



Presents...

# The Truth Behind Commonly Used Indicators

## ABOUT THE AUTHOR

Cristina Ciurea is a Mathematician and Accountant by profession. She completed her degree in Mathematics at the University "Alexandru Ioan Cuza" in 1990 in Iasi, Romania, and her degree in Accounting at the Chamber of Commerce in 1994. She also earned a Masters degree in Audit of Banking and Financial Institutions in the Academy of Economic Studies-Bucharest in 2006.

As soon as she received her license in Mathematics, Cristina worked as a Math teacher from 1990 to 1994. She then founded her first company in 1994.

Since then, she has 14 years of managerial experience and has also served as a consultant for companies regarding fiscal and financial issues.

Cristina has been a Forex trader for several years. One of her greatest achievements in the field of Forex trading is winning the prestigious Surefire Trading Challenge, the largest independent Forex trading competition in the world, in 2011.

Cristina now spends most of her day watching the charts, monitoring economic news, trading, sharing her knowledge of the Forex market on the web, and providing private trading lessons to a select few.

On February 28<sup>th</sup>, Cristina plans to unveil something that she says will help more people to understand how to use her scientific approach to trading and which will do more to improve the odds of success to their favour, than anything she has ever shared.

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# INTRODUCTION

Hi there, I want to share something with you that most traders never mention because they just don't know it themselves – trading Forex doesn't need to be hard.

In this report, I want to demonstrate that by giving you a glimpse into how I approach trading.

I believe that if you just apply a little common sense and basic science, you can radically change your trading forever. Soon, I will be making an announcement that the thousands who have allowed me the privilege of helping them to become better traders, have been anxiously awaiting.

Often times, I am asked what the best settings are for certain indicators. I'm sure you ask the same question too. If you search the web, you'd find a lot of answers that might seem quite confusing. Instead of believing what others online say, I have conducted a series of tests to see if the settings will really work.

I compared the effectiveness of the default settings, as well as the other settings commonly used by traders, or those that are suggested on the web. In this process, we will answer the following questions...

1. What is the best setting for the Moving Average?
  - a. Is the exponential moving average (EMA) really better than the simple moving average?
  - b. Are there specific settings that are best for specific timeframes?
2. What is the best setting for the Stochastic Oscillator?
  - a. Are there specific settings that are best for specific timeframes?
3. What are the best parameters for the Relative Strength Index?
  - a. What are the best levels for overbought and oversold conditions?
  - b. What if you trade the 50 level crossovers?

4. What candlestick reversal pattern gives the best reversal signal?

Do these questions sound familiar to you? 😊

Like a machine, a trading system or method must first start with effective parts in order for the whole to function the way it is intended to. That's why it's important to take a closer look at the indicators and settings to find which ones perform the best.

## METHODOLOGY

In order to see if the settings really worked from a scientific point of view, I back-tested the indicators with different settings on a couple of currency pairs and across a variety of timeframes.

To ensure enough trades are entered for reliable results, I ran all back-tests through 4 years of historical data (January 2008 to December 2011). Using similar entry, stop loss and take profit rules for each test, I started out with a \$10,000 account and set each trade to be entered at 0.1 lot to allow enough equity for the trades. The spread for EURUSD and GBPUSD is 2 pips.

The rules of the tests are simple.

1. Enter at the close of the candle right after the signal appeared. The signal depends on the indicator or candlestick reversal pattern that is used.
2. Set the stop loss 3 pips above the highest high of the past three candles.
3. Set the take profit twice the value of the stop loss.

The answers to the questions listed in the previous page will be based on some vital data from the results of the backtests. Here's what we are looking for:

1. Total net profit - Of course, the best measure of performance is the total profit you get from the trades entered. What good is an indicator if it does not help you earn a profit?
2. Percentage of Profit Trades - This indicates the percentage of winning trades from the total number of trades entered. The higher the percentage, the more winners and the better is the performance.
3. Drawdown - It is the difference from highest and lowest balance of the account, in percentage. The lower the drawdown, the more stable are the gains and the better is the performance.

Keeping all the variables except for the settings constant, I am assured that the variations in the results are caused by the variations in settings.

# MOVING AVERAGES

Moving Averages, especially the Simple Moving Average (SMA) and the Exponential Moving Average (EMA), are probably some of the most commonly used indicators. They are all over the internet, and I've also encountered some good systems that use them, so why not put them to the test.



## I. Signal/Entry Trigger

If the price crosses and closes above the moving average, enter a buy trade. And if the price crosses and closes below the moving average, enter a sell trade. The stop loss and take profit are applied following the rules indicated under methodology.

## II. Settings

I tested the following period settings for both simple and exponential moving average: 5, 10, 20, 50, 100, 150, and 200.

### III. Simple Moving Average (SMA) Findings

#### A. Net Profit

- overall highest value with reliable number of trades
- highest positive net profit per period
- positive - net profit more than 1,000 but not the highest
- negligible - net profit less than 1,000
- negative (less than 0) net profit

EURUSD Total Net Profit In USD From Long & Short Positions							
TIMEFRAME	SMA SETTINGS (Period)						
	5	10	20	50	100	150	200
5 Min	-19962.34	-19097.94	-14636.34	-11422.80	-10405.46	-7015.38	-4521.74
15 Min	-9078.31	-5841.00	-5786.77	-3461.00	-1040.88	570.34	2193.40
30 Min	-7929.38	-11635.22	-1904.04	-1747.68	1363.64	1870.04	1587.44
1 Hour	-2540.66	-245.54	-2455.18	-77.82	1599.68	-752.26	-1550.24
4 Hours	1822.00	868.60	2646.00	1283.84	2986.48	-497.96	-26.56
Daily	1287.56	-166.68	-333.72	1216.00	-161.80	-265.80	211.68

GBPUSD Total Net Profit In USD From Long & Short Positions							
TIMEFRAME	SMA SETTINGS (Period)						
	5	10	20	50	100	150	200
5 Min	-19762.57	-19729.05	-13927.74	-17079.80	-13276.66	-7911.60	-8401.20
15 Min	-17785.12	-9816.99	-8087.31	-6369.18	-909.16	-38.00	92.92
30 Min	-15050.59	-3267.86	-2872.27	206.97	-1807.89	-3761.32	-778.76
1 Hour	-729.57	393.53	-687.98	2248.29	1216.38	811.46	749.86
4 Hours	-1659.95	-615.56	-240.86	-607.11	5508.20	4352.42	2579.44
Daily	-1913.14	-359.48	-1857.38	-1002.98	-1102.44	-100.36	-1203.24

#### B. Profit Trades (% Profitable Trades From Total Number Of Trades)

- overall highest value with reliable number of trades
- highest profit trades per period
- profit trades more than 30% but not the highest
- less than 30%

EURUSD Percentage of Profit Trades (% of total) From Long & Short Positions							
TIMEFRAME	SMA SETTINGS (Periods)						
	5	10	20	50	100	150	200
5 Min	30.17%	30.44%	30.68%	30.36%	30.15%	30.41%	31.00%
15 Min	31.56%	31.54%	31.21%	31.22%	32.14%	33.48%	34.53%
30 Min	31.19%	30.74%	31.26%	32.11%	33.78%	33.76%	34.76%
1 Hour	32.09%	32.43%	31.49%	33.21%	34.27%	31.43%	31.38%
4 Hours	34.05%	33.73%	36.56%	35.50%	42.16%	31.84%	32.99%
Daily	35.67%	32.57%	31.64%	47.37%	31.48%	27.38%	45.00%

GBPUSD Percentage of Profit Trades (% of total) From Long & Short Positions							
TIMEFRAME	SMA SETTINGS (Periods)						
	5	10	20	50	100	150	200
5 Min	28.82%	30.65%	30.76%	29.46%	29.24%	30.13%	29.77%
15 Min	30.42%	31.33%	31.12%	30.58%	32.29%	32.69%	32.62%
30 Min	30.48%	32.26%	32.19%	32.64%	31.83%	30.96%	32.43%
1 Hour	31.00%	31.60%	31.83%	31.79%	33.44%	33.90%	32.55%
4 Hours	32.76%	32.93%	33.12%	32.03%	37.12%	35.12%	31.00%
Daily	29.89%	32.35%	23.79%	23.79%	23.76%	31.25%	12.63%

### C. Best Results

The 100 SMA applied in the 4 hour timeframe gave the best results in terms of total net profit and percentage of profitable trades in both EURUSD and GBPUSD. It is also showed favourable results on the 30 minute and 1 hour timeframes. However, many of the settings also have better results on the 4 hour chart.

#### 1. EURUSD: 100 SMA, 4 Hour

Using the 100 SMA in the EURUSD resulted in a net profit of \$2,986.48 or 29.86% gain in the account after 4 years of trading. A total of 216 trades were entered, 42.16% of which were profitable. The 50 SMA on the daily timeframe showed a higher percentage of profitable trades at 47.37%, but the net profit was negative and there were only 58 trades entered in a span of 4 years.

#### 2. GBPUSD: 100 SMA, 4 Hour

On the GBPUSD, trading with the 100 SMA on the 4 Hour timeframe resulted in \$5,508.20 or 55.08% gain. 37.12% of the total 269 trades were profitable.

Using any of the SMAs as the only trade signals on the 5 minute chart depleted the \$10,000 account. The shorter the timeframe and period setting for the SMA the worse is the result.

These results may seem unexciting but if you understand money management and combine the right indicators, you can have SPECTACULAR results.

## IV. Exponential Moving Average (EMA) Findings

### A. Net Profit

<span style="color: cyan;">■</span>	overall highest value with reliable number of trades
<span style="color: lightgreen;">■</span>	highest positive net profit per period
<span style="color: yellow;">■</span>	positive - net profit more than 1,000 but not the highest
<span style="color: orange;">■</span>	negligible - net profit less than 1,000
<span style="color: red;">■</span>	negative (less than 0) net profit

EURUSD Total Net Profit In USD From Long & Short Positions							
TIMEFRAME	EMA SETTINGS (Period)						
	5	10	20	50	100	150	200
5 Min	-19970.22	-18052.47	-16019.44	-12024.85	-8818.52	-6475.56	-5637.81
15 Min	-8950.08	-8572.00	-7141.23	-2989.37	-310.06	2306.70	-210.15
30 Min	-7882.17	-2492.57	-3147.93	-677.66	502.00	717.95	3001.40
1 Hour	-4839.38	-2881.09	-2667.82	-346.24	1619.38	1507.58	2366.07
4 Hours	2933.00	2520.95	2253.00	2885.60	1596.52	562.73	365.20
Daily	123.00	-6.95	-694.12	791.48	-706.36	-54.01	-107.34

GBPUSD Total Net Profit From Long & Short Positions							
TIMEFRAME	EMA SETTINGS (Periods)						
	5	10	20	50	100	150	200
5 Min	-19714.24	-19701.68	-16377.12	-16688.12	-12417.63	-9308.92	-7240.36
15 Min	-11140.62	-9623.74	-10395.00	-6686.54	-2230.30	-1804.08	1464.86
30 Min	-10784.74	-5987.84	-8759.24	-2485.00	391.67	-1104.16	-696.20
1 Hour	-7150.60	-5847.46	-4429.76	-839.20	212.09	-626.44	1553.24
4 Hours	-4242.72	-1944.64	-1144.96	707.52	861.58	-406.14	-1934.58
Daily	-2399.24	-1359.24	-2256.48	-1203.24	247.86	-429.49	-852.92

### B. Profit Trades (% Profitable Trades From Total Number Of Trades)

<span style="color: cyan;">■</span>	overall highest value with reliable number of trades
<span style="color: lightgreen;">■</span>	highest profit trades per period
<span style="color: yellow;">■</span>	profit trades more than 30% but not the highest
<span style="color: red;">■</span>	less than 30%

EURUSD Percentage of Profit Trades (% of total) From Long & Short Positions							
TIMEFRAME	EMA SETTINGS (Periods)						
	5	10	20	50	100	150	200
5 Min	30.22%	30.67%	30.59%	30.38%	30.37%	30.85%	30.91%
15 Min	31.66%	31.02%	31.03%	31.70%	32.92%	33.75%	33.18%
30 Min	31.35%	31.75%	31.11%	31.92%	33.83%	33.33%	35.66%
1 Hour	31.46%	31.86%	31.97%	32.95%	34.78%	34.91%	36.18%
4 Hours	34.55%	35.01%	35.29%	38.05%	38.65%	35.17%	34.66%
Daily	33.52%	33.33%	29.93%	40.28%	24.42%	32.35%	31.37%

GBPUSD Percentage of Profit Trades (% of total) From Long & Short Positions							
TIMEFRAME	EMA SETTINGS (Periods)						
	5	10	20	50	100	150	200
5 Min	31.32%	30.75%	30.52%	29.53%	29.71%	30.02%	30.21%
15 Min	31.55%	31.32%	30.59%	30.76%	31.70%	31.71%	33.58%
30 Min	31.38%	31.61%	30.98%	32.11%	33.23%	32.42%	33.43%
1 Hour	31.68%	31.34%	31.36%	32.87%	33.44%	33.05%	35.27%
4 Hours	31.79%	31.95%	32.21%	34.50%	35.50%	29.90%	27.93%
Daily	29.85%	29.75%	24.08%	24.75%	36.11%	28.14%	23.96%

### C. Best Results

#### 1. EURUSD: 200 EMA, 30 Min

Among the EMAs, the 200 period EMA gave the best results followed by 150 EMA and 100 EMA. The 4 Hour remained to be the best timeframe to use for any EMA on the EURUSD. The 200 EMA made the highest net gain with \$3001.40 or 30.01%. On the 30 minute timeframe, it made a total of 928 trades; 35.66% of these trades were profitable.

The highest percentage of profitable trades was made by the 50 EMA on the daily chart with 40.28% of the total 72 trades, but a more reliable result was made by the 100 EMA with 38.65% of 321 trades in the 4 hour timeframe.

#### 2. GBPUSD: 100 SMA, 4 Hour

On the GBPUSD, trading with the 200 EMA on the 1 Hour timeframe resulted in \$1553.24 or 55.08% gain, and 37.12% of the total 269 trades were profitable.

The 100 EMA showed to be the most stable setting as it produced positive results in 4 out of 6 timeframes that were tested (30 Minute to Daily timeframes).

The highest percentage of profit trades was made on the daily chart. The 100 EMA made 36.11% profit trades out of 49 trades. Still, the 100 EMA on the 4 Hour timeframe provides a more reliable result because of the number of trades entered: 38.65% of 199 trades were profitable.

Just like the SMAs, the EMA signals on the 5 minute chart depleted the accounts. The shorter the timeframe and period settings, the worse are the results of the trades.

## V. SMA versus EMA

The results of the Exponential Moving Average were definitely much higher than the results of the Simple Moving Average on the 4 Hour timeframe, especially on the EURUSD wherein all EMAs tested produced positive results. The EMAs also provide a wider range of settings that can be used in more timeframes.

Here's a list of the settings that produced positive results (total net profit) in the different timeframes on the EURUSD:

Timeframe	SMA	EMA
5 Min	none	none
15 Min	150 and 200	150
30 Min	100, 150, 200	100, 150, 200
1 Hour	100	100, 150, 200
4 Hours	5, 10, 20, 50, 100	5, 10, 20, 50, 100, 150, 200
Daily	5, 50, 200	5, 50

However, the results on the GBPUSD are quite different. In the table below, more SMAs used gave positive net profit on the 1 Hour chart.

Timeframe	SMA	EMA
5 Min	none	none
15 Min	200	200
30 Min	50	100
1 Hour	10, 50, 100, 150, 200	100, 200
4 Hours	100, 150, 200	50, 100
Daily	none	100

One of the things that surprise people is that even if an indicator proved to be a loser after the test, it could still be made very profitable if you apply a little science.

# STOCHASTIC OSCILLATOR

The Stochastic Oscillator is a momentum indicator that compares a currency pair's closing price to the price range over a given time period.



## I. Signal/Entry Trigger

Buy Trades: Once the Stochastic Oscillator is oversold, buy if price crosses and closes above the oversold level.

Sell Trades: Once the Stochastic Oscillator is overbought, sell if price crosses and closes below the oversold level.

## II. Settings

I tested the following settings of the Stochastic Oscillator on the 5 Minute to Daily timeframes:

5, 3, 3, 80%, 20%

14, 3, 5, 80%, 20%

8, 3, 5, 80%, 20%

15, 5, 7, 80%, 20%

10, 5, 5, 80%, 20%

### III. Findings

#### A. Net Profit

- overall highest value with reliable number of trades
- highest positive net profit per setting
- positive - net profit more than 200 but not the highest
- negligible - net profit less than 200
- negative (less than 0) net profit

EURUSD Total Net Profit From Long & Short Positions					
TIMEFRAME	STOCHASTIC OSCILLATOR SETTINGS				
	5,3,3,80-20	8,3,5,80-20	10,5,5,80-20	14,3,5,80-20	15,5,7,80-20
5 Min	-6756.97	-8074.66	-9037.67	-8152.91	-8130.92
15 Min	-4120.45	-2704.09	-2266.89	-342.34	-1587.05
30 Min	-2842.10	-2785.18	-3310.89	-2599.67	-7004.70
1 Hour	-3322.04	-3834.29	-1840.14	-3779.72	-1750.97
4 Hours	-886.75	-1292.05	-851.14	-60.97	-1777.39
Daily	-834.06	-819.83	-1012.54	-352.37	-554.40

GBPUSD Total Net Profit From Long & Short Positions					
TIMEFRAME	STOCHASTIC OSCILLATOR SETTINGS				
	5,3,3,80-20	8,3,5,80-20	10,5,5,80-20	14,3,5,80-20	15,5,7,80-20
5 Min	-8913.80	-6592.72	-1608.80	-7691.20	-5767.44
15 Min	-400.88	-4716.18	-2305.00	-1694.48	-899.96
30 Min	-26.18	-2312.28	-1518.72	-5221.74	-3861.64
1 Hour	-1152.52	-1271.40	-1482.24	-920.40	517.00
4 Hours	-439.96	198.76	180.94	570.80	-2089.28
Daily	-22.44	409.92	-215.08	-329.68	-659.44

## B. Profit Trades (% Profitable Trades From Total Number Of Trades)

<span style="color: cyan;">■</span>	overall highest value with reliable number of trades
<span style="color: lightgreen;">■</span>	highest profit trades per setting
<span style="color: yellow;">■</span>	profit trades more than 30% but not the highest
<span style="color: red;">■</span>	less than 30%

EURUSD Percentage of Profit Trades (% of total) From Short Positions					
TIMEFRAME	STOCHASTIC OSCILLATOR SETTINGS				
	5,3,3,80-20	8,3,5,80-20	10,5,5,80-20	14,3,5,80-20	15,5,7,80-20
5 Min	32.34%	32.13%	31.52%	32.05%	31.36%
15 Min	32.23%	32.45%	32.21%	33.47%	32.63%
30 Min	32.28%	31.40%	30.30%	31.92%	28.70%
1 Hour	30.20%	29.89%	31.11%	30.26%	30.59%
4 Hours	30.86%	30.90%	31.67%	33.68%	29.10%
Daily	28.06%	27.55%	27.65%	30.90%	28.22%

GBPUSD Percentage of Profit Trades (% of total) From Short Positions					
TIMEFRAME	STOCHASTIC OSCILLATOR SETTINGS				
	5,3,3,80-20	8,3,5,80-20	10,5,5,80-20	14,3,5,80-20	15,5,7,80-20
5 Min	32.21%	32.54%	33.38%	32.53%	32.16%
15 Min	33.38%	32.12%	32.84%	28.18%	32.58%
30 Min	33.65%	31.91%	32.75%	31.41%	30.72%
1 Hour	32.73%	32.28%	31.61%	31.74%	33.51%
4 Hours	32.31%	34.04%	34.45%	34.56%	28.85%
Daily	34.06%	35.99%	31.39%	30.31%	27.48%

## C. Best Results

### 1. EURUSD: 14,3,5, levels 80%, 20%, 4 Hours

All the tests made in the EURUSD using the different settings of the Stochastic Oscillator resulted in a loss. The least amount of loss was -\$60.97, using 14,3,5, and the levels 80% and 20% on the 4 Hour chart. Of the total 464 trades placed, 33.68% were profit trades.

However, it does not mean that just because the indicator is not profitable on individual tests, it cannot be used. Based on the percentage of profit trades, it made some winning

trades too. To make it profitable, you can employ complimentary indicators or techniques to filter out the bad signals.

## 2. GBPUSD: 14,3,5,80-20, 4 Hour

The tests using the same settings (14,3,5, 80% and 20%) on the 4 Hour chart revealed better results on the GBPUSD. It made 492 trades with 34.56% profit trades and \$570.80 profit.

On the 1 Hour chart, the settings 15,5,7, made the most profit with 33.51% profit trades out of exactly 1000 trades. And on the daily chart, 8,3,5, work best with 35.99% profit trades from the total 108 trades it made.

All settings of the Stochastic Oscillator tested on the 5 minute timeframe gave the worst results.

## RELATIVE STRENGTH INDEX (RSI)

The Relative Strength Index (RSI) is a technical indicator that measures the speed and change of price movement by comparing a security's gains to its losses and plotting that on a 0 to 100 scale.

In the example to the right, the RSI 14 is used with the levels 70 and 30.



### I. Entry trigger

Buy Trades: Once the RSI is oversold, buy if price crosses and closes above the oversold level.

Sell Trades: Once the RSI is overbought, sell if price crosses and closes below the oversold level.

### II. Settings Tested

14, 70%, 30%	18, 70%, 30%
14, 80%, 20%	18, 50%
14, 60%, 40%	10, 70%, 30%
14, 50%	10, 50%

### III. Findings

#### A. Net Profit

- overall highest value with reliable number of trades
- highest positive net profit per setting
- positive - net profit more than 200 but not the highest
- negligible - net profit less than 200
- negative (less than 0) net profit

EURUSD Total Net Profit in USD From Long & Short Positions								
TIMEFRAME	RSI SETTINGS (Period, Levels)							
	14,70-30	14,80-20	14, 60-40	14,50	18,70-30	18,50	10,70-30	10,50
5 Min	-3383.45	-3667.02	-3383.45	-3553.15	-2260.12	-1918.70	-5061.81	-5061.81
15 Min	-1824.70	-1796.85	-1858.85	-1886.70	-3026.63	-2902.33	-1669.84	-1478.74
30 Min	-2244.94	-2480.84	-2264.74	-2187.64	-2796.60	-2771.20	-941.94	-1024.81
1 Hour	-922.52	-976.37	-945.52	-945.52	-671.11	-594.41	-250.37	-194.02
4 Hours	-909.93	-913.08	-914.08	-913.08	-1179.13	-1178.13	-1244.41	-1244.41
Daily	-451.74	-451.74	-451.74	-451.47	-27.59	-27.59	-279.81	-280.81

GBPUSD Total Net Profit in USD From Long & Short Positions								
TIMEFRAME	RSI SETTINGS (Period, Levels)							
	14,70-30	14,80-20	14, 60-40	14,50	18,70-30	18,50	10,70-30	10,50
5 Min	-4132.58	-6964.65	-7646.13	-4854.78	-3626.64	-2161.72	-6830.46	-4854.78
15 Min	-3341.56	-3468.62	-3401.50	-3448.84	-2548.03	-786.84	-4071.00	-3448.84
30 Min	-650.60	-423.09	-599.16	-483.04	-1394.72	-1331.72	-2632.56	-483.04
1 Hour	-697.04	-564.58	-709.30	-982.76	-260.32	-182.44	-1471.52	-982.76
4 Hours	-958.24	-961.54	-655.82	-808.20	-1058.37	-194.08	-823.48	-808.20
Daily	200.04	199.93	199.93	200.04	49.72	49.72	-212.32	649.36

## B. Profit Trades (% Profitable Trades From Total Number Of Trades)

- overall highest value with reliable number of trades
- highest profit trades per setting
- profit trades more than 30% but not the highest
- less than 30%

EURUSD Percentage of Profit Trades (% of total) From Long & Short Positions								
TIMEFRAME	RSI SETTINGS (Period, Levels)							
	14,70-30	14,80-20	14, 60-40	14,50	18,70-30	18,50	10,70-30	10,50
5 Min	32.21%	32.11%	32.21%	32.16%	31.89%	32.12%	32.20%	32.20%
15 Min	32.18%	32.20%	32.14%	32.11%	30.34%	30.40%	32.21%	32.27%
30 Min	30.78%	30.55%	30.80%	30.88%	29.43%	29.47%	32.12%	32.06%
1 Hour	31.54%	31.38%	31.51%	31.51%	31.11%	31.31%	32.14%	32.23%
4 Hours	30.37%	30.37%	30.37%	30.37%	25.76%	25.76%	30.50%	30.50%
Daily	25.00%	25.00%	25.00%	25.00%	39.29%	39.29%	30.72%	30.72%

GBPUSD Percentage of Profit Trades (% of total) From Long & Short Positions								
TIMEFRAME	RSI SETTINGS (Period, Levels)							
	14,70-30	14,80-20	14, 60-40	14,50	18,70-30	18,50	10,70-30	10,50
5 Min	32.18%	31.25%	31.00%	32.08%	31.72%	32.50%	32.46%	32.08%
15 Min	31.22%	31.14%	31.16%	31.14%	30.89%	32.98%	31.85%	31.14%
30 Min	32.85%	33.10%	32.76%	32.88%	31.89%	32.01%	31.94%	32.88%
1 Hour	32.54%	32.73%	32.54%	32.25%	33.44%	33.53%	32.26%	32.25%
4 Hours	29.10%	29.10%	29.53%	29.70%	25.95%	31.73%	31.11%	29.70%
Daily	53.89%	53.89%	53.89%	53.89%	34.85%	34.85%	32.07%	36.39%

## C. Best Results

The back-test results of the Relative Strength Index had negative results except for the settings tested on the GBPUSD Daily timeframe.

### 1. EURUSD-RSI: 10, 50%, 1 Hour

The least amount of loss was -\$60.97, using 14, 3, 5, and the levels 80% and 20% on the 4 Hour chart. Of the total 464 trades placed, 33.68% were profit trades.

However, it does not mean that just because the indicator is not profitable on individual tests, it cannot be used. Based on the percentage of profit trades, it made some winning trades. To make it profitable, you can employ complimentary indicators or techniques to filter out the bad signals.

### 2. GBPUSD: 14,3,5,80-20, 4 Hour

The tests using the same settings (14,3,5, 80% and 20%) on the 4 Hour chart revealed better results on the GBPUSD. It made 492 trades with 34.56% profit trades and \$570.80 profit.

On the 1 Hour chart, the settings 15,5,7, made the most profit with 33.51% profit trades out of exactly 1000 trades. And on the daily chart, 8,3,5, work best with 35.99% profit trades from the total 108 trades it made.

All settings of the Stochastic Oscillator tested on the 5 minute timeframe gave the worst results.

No matter what you read on the internet, it does not mean you should blindly believe that they work. You have to test them and select the best, and then you can improve the results using other techniques or indicators to filter the signals and increase your profitability.

# CANDLESTICK REVERSAL PATTERNS

## I. Dark Cloud Cover

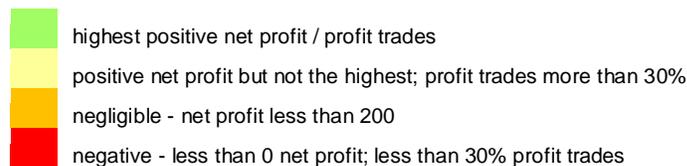
The Dark Cloud Cover Pattern occurs during an uptrend and is a bearish reversal pattern. It consists of two candles: the first candle is a long bullish candle followed by a long bearish candle that opened above the close of the bullish candle.



### A. Sell Entry Trigger

Enter a sell trade at the open of the next candle right after the dark cloud cover. Only sell trades were entered for the backtest of the Dark Cloud Cover.

### B. Findings



EURUSD Trades Using Dark Cloud Cover			
TIMEFRAME	Net Profit (USD)	Profit Trades (%) Short Positions	Maximal Drawdown (%)
5 Min	333.00	34.97%	4.02%
15 Min	420.36	38.10%	2.53%
30 Min	-317.20	26.76%	4.54%
1 Hour	406.60	44.74%	2.78%
4 Hours	-31.32	25.00%	1.60%
Daily	0.00	0.00%	0.00%

GBPUSD Trades Using Dark Cloud Cover			
TIMEFRAME	Net Profit (USD)	Profit Trades (%) Short Positions	Maximal Drawdown (%)
5 Min	95.88	32.60%	5.11%
15 Min	97.04	33.97%	4.07%
30 Min	123.60	30.99%	3.82%
1 Hour	-375.16	14.29%	4.22%
4 Hours	323.36	62.50%	1.68%
Daily	50.00	50.00%	50.00%

USDCHF Trades Using Dark Cloud Cover			
TIMEFRAME	Net Profit (USD)	Profit Trades (%) Short Positions	Maximal Drawdown (%)
5 Min	-247.94	31.87%	4.98%
15 Min	-197.20	30.00%	4.30%
30 Min	-509.44	21.54%	6.75%
1 Hour	-146.59	23.81%	3.15%
4 Hours	-20.99	33.33%	0.97%
Daily	0.00	0.00%	0.00%

### C. Best Results

The Dark Cloud Cover gave the best results in the EURUSD and GBPUSD. I tested it on the USDCHF as well, just to see what happens, but the results were quite negative.

On the 15 Minute chart of the EURUSD, the reversal pattern made \$420.36; a total of 147 trades were placed and 38.10% of which are profitable. The 1 Hour timeframe had good results too, with \$406.60 net profit, but only 38 trades were entered, and 44.74% of which were profitable.

In the GBPUSD, reversal pattern made \$323.36 in the 4 Hour chart, and there were only 8 trades entered with 62.50% profit trades.

There were no positive gains from the backtests on the USDCHF. That may be an indication that what works for the EURUSD and GBPUSD may not work in the USDCHF. The 33.33% of profit trades on the 4 Hour chart is not very reliable since it only placed 3 trades in the span of 4 years for the backtest.

## II. Engulfing Pattern

An Engulfing Pattern is composed of two candles, where the first candle is smaller and is within the range of the second candle. They are opposite in direction. Because the first candle is within the range of the second candle, it appears as though the second candle is “engulfing” the first candle.

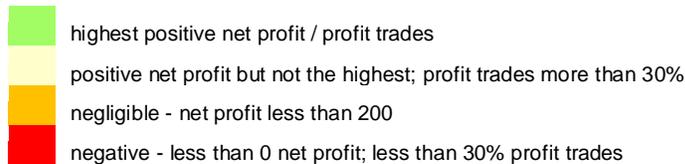


### A. Entry Trigger

**Buy Trades:** Enter a sell trade at the open of the next candle right after the engulfing pattern.

**Sell Trades:** Enter a sell trade at the open of the next candle right after the engulfing pattern.

### B. Findings



EURUSD Trades Using Engulfing Pattern					
TIMEFRAME	Net Profit (USD) Long & Short	Profit Trades (%)			Max. Drawdown Long & Short
		Long Positions	Short Positions	Long & Short	
5 Min	-2217.76	31.36%	31.44%	31.40%	22.45%
15 Min	-700.30	32.01%	31.20%	31.58%	16.37%
30 Min	588.30	31.27%	31.60%	31.43%	10.67%
1 Hour	-1554.64	30.36%	27.95%	29.18%	17.97%
4 Hours	-680.60	27.08%	29.17%	28.13%	12.32%
Daily	-1.20	0.00%	50.00%	33.33%	2.76%

GBPUSD Trades Using Engulfing Pattern					
TIMEFRAME	Net Profit (USD) Long & Short	Profit Trades (%)			Max. Drawdown Long & Short
		Long Positions	Short Positions	Long & Short	
5 Min	-5162.00	28.92%	30.16%	29.56%	52.23%
15 Min	-3333.96	25.98%	30.51%	28.23%	35.25%
30 Min	-624.64	30.96%	31.47%	31.22%	15.74%
1 Hour	819.12	29.11%	39.32%	34.89%	8.32%
4 Hours	-502.80	38.46%	22.22%	29.03%	10.69%
Daily	349.04	66.67%	37.50%	50.00%	1.59%

USDCHF Trades Using Engulfing Pattern					
TIMEFRAME	Net Profit (USD) Long & Short	Profit Trades (%)			Max. Drawdown Long & Short
		Long Positions	Short Positions	Long & Short	
5 Min	-4816.50	28.60%	29.02%	28.81%	50.35%
15 Min	-2049.08	27.47%	32.28%	29.72%	27.74%
30 Min	604.79	33.55%	31.91%	32.68%	8.99%
1 Hour	9.42	30.34%	32.95%	31.76%	8.02%
4 Hours	-427.11	37.25%	26.32%	31.48%	7.46%
Daily	233.22	50.00%	40.00%	46.15%	1.96%

### C. Best Results

#### 1. EURUSD: 30 Minute

On the EURUSD 30 Minute chart, the engulfing reversal pattern made a profit of \$588.30. Here, 614 trades were entered and 31.43% of which were profitable.

#### 2. GBPUSD: 1 Hour

This is the second highest profit gained from the reversal patterns I tested. On the GBPUSD 1 Hour chart, the reversal pattern made \$819.12 of profit. A total of 364 trades were entered and 34.89% were profitable.

#### 3. USDCHF: 30 Minute

The engulfing pattern showed better results on the USDCHF than the Dark Cloud Cover. It made \$604.79 profit from 661 trades. The profit trades comprise 32.68% of the total number of trades.

### III. Hammer & Hanging Man

A Hammer (H) is a candlestick with a long lower shadow, which is 2-3 times the length of its body. The body is short and it has no or little upper shadow. This pattern is a bullish reversal found at the end of a downtrend. On the other hand, a Hanging Man (HM) looks exactly like a hammer (small body and long lower shadow), but it is found in an uptrend and is a bearish reversal.

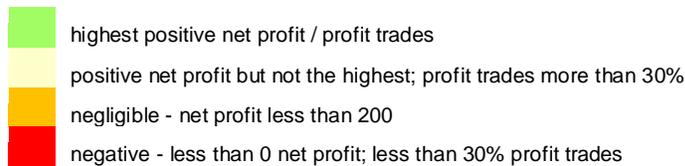


#### A. Entry Trigger

**Buy Trades:** Enter a buy trade at the open of the next candle right after the hammer candle closed.

**Sell Trades:** Enter a sell trade at the open of the next candle right after the hanging man candle closed.

#### B. Findings



EURUSD Trades Using The Hammer & Hanging Man					
TIMEFRAME	Net Profit (USD) Long & Short	Profit Trades (%)			Max. Drawdown Long & Short
		Hammer (Long)	Hanging Man (Short)	Long & Short	
5 Min	-1609.76	32.43%	31.47%	32.00%	23.89%
15 Min	398.32	31.91%	35.78%	33.68%	11.98%
30 Min	14.90	30.61%	36.64%	33.44%	8.07%
1 Hour	-94.94	31.36%	32.26%	31.74%	8.27%
4 Hours	-597.12	26.47%	31.25%	28.79%	7.18%
Daily	-149.00	20.00%	25.00%	22.22%	2.56%

GBPUSD Trades Using The Hammer & Hanging Man					
TIMEFRAME	Net Profit (USD) Long & Short	Profit Trades (%)			Max. Drawdown Long & Short
		Hammer (Long)	Hanging Man (Short)	Long & Short	
5 Min	-843.28	32.35%	33.15%	32.72%	13.61%
15 Min	309.00	34.92%	36.48%	35.65%	12.14%
30 Min	-1921.20	28.65%	34.29%	31.21%	23.15%
1 Hour	117.56	34.10%	29.27%	32.09%	12.14%
4 Hours	515.62	41.03%	36.36%	38.89%	5.05%
Daily	-149.92	25.00%	25.00%	25.00%	2.97%

USDCHF Trades Using The Hammer & Hanging Man					
TIMEFRAME	Net Profit (USD) Long & Short	Profit Trades (%)			Max. Drawdown Long & Short
		Hammer (Long)	Hanging Man (Short)	Long & Short	
5 Min	739.64	35.21%	32.21%	33.82%	11.96%
15 Min	-1421.83	30.62%	30.28%	30.46%	15.58%
30 Min	-385.89	31.86%	30.90%	31.41%	10.04%
1 Hour	-72.54	33.88%	26.53%	30.61%	6.14%
4 Hours	582.93	45.83%	38.89%	42.86%	3.52%
Daily	-497.77	8.33%	25.00%	15.00%	4.98%

### C. Best Results

#### 1. EURUSD: 15 Min

The highest net profit gained from the EURUSD was \$398.32 on the 15 Minute timeframe, with 33.68% profit trades from a total of 1253 trades that were entered.

#### 2. GBPUSD: 4 Hour

On the GBPUSD, the highest net gain was \$515.62 on the 4 Hour timeframe. Only 72 trades were made with 38.89% profit trades.

#### 3. USDCHF: 5 Min

The highest net gain made by the hammer and hanging man was \$739.64, which were from trades on the USDCHF 5 Minute chart. The profit trades are 33.82% of the total of 3347 trades that were placed.

## IV. Inverted Hammer & Shooting Star

An Inverted Hammer (IH) is a candle with a small body and long upper shadow. It is a hammer turned upside down. The inverted hammer is found in a downtrend and is a bullish reversal pattern.



The Shooting Star (SS) also has a small body, a very long upper shadow and absent or short lower shadow. It appears when price has been increasing and is considered a bearish reversal candle.

### A. Entry Trigger

Buy Trades: Enter a sell trade at the open of the next candle right after the inverted hammer closed.

Sell Trades: Enter a sell trade at the open of the next candle right after the shooting star closed.

## B. Findings

<span style="display:inline-block; width:15px; height:15px; background-color:#90EE90; border:1px solid black;"></span> highest positive net profit
<span style="display:inline-block; width:15px; height:15px; background-color:#FFFF99; border:1px solid black;"></span> positive net profit but not the highest
<span style="display:inline-block; width:15px; height:15px; background-color:#FFA500; border:1px solid black;"></span> negligible - net profit less than 200
<span style="display:inline-block; width:15px; height:15px; background-color:#FF0000; border:1px solid black;"></span> negative (less than 0) net profit

EURUSD Trades Using The Inverted Hammer & Shooting Star					
TIMEFRAME	Net Profit (USD) Long & Short	Profit Trades (%)			Max. Drawdown Long & Short
		Long Positions	Short Positions	Long & Short	
5 Min	693.12	33.30%	33.78%	33.56%	12.27%
15 Min	-811.46	30.75%	32.89%	31.94%	12.84%
30 Min	914.94	35.05%	36.34%	35.74%	4.95%
1 Hour	32.20	31.21%	34.33%	32.96%	9.77%
4 Hours	654.26	34.88%	41.67%	38.46%	2.90%
Daily	-194.12	28.57%	20.00%	25.00%	3.53%

GBPUSD Trades Using The Inverted Hammer & Shooting Star					
TIMEFRAME	Net Profit (USD) Long & Short	Profit Trades (%)			Max. Drawdown Long & Short
		Long Positions	Short Positions	Long & Short	
5 Min	-51.16	32.77%	33.65%	33.23%	11.91%
15 Min	-48.04	33.29%	32.89%	33.08%	11.88%
30 Min	-945.04	32.78%	31.11%	31.97%	16.08%
1 Hour	796.28	42.35%	30.52%	36.19%	8.21%
4 Hours	-479.56	32.43%	22.58%	27.94%	6.80%
Daily	-165.56	11.11%	42.86%	25.00%	3.97%

USDCHF Trades Using The Inverted Hammer & Shooting Star					
TIMEFRAME	Net Profit (USD) Long & Short	Profit Trades (%)			Max. Drawdown Long & Short
		Long Positions	Short Positions	Long & Short	
5 Min	-2422.38	32.00%	30.93%	31.43%	26.48%
15 Min	-1945.27	30.47%	28.91%	29.67%	25.02%
30 Min	-1610.44	32.11%	26.23%	29.13%	17.62%
1 Hour	-613.42	28.49%	32.94%	30.66%	7.57%
4 Hours	40.94	31.58%	37.50%	34.62%	4.87%
Daily	-6.06	50.00%	12.50%	0.33%	2.57%

### **C. Best Results**

#### 1. EURUSD: 30 Minute

The highest net gain from all the patterns tested was \$914.94 on the EURUSD 30 Minute chart.

#### 2. GBPUSD: 15 Min

The third highest net gain is \$796.28 on the GBPUSD 15 Minute timeframe.

#### 3. USDCHF: 4 Hours

The results of on the USDCHF were not as impressive, only \$40.94 net profit was gained.

# APPLICATION

Now that we know which settings of the indicators have the best performance in the last 4 years, we can now use this information by enhancing the profitability of our trades.

## I. Improving Your Profitability

There are a few aspects in trading that can be adjusted.

### A. Money Management

1. Change the lot size
2. Adjust the amount you are risking
3. Adjust the risk-reward ratio
4. Do not trade when the market is flat
5. Avoid trading when high impact news is to be released

### B. Entry

Use confirmatory entry signals, such as the following:

1. Trade in the direction of the trend.
2. Wait for another candle moving in the favourable direction to close before entering a trade.
3. Draw trendlines to define the trend, and enter only when the candle breaks the trendline.
4. Use another indicator to filter the bad signals of the initial indicator.

## C. Exit

Try out other methods to determine your stop loss and take profit. However, don't use a fixed number of pips as the volatility of the market is always changing.

1. Use support or resistance areas (previous highs and lows) as the basis for stop loss and take profit levels.
2. Use trailing stops. There are a number of methods to trail your stops. There's no harm in testing each of them.
3. Use momentum indicators that help identify changes in volatility, such as the ADX or ATR, and base the distance of the stop loss and take profit on their values.

## II. Examples

You don't really need to apply all the tips I listed above. Those are possible ideas that are most likely to increase the profit from your trades.

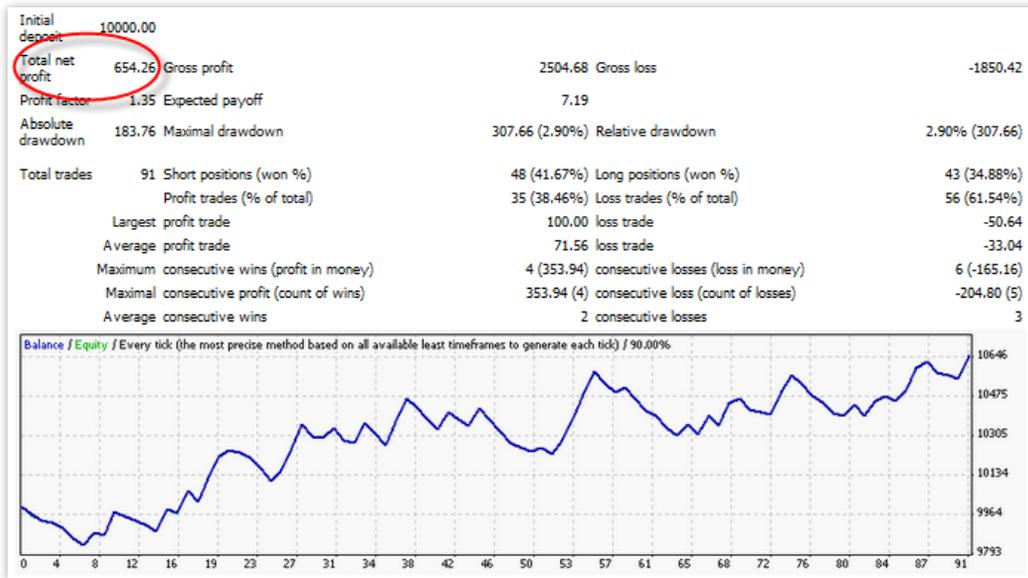
Originally, the lot size used for the backtest was 0.1 lot. The trades were entered with a dynamic stop loss set a few pips away from the highest high of the last three candles, and the take profit was twice the distance of the entry to the stop loss.

This time, the same rules will be applied, and the only variable we will change is the lot size will be computed as follows:

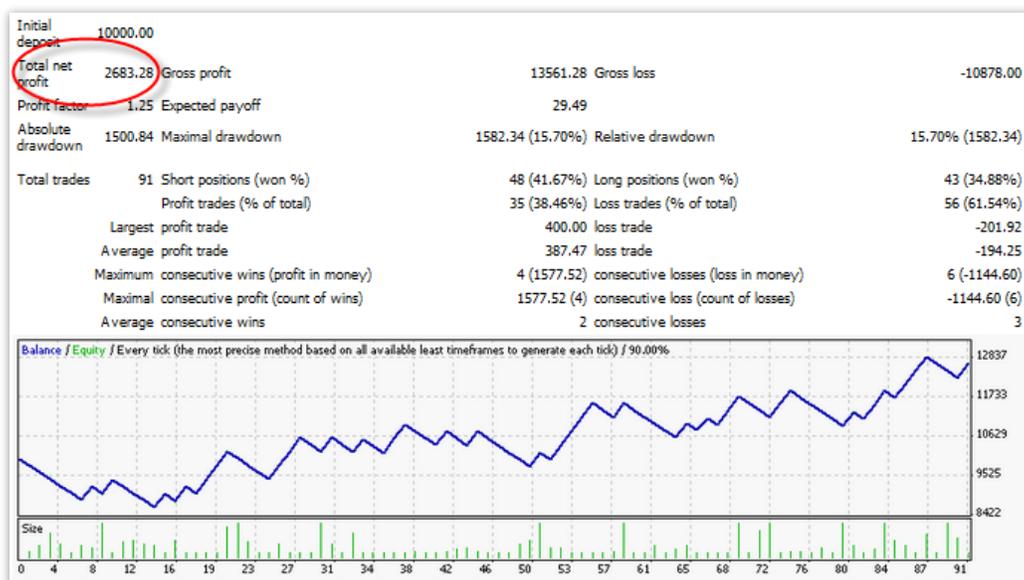
$$\text{Current Lot Size} = (200 / \text{Stop Loss}) * \text{Original Lot Size}$$

Supposing that the stop loss is 10 pips from the entry, the lot size for the trade will be 2.0 lots ( $200 / 10 * 0.1$ ). However, if the stop loss is 50 pips away from the entry the new lot size is 0.4 lot ( $200 / 50 * 0.1$ ). In this manner, when we are risking a large number of pips, we reduce the lot size to enter the trade so that the potential loss is also reduced.

Let me show you how changing one aspect makes such a big difference in the results. The backtests using the candlestick patterns show that the Inverted Hammer and Shooting Star on the EURUSD 30 Minute timeframe gained a net profit of \$654.26 with a total of 91 trades and 38.46% profit trades.



If you apply the formula to the lot size, you will get exactly the same 91 trades and 38.46% of them are profit trades. But now, the total net profit is \$2683.28. Isn't it amazing?



## CONCLUSION

I'm sure that by now, you understand that all information you find online is not necessarily useful information. As we traders look for the best method to use, the biggest challenge is to find the indicators and settings we can earn profit from.

From the backtests that I have conducted for this report, the most significant results are those of indicators applied on higher timeframes. Based on the results, the 4 Hour is the best timeframe to trade and the 5 Minute timeframe is the worst.

There are many reasons that some indicators work while others don't. This is mainly because some indicator settings better represent price movements in certain timeframes and currency pairs. Take note that even if an indicator setting works for one timeframe, it does not necessarily mean that it will work for the other timeframes. In the same manner, not all indicators that work in one currency pair will work in other currency pairs.

It must be tested in those timeframes or currency pairs to see if the results are profitable. Yes, you can test the systems by entering trades in real time. But in order to find the best indicator and setting with the least amount of energy and time *and* without wasting any money from your account, it is best to backtest the indicators in an orderly and systematic manner. As you can see, the best way to pinpoint the best indicators and settings is by using a scientific approach.

I hope that with my simple report, you have found the answers to the questions I have mentioned. Best of luck in your trading journey!

**Cristina Ciurea**

<http://www.ScientificForex.com>

**“On February 28<sup>th</sup> I will share all of my powerful trading secrets... that I use every day to take money from the Forex market with scientific precision”**

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