

Math Trend Indicator Success Rate 2019-2023

To compare our algorithm success to other algorithms, we tested the MTI forecasts with the historical market data by comparing them (using linear regression). We consider two possibilities, when the MTI predicted well the direction of the future market, and when it didn't.

This comparison is made for each day from the 1nd of January 2019 until the 29th of December 2023. For each successful Forecast we attribute a score of 1 and for a failure a score of 0.



Successful Forecast





The Success Rate is the percentage of success: Success Rate (%) = $\frac{\sum Success Score}{days amount}$

We can also filter the MTI values removing the ones close to the average that don't indicate important trend variations. Doing so we can plot the Success Rate of the highest values. For example, at the axis value 10%, we consider only the 10% of highest MTI values.

We observed for all asset an increase of the Success Rate which means that the MTI is even more efficient at forecasting the future trend when slopes are higher.

For example, with the S&P 500, when considering only the 10% of the highest MTI values, we found that the Success Rate reaches up to 85.0% This study can be corroborated for almost any asset.



Success Rate vs % of the time



On those histograms of the S&P 500 the green zone represents the values used for the previous Success Rate graph when we filter the 10% of the highest MTI and the second one represents a filter of 50% of highest values.



Histogram MTI S&P 500 2019-2023

Histogram MTI S&P 500 2019-2023





Following is the result table for 10 different kinds of assets:

Asset Class	Asset	Currency	Success Rate	Success Rate of 50% highest MTI	Success Rate of 10% highest MTI
Index	S&P 500	USD	70.9%	74.7%	84.8%
	STOXX 50	EUR	64.0%	64.6%	75.8%
	Nikkei 225 ²	JPY	64.5%	69.6%	74.2%
	IPSA Clp	CLP	63.4%	67.3%	72.0%
Currency	Eur/Usd	USD	61.3%	71.0%	75.8%
	Eur/Clp	CLP	63.3%	69.0%	70.5%
	Usd/Clp	CLP	65.8%	70.6%	65.2%
Treasory	US 10Y BMK	USD	62.7%	64.9%	57.6%
	CL 5Y BCU	CLP	65.3%	68.7%	73.5%
Crypto	Btc/Usd	USD	64.5%	74.1%	82.6%
		Average	64.6%	69.4%	73.2%