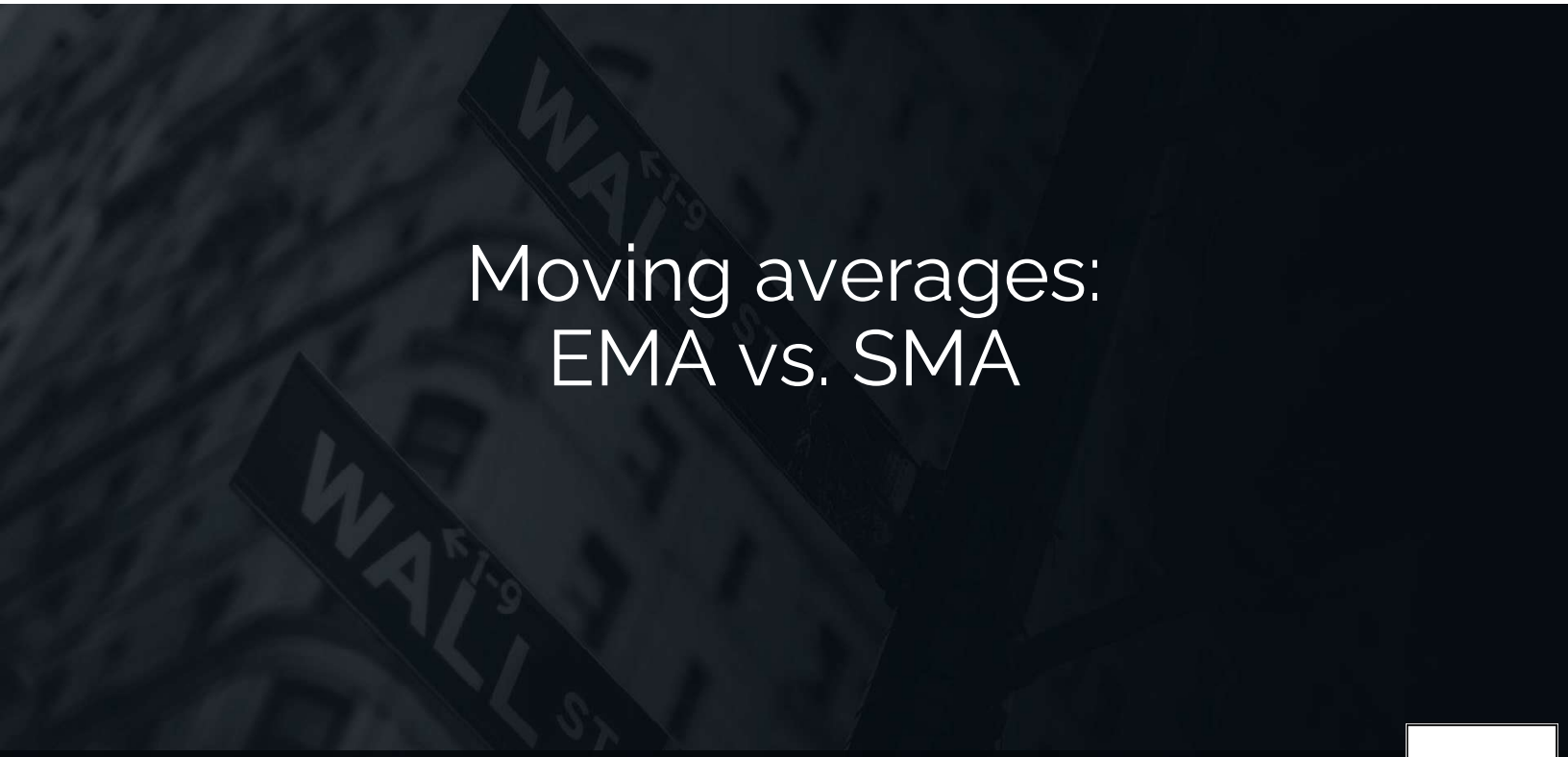

Moving averages: EMA vs. SMA

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Presented by: Roko

Moving average

A **moving average** is a technical indicator that investors and traders use to determine the **trend direction** of securities.

A **moving average** is calculated by adding up all the data points during a specific period and dividing the sum by the number of time periods (e.g. 9, 20, 50, 100, 200).

Moving averages help technical traders to generate trading signals as it helps to smooth out the price data by creating a constantly updated average price.

SMA vs EMA

Simple moving averages (**SMAs**) use a simple arithmetic average of prices over some timespan in the past.

Exponential moving averages (**EMAs**) place greater weight, importance on more recent prices than older ones over the time period.

EMA is more responsive to new information!

Moving averages are constantly updated and suggest the trend direction

20 SMA vs 20 EMA

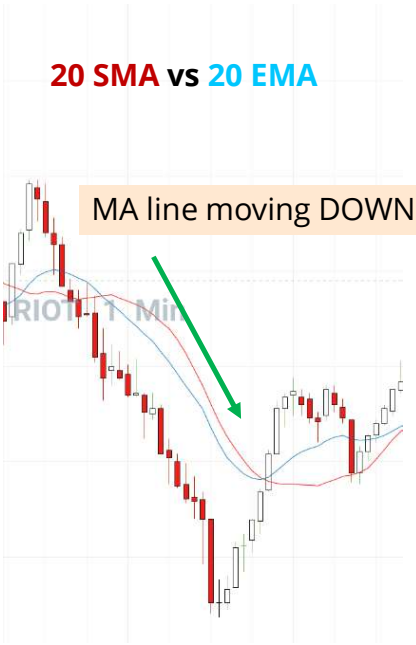
MA line moving UP suggests UPTREND

Notice how EMA (**blue**) responds to price faster than the SMA (**orange**).

Moving averages are constantly updated and suggest the trend direction

20 SMA vs **20 EMA**

MA line moving DOWN suggests DOWNTREND

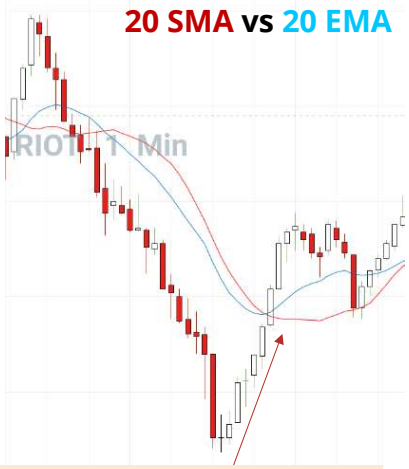


Notice again how EMA (**blue**) responds to price faster than the SMA (**orange**).

All indicators including Mas are lagging in data information

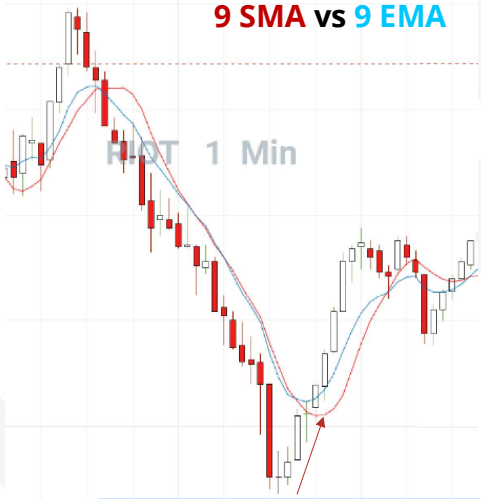
The longer the period for the moving average, the greater the lag. For example 200, 100, 50 moving averages will have a much greater degree of lag than a 20 or 9 MA because it contains prices for the past 200, 100, or 50 time points.

20 SMA vs 20 EMA



Price moved up already significantly till 20 EMA (blue) changed direction.

9 SMA vs 9 EMA



Shorter time period MAs lag less behind the price action change.

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MAs are often used in trading for trends and even become points of exit and entry of trades.

Practice

- Go to www.tradingterminal.com and add 9 EMA and 9 SMA indicators to your charts.
- Go over at least 20 stocks on daily time frames and try to focus your attention on EMA and MA line shapes.
- Identify uptrend, downtrend, and consolidation.
- Repeat the same with 20, 50, 100, 200 MA and SMA as these are most commonly used ones.
- Do you see any differences between these?