Comments on "Dependence structure among carbon markets around the world: New evidence from GARCH-copula analysis" (Ansaram, Mazza)

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An econometric study of dependence levels accross several carbon markets around the world

The objectives

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Q1: what are the hurdles ? Why are there so many markets ?

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Q2: AR-EGARCH model for carbon prices or returns ? Returns, apparently... but are the series of prices and/or returns stationary ?

Descriptive statistics of return distributions: apparently very different laws accross markets (Table 1 & 2).

Q3: is it still the case on an identical period of time ?

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Q4: What can the specification GED be used for ?

Probably to apply Quasi-MLE of AR-EGARCH models... but it is pretty unusual...

Some parameters of the GED have to be fixed, so that $\mathbb{E}[\varepsilon_t] = 0$ (i.e. $\mu = 0$) and $\mathbb{E}[\varepsilon_t^2] = 1$ (not σ_t^2 !). But it remains δ...

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Q5: is a value of δ imposed ? Is δ estimated ?

1. Q6a: does the empirical distribution of the estimated residuals look like a GED ?
2. Q6b: what if the underlying copula is parametrically estimated with GED marginal laws ?

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Q7: Any explanation ? The influence of time zones does not explain the whole phenomenon... is the integration of all these markets realistic/desired ?