

# Hack de markets

Historical information on the EURO-LIBRA  
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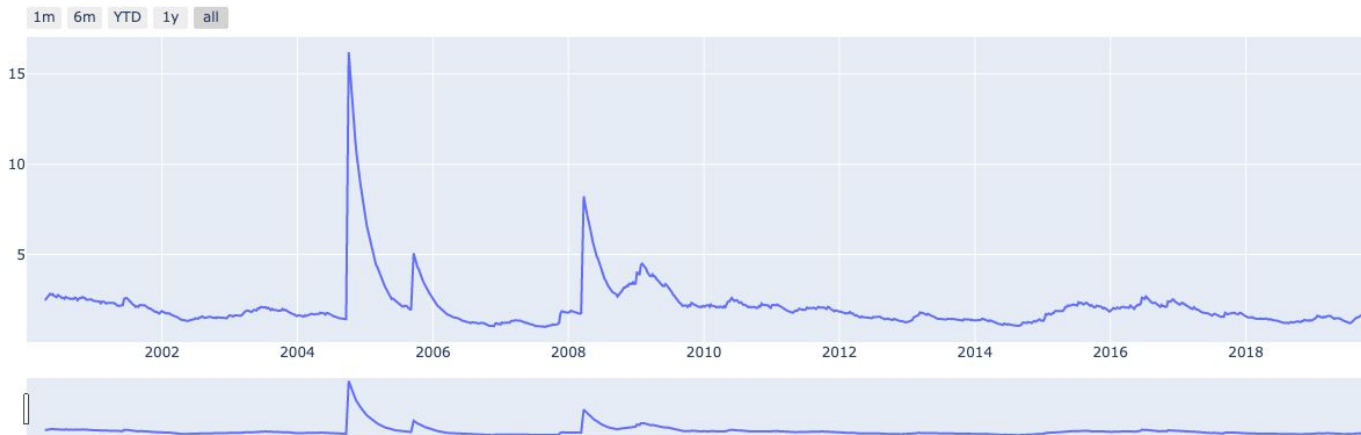


## Candlestick chart with outliers



After homogenising the format of the variables (open, close, high and low), 3 outliers still stand out. We can affirm that these are not incorrect, as they also show up causing pronounced volatility increases.

## Volatility



Interactive charts: Use the slide and buttons to zoom in and move through time.



The outliers are removed in order to observe the overall behaviour over time. The exponential moving average is included in its two formats: fast and slow.

Candlestick chart with slow and fast Exponential Moving Average



## Example

Candlestick for a 2 years interval: from Jan 2008 to Jan 2010.

### Observations

This time interval is the beginning of an uptrend, since ema\_fast exceeds ema\_slow (red line above blue line).



## Relative Strength Index



### Interactive charts:

Trace over using  
the mouse to see  
exact RSI value on  
a specific date.



## Further analysis

1. Analyse annual and monthly aggregation. Possible questions to answer: Is there a monthly trend?
2. Colour the background depending on whether the time period is uptrend or not. Example: `boolean uptrend = ema_fast > ema_slow`.
3. Analyse growth at a monthly distance. Is the value higher than the previous month's value?