

| | | |
|----------------------------------|---------------------|----------|
| Time Frame: | 4/1/99 | 12/31/99 |
| Time Series: | DAILY | |
| Exchanges: | NASDAQ | |
| Stocks: | ALL optionable with | |
| Total Number of Stocks Analysed: | 831 | |
| Total Number of Occurrences: | 33275 | |

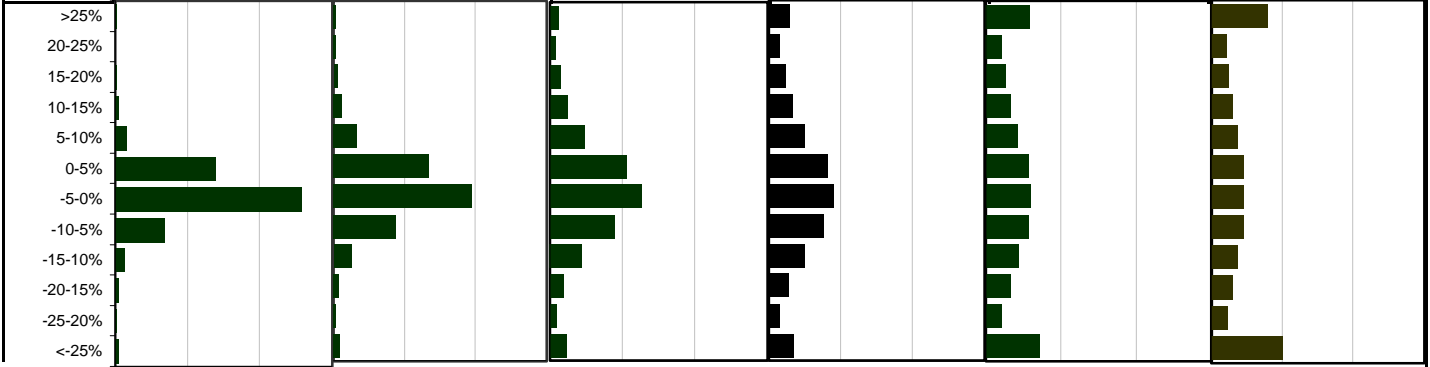
Bearish Technical Indicator: Stochastic Oscillator

Requirements:

| | | |
|------------|---|---------|
| %K | 5 | Periods |
| %K slowing | 3 | Periods |
| %D | 3 | Periods |

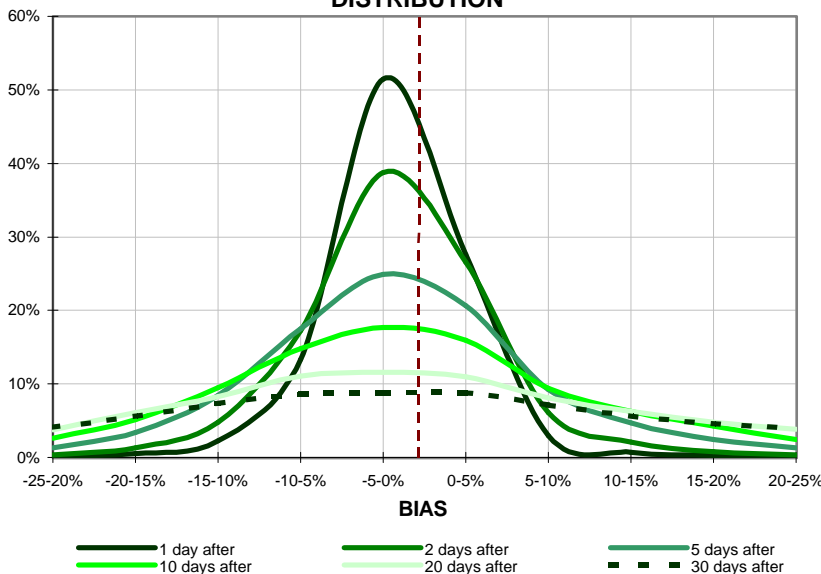
ACTUAL STOCK PRICES BIAS (1-30 DAYS AFTER)

| Breakdown | 1 day after | 2 days after | 5 days after | 10 days after | 20 days after | 30 days after |
|-----------|-------------|--------------|--------------|---------------|---------------|---------------|
| <-25% | 0.7% | 1.4% | 4.2% | 6.6% | 13.9% | 19.9% |
| -25-20% | 0.2% | 0.4% | 1.3% | 2.6% | 3.8% | 4.1% |
| -20-15% | 0.5% | 1.3% | 3.4% | 5.1% | 6.1% | 5.6% |
| -15-10% | 2.2% | 4.8% | 8.4% | 9.5% | 8.3% | 7.3% |
| -10-5% | 13.4% | 17.2% | 17.5% | 14.8% | 11.0% | 8.6% |
| -5-0% | 51.5% | 38.7% | 24.9% | 17.7% | 11.6% | 8.7% |
| 0-5% | 27.6% | 26.6% | 20.6% | 15.9% | 10.9% | 8.8% |
| 5-10% | 2.9% | 6.1% | 9.2% | 9.4% | 8.1% | 7.1% |
| 10-15% | 0.7% | 2.1% | 4.7% | 6.3% | 6.3% | 5.7% |
| 15-20% | 0.2% | 0.8% | 2.5% | 4.2% | 4.8% | 4.6% |
| 20-25% | 0.1% | 0.3% | 1.3% | 2.5% | 3.9% | 3.9% |
| >25% | 0.1% | 0.4% | 2.0% | 5.4% | 11.4% | 15.7% |



| Accumulated | 1 day after | 2 days after | 5 days after | 10 days after | 20 days after | 30 days after |
|-------------|-------------|--------------|--------------|---------------|---------------|---------------|
| <-25% | 0.7% | 1.4% | 4.2% | 6.6% | 13.9% | 19.9% |
| <-20% | 0.8% | 1.8% | 5.5% | 9.2% | 17.7% | 23.9% |
| <-15% | 1.3% | 3.1% | 8.9% | 14.3% | 23.8% | 29.6% |
| <-10% | 3.6% | 7.8% | 17.3% | 23.8% | 32.1% | 36.9% |
| <-5% | 16.9% | 25.1% | 34.8% | 38.5% | 43.1% | 45.5% |
| <0% | 68.4% | 63.8% | 59.7% | 56.2% | 54.7% | 54.2% |
| <5% | 96.0% | 90.4% | 80.4% | 72.2% | 65.6% | 63.0% |
| <10% | 98.9% | 96.5% | 89.5% | 81.6% | 73.7% | 70.1% |
| <15% | 99.6% | 98.5% | 94.2% | 87.9% | 80.0% | 75.7% |
| <20% | 99.8% | 99.3% | 96.7% | 92.1% | 84.8% | 80.4% |
| <25% | 99.9% | 99.6% | 98.0% | 94.6% | 88.6% | 84.3% |
| Accum | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

DISTRIBUTION



Findings:

1. Significant downward bias is obvious.
2. Bias is most likely to take place soon after the occurrence. Over time, the bias goes down and dispersion increases.
3. Since the probability of more than 10% price increase during the next five days is only 10%, it appears reasonable to buy in-the-money put. Probability of price decrease during the considered period is 60%.