The main problem with TC is it is calculated using only the portfolio.

Very, very strange TC behavior[

Tournament

](/c/tournament/7)

Yeah markets are quite volatile at the moment and a metric based on portfolio returns (i.e. the returns of a subset of the stocks) is going to be much choppier than correlation to a normalized target across all stocks. With lots of stocks making double digit moves such things are to be expected.

We optimize an universe of 5K instruments and then Numerai pick up 100 instruments (I don't know exactly the number).

The sampling (selection of instruments) is the key of the problem.

If you have 5K instruments with correlation of 0.06 and sample 100 instruments, the distribution of correlations you will get has a high volatility.

Only if you could get correlations in order of 0.8-0.9 the sampling would work.

So the ploblem hasn't solution. TC can be the perfect metric from a statistical point of view to the perspective of the challenge maker (average matters), but from individual perspective (variance matters) is horrid.