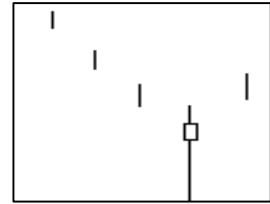


Time Frame:	1/9/99	12/31/99
Time Series:	DAILY	
Exchanges:	NASDAQ, NYSE, AMEX	
Stocks:	ALL	optionable
Number of Stocks Analyzed:	2215	
Total Number of Occurrences:	55715	

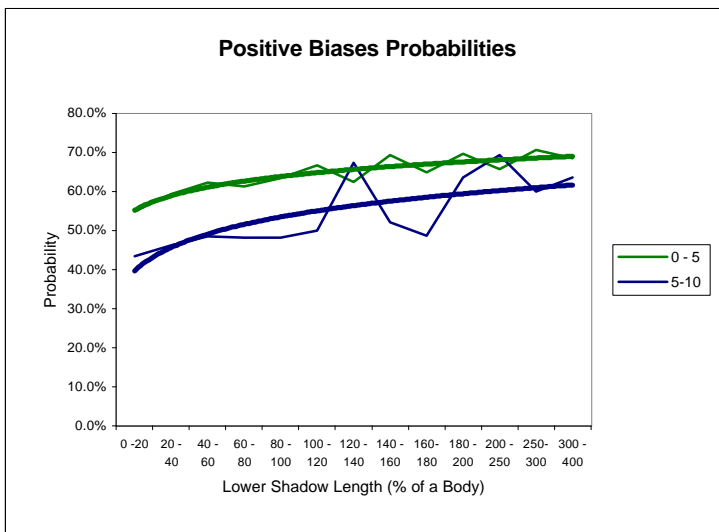
Candlestick Bullish Reversal Pattern: HAMMER



HOW DOES THE PROBABILITY OF TURNING UP DEPEND ON SHADOW LENGTHS?
(five days after occurrences)

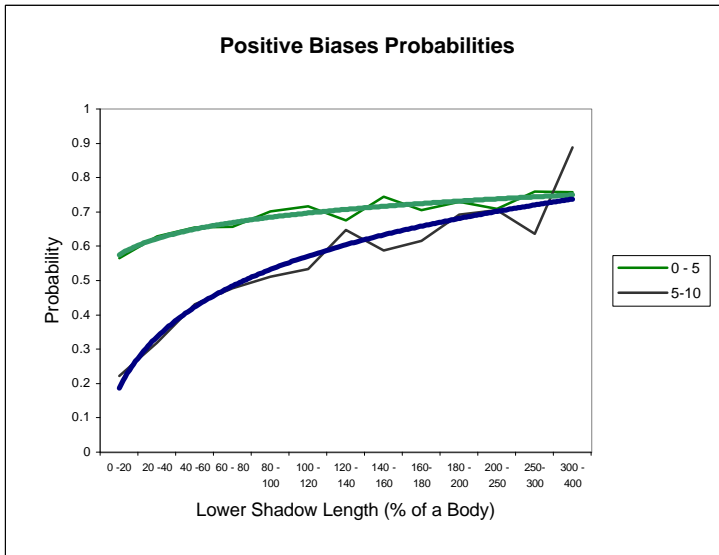
1. PROBABILITIES FOR ALL STOCKS CONSIDERED

Lower Shadow	Upper Shadow Length (% of Body)			
	0 - 5	5-10	10-15	15-20
0 -20	54.9%	43.5%	45.3%	39.4%
20 -40	59.3%	46.2%	44.6%	42.1%
40 -60	62.2%	48.5%	43.9%	43.7%
60 - 80	61.3%	48.1%	46.3%	39.9%
80 - 100	63.5%	48.2%	48.4%	39.8%
100 -120	66.7%	50.0%	52.1%	41.9%
120 - 140	62.5%	67.4%	50.0%	50.0%
140 - 160	69.3%	52.1%	52.5%	54.9%
160-180	64.8%	48.7%	47.9%	45.0%
180 - 200	69.6%	63.6%	47.2%	44.6%
200 - 250	65.7%	69.4%	59.0%	42.5%
250- 300	70.6%	60.0%	60.7%	47.7%
300 - 400	68.5%	63.6%	30.4%	40.9%



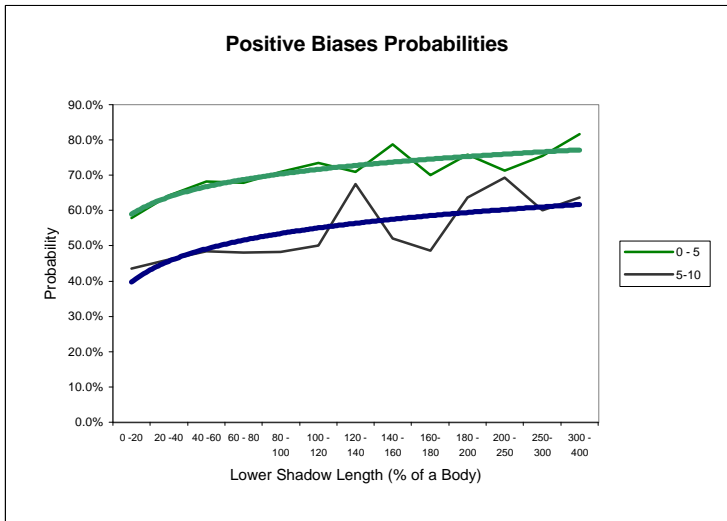
2. PROBABILITIES FOR STOCKS WHOSE PRICES DIDN'T GROW LAST FIVE DAYS BEFORE OCCURENCES

Lower Shadow	Upper Shadow Length (% of Body)			
	0 - 5	5-10	10-15	15-20
0 -20	56.6%	27.4%	34.3%	40.0%
20 -40	63.0%	35.9%	33.3%	32.4%
40 -60	65.5%	43.7%	32.8%	30.6%
60 - 80	65.7%	47.1%	32.4%	29.3%
80 - 100	70.2%	49.2%	43.5%	27.2%
100 -120	71.7%	50.8%	46.5%	39.7%
120 - 140	67.5%	63.6%	52.6%	44.9%
140 - 160	74.4%	59.1%	51.4%	52.8%
160-180	70.6%	52.4%	55.6%	45.2%
180 - 200	72.9%	62.5%	46.7%	41.7%
200 - 250	71.0%	72.7%	55.0%	30.3%
250- 300	75.9%	53.8%	50.0%	50.0%
300 - 400	75.8%	80.0%	30.0%	46.2%



3. PROBABILITIES FOR THE STOCKS WHICH WERE AT OCCURENCES 3% LOWER THAN FIVE DAYS BEFORE

Lower Shadow	Upper Shadow Length (% of Body)			
	0 - 5	5-10	10-15	15-20
0 -20	57.9%	22.2%	36.9%	50.0%
20 -40	64.2%	31.8%	30.5%	26.1%
40 -60	68.3%	43.0%	28.4%	30.5%
60 - 80	67.9%	47.8%	32.3%	26.9%
80 - 100	70.9%	51.1%	34.1%	28.7%
100 -120	73.5%	53.3%	50.0%	34.8%
120 - 140	71.0%	64.7%	58.3%	41.4%
140 - 160	78.7%	58.8%	46.2%	54.5%
160-180	70.0%	61.5%	56.5%	47.6%
180 - 200	75.9%	69.2%	56.5%	43.8%
200 - 250	71.3%	70.6%	53.8%	26.3%
250- 300	75.4%	63.6%	40.0%	50.0%
300 - 400	81.6%	88.9%	25.0%	45.5%



Conclusions:

1. Lower shadow length is really critical. Hammer patterns with short lower shadows do not indicate sufficient upward biases.
2. Upper shadow length should not exceed 10%.
3. Stocks that declined five days before occurrences have more chances to turn up.