
Hi All,

I will be explaining the basic terms related to forex so that newbies don't feel any difficulty in picking up the advanced trading info and lessons. I will try to explain everything in detail and would suppose that reader does not know anything about it.

The terms may be explained as they are enquired by traders or I will select topics randomly.

Moving Averages:

Mostly new traders are confused by different kinds of moving averages and do not know what is difference in their utility. I will try to explain briefly.

What is a moving Average?

We know that price of a pair of currency fluctuates with time. Sometimes it rises and other times it drops down. This fluctuation of price can be plotted against time and the result is a chart. This chart gives us information about the rise and fall of price in different times of a day or month or year.

Anything which changes with time can be written into time series and its rate of change can be calculated. The moving average is also a time series involving price of the currency. We can select a time period of our choice which may be a second or a day. Then we observe change in the price of currency in that time period. It leads us to the concept of Average and Moving Average.

Let us assume that we are taking time period of one hour. It means we will be considering change of price in currency in each hour. Once we have data of each hour for many hours we can calculate an average and a moving average.

Let us suppose we have collected data for 12 hours. Now what we do is add up all prices for these 12 hours and we divide it with 12. We get an average of 12 hours. It tells us that price of currency in those 12 hours was averagely xxx. When 13th hour is completed, we erase the value of first hour and add the value of 13th hour. Still we have 12 values and we calculate average. It may give us slightly different value because the value of first hour may not be same as 13th hour.

Now we have got two values of averages: Avg one and Ave two. If we continue the process, we will get numerous values of average: A1, A2, A3, A100,

If we plot these average against hourly time, we get a line which is called moving average. As the value of average is changing by addition of prices of hours and erasing of previous values, we call it a moving average.

Purpose of Moving Average:

As price of currency fluctuates too much, we get confused with the price values. Therefore we use average values and it smoothens out the price fluctuation over a time period and we can see fluctuation in the form of cycles or waves plotted against time.

Human brain is very receptive to visual patterns and easily grasps the information contained in pictures. Hence the plotted average values of currency provide us a valuable information.

Types of Moving Averages:

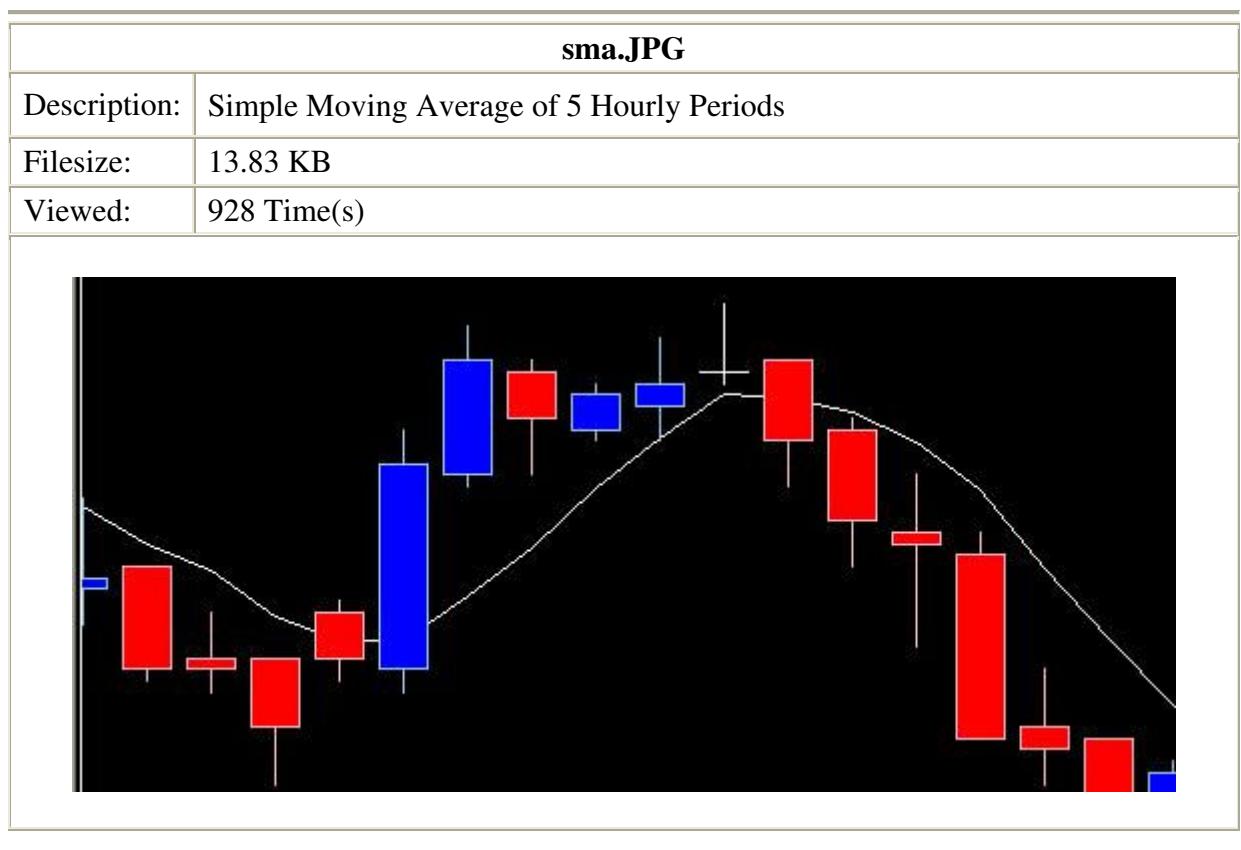
There are different kinds of Moving Averages but here we will discuss four popular types.

[Simple Moving Average:](#)

It is the average of prices over a certain time period in which all values of prices are given equal importance. As we do not discriminate in different price values but just calculate their average in a simple manner, it is called Simple Moving Average (SMA).

A 5 SMA means we have taken average over five time periods. Let us consider 5 SMA on one Hour chart. It means our period is one hour. Hence we will consider 5 values taken at each hour for calculation of average. At end of each hour we will be subtracting previous first value and add latest value.

To get an idea, I am posting chart of 5 SMA on hourly time period. We can see that when price is rising (blue candles) the moving average is also rising with each new value of price added in calculation. When price is falling down (red candles), SMA is also falling down.



[Weighted Moving Average:](#)

It is a moving average of the price of the currency over a certain period of time in which the latest

price is given much weightage than the previous one.

If we are considering 5 period moving average then the latest price will have the most importance (weightage) and the previous one will have lesser importance in calculation. This importance or weightage will be decreasing arithmetically for all price values till the first one reaches which will have one importance.

Let us say we have given x importance to fifth candle, then previous one will be weighted $x-1$ and the candle previous to it will have $x-1-1$ and so on. The point to note here is that weightage changes arithmetically and linearly. It means weightage is decreasing or increasing by one.

The purpose of weightage is to get more better average value which does not rely more on past values but considers present value more important.

Following is the chart of 5 period Weighted Moving Average (WMA).

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Exponential Moving Average:

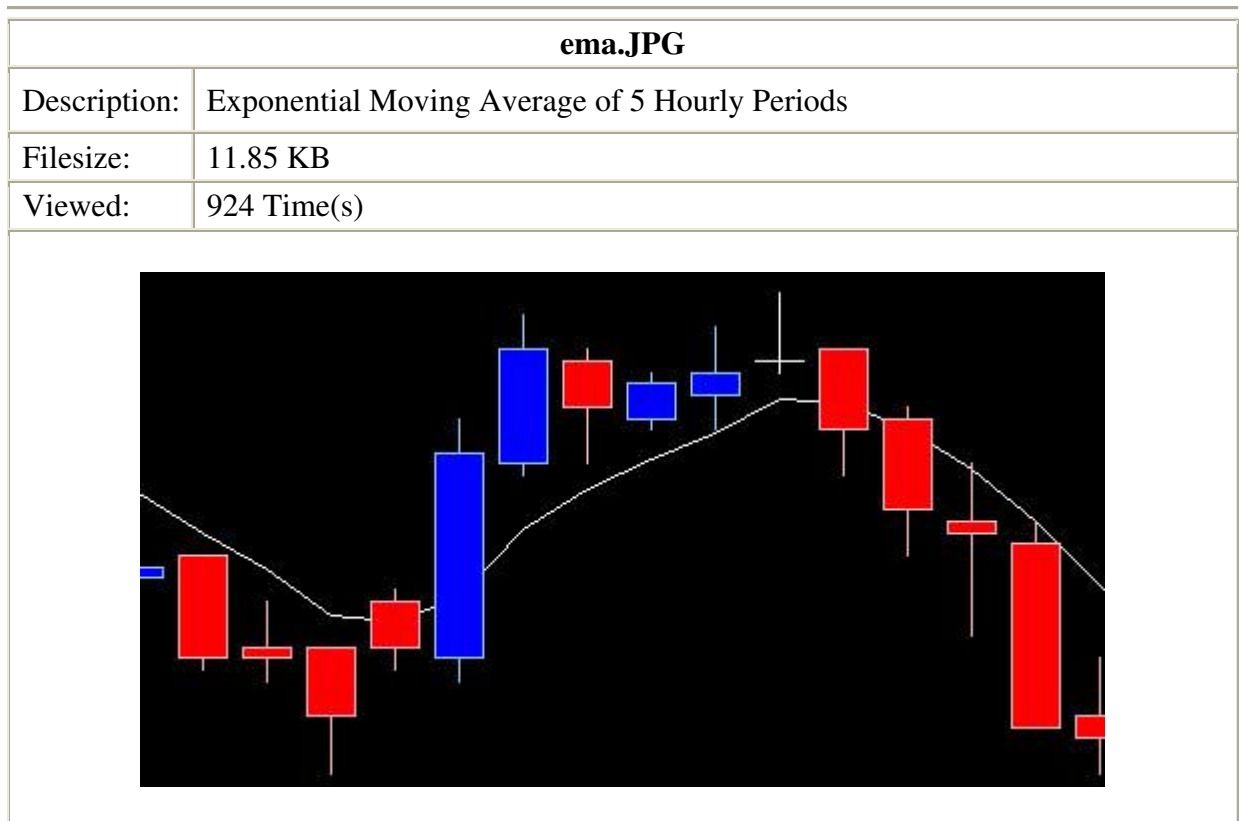
The exponential moving average is also a weighted moving average in which weightage is exponentially changing.

It is different from WMA in the manner of weightage. That is why WMA is sometimes called LWMA and exponentially moving average is called EWMA or simply EMA.

In EMA, the weightage to the latest one is a bit more than the previous one but it changes exponentially.

Following is chart showing EMA.

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Comparison of Moving Averages:

As a trader we need to know the difference and utility of different moving averages. I have posted the chart below and we can see the SMA is white coloured, whereas WMA is green coloured and EMA

is red coloured.

As WMA and EMA both consider weightage to give much importance to the latest value we should know how both differ.

The linear sequence of numbers: 1, 2, 3, 4, 5

The exponential sequence of numbers: 1, 1.1, 2.2, 3.4, 4.7, 6.2

Now we can observe that in first sequence the weightage to latest price is 5 times whereas in the exponential the weightage of same is 6.2 times. Hence, we can say that EMA is the most sensitive to latest price changes, whereas WMA is giving due consideration to previous prices as well. While SMA does not believe in any discrimination.

Each MA has its own merits and demerits. Sometimes we are interested in latest price movements we consider EMA, specially in longer time period we use EMA as noise is lesser and we want actual picture. While in shorter time periods EMA is a bit misleading as it is victim of noise and quick price movement, and hence WMA is a better substitute.

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allmas2.JPG	
Description:	We can observe the red is quickly changing direction while white is too lazy to move.
Filesize:	16.36 KB
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allmas.JPG	
Description:	We can see that red ema is most sensitive to latest price change.
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Effect of Period over Weightage:

As EMA and WMA consider weightage to the latest price, let us try to understand the difference in them when considered period is short and large.

WMA sequence: 1, 2, 3, 4, 5.....

EMA sequence: 1, 1.2, 2.4, 3.4, 4.7, 6.2.....

Now we can see that as period is going larger the difference between the two sequences is growing. It means that at a larger period two MAs will be miles apart.

That is why in higher moving averages, I use EMA because it gives more weightage to latest prices while on shorter periods the difference between two moving averages is not much wider and EMA gets caught up in the price noise whereas WMA performs well in shorter periods as it is less sensitive to noise.

Please look at the hourly chart of euro which shows four moving averages.

Two close lines are 100 ema (red) and 100wma (green).

While top and bottom are 500ema and 500wma.

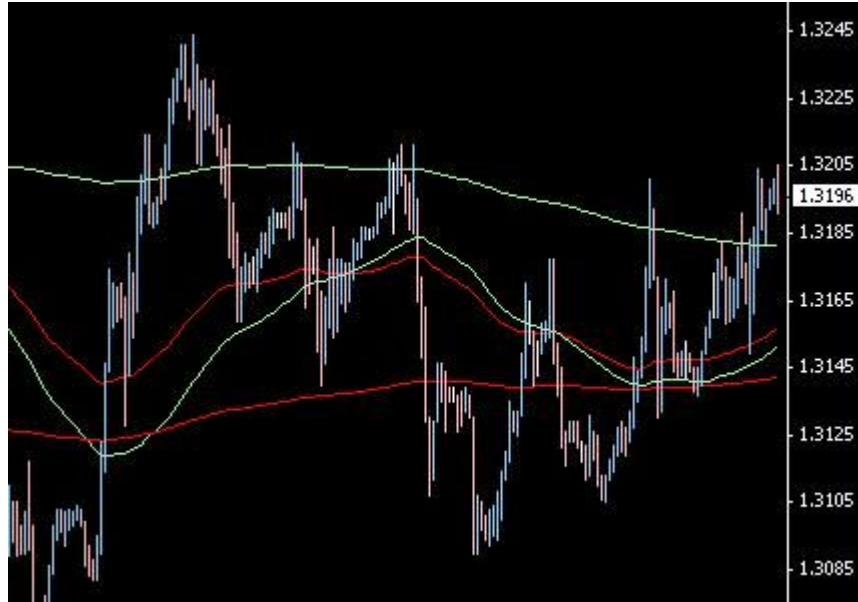
You can easily see that the higher the period, the larger the gulf between moving averages.

500emawma.JPG

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Slope Change:

Mathematically slope is the angle which a line makes with any horizontal line. It is measured in theta or tangent of theta.

When a line is rising up from left to right, it is said its slope is positive. Whereas slope of a line falling from left to right is negative.

Rising from left to right means the end at left is low while end and right is up. Similarly falling from left to right means that the left end is up and the right end is down.

When a line is horizontal it has zero slope. We use the concept of slope change in moving averages. When 5wma is changing its slope from negative to positive, it has to undergo a point where we can draw a horizontal line usually called tangent and that point is called tangent point.

Please look at the chart below, which shows dotted line having negative slope and white line with positive slope. Whereas green line is with zero slope. Hence the moving average has changed its slope after passing through tangent point.



Repulsion of Moving Averages:

When a moving average fails to pass through another moving average and instead starts going away from it, the phenomenon is called repulsion.

Many traders call this phenomenon as bounce. There is no difference in bounce and repulsion except terminology.

The word bounce seems more sportive in nature and repulsion is a scientific term. We know that two magnets or two electric charges either attract each other or repulse each other.

In moving averages, this phenomenon is quite common and it is highly profitable to identify and utilize it. We know that moving average is nothing but average of price for a certain periods in a time frame. Let us assume that we are considering moving average of 200 and moving average of 5 periods. When we calculate average for period 5, we consider only five recent candles and when we consider moving average of 200 periods, we consider 200 candles of the same time frame to calculate average. What happens that the results of two moving averages start converging like two convergent infinite series of mathematics. A time reaches when the price of one moving average is almost equal to the value of other. It is critical point. Now we have two possibilities: either value of one will fall below the other and will continue falling, which is graphically known as cross; while in other case the price of one will revert to previous higher values and will continue in the direction which results in the increased gulf in the values of the two averages. It is called repulsion of moving averages.

Chart:

Please look at the chart below which shows three points of repulsion marked as A, B, and C. We can see that wma 5 came closer to axis (200ema, red) and 55ema (brown) and then was repulsed.

repulsion.JPG	
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Looking at the chart below, we see following opportunities to enter.

A) When the second blue candle closes at 1.3128, we can enter long. The next blue candle closes at 1.3154 and we move stop to low of the blue candle at 1.3124. The next candle is red spinning top. We move stop to its low as soon as it closes. The next blue candle closes at 1.3175. We can see that the new candle failed to break top of blue candle and started coming down. We rush to move stop to low of blue candle to save hard earned pips (1.3149).

Hence, we can earn 20 pips.

B) Similarly we can enter long on point B, but we get no chance to enter short on repulsion from ema55 as move is too swift to let us decide anything.

N.B. Please note that shaded candles are red ones.

