | | | |
| 41 | | | 14 | 0.03 | 0 | | | | |
| 42 | | | 16 | 0.08 | 0 | | | | |
| 43 | | | 18 | 0.16 | 0 | | | | |
| 44 | | | 20 | 0.29 | 0 | | | | |
| 45 | | | 22 | 0.50 | 0 | | | | |
| 46 | | | 24 | 0.78 | 0 | | | | |
| 47 | | | 25 | 0.95 | 0 | | | | |
| 48 | | | 26 | 1.15 | 0 | | | | |
| 49 | | | 28 | 1.61 | 0 | | | | |
| 50 | | | 30 | 2.17 | 0 | | | | |
| 51 | | | 32 | 2.84 | 0 | | | | |
| 52 | | | 34 | 3.61 | 0 | | | | |
| 53 | | | 36 | 4.47 | 0 | | | | |
| 54 | | | 38 | 5.44 | 0 | | | | |
| 55 | | | 40 | 6.49 | 0 | | | | |
| 56 | | | 42 | 7.63 | 0 | | | | |
| 57 | | | 44 | 8.85 | 1 | | | | |
| 58 | | | 46 | 10.14 | 3 | | | | |
| 59 | | | 48 | 11.51 | 5 | | | | |
| 60 | | | 50 | 12.93 | 7 | | | | |
| 61 | | | 52 | 14.42 | 9 | | | | |
| 62 | | | 54 | 15.95 | 11 | | | | |
| 63 | | | 56 | 17.54 | 13 | | | | |
| 64 | | | 58 | 19.17 | 15 | | | | |
| 65 | | | 60 | 20.83 | 17 | | | | |
| 66 | | | 62 | 22.53 | 19 | | | | |
| 67 | | | 64 | 24.27 | 21 | | | | |
| 68 | | | 66 | 26.03 | 23 | | | | |
| 69 | | | 68 | 27.81 | 25 | | | | |
| 70 | | | 70 | 29.62 | 27 | | | | |
| 71 | | | 72 | 31.45 | 29 | | | | |
| 72 | | | 74 | 33.30 | 31 | | | | |
| 73 | | | 76 | 35.16 | 33 | | | | |
| 74 | | | 78 | 37.04 | 35 | | | | |
| 75 | | | 80 | 38.93 | 37 | | | | |



| Hedge Ratios | |
|--------------|--------|
| Short Calls | 1.37 |
| Long Puts | 3.68 |
| Delta | 0.7282 |

To hedge, short calls or long delta shares of stock
 To hedge, long puts or long (delta-1) shares of stock
 Rate of change of option price with respect to the stock price