aggregate.Distortion Cheat Sheet

The `Distortion` call signature follows the corresponding DecL clauses, using prefixes for exposure (including limit sub-clause), severity, occurrence reinsurance, frequency, aggregate reinsurance, and note. `sev_xs, sev_ps` equal `dsev` outcomes and probabilities, and `(occ|agg)_reins` clauses are lists of (share, limit, attachment) triples.

m `Severity(name, exp_el=0, exp_premium=0, exp_lr=0, exp_en=0, exp_attachment=0, exp_limit=np.inf, sev_name='', sev_a=np.nan, sev_b=0, sev_mean=0, sev_cv=0, sev_loc=0, sev_scale=0, sev_xs=None, sev_ps=None, sev_wt=1, sev_conditional=True, occ_reins=None, occ_kind='', freq_name='', freq_a=0, freq_b=0, freq_zm=False, freq_p0=np.nan, agg_reins=None, agg_kind='', note='')`[0]

The following tables show all m `methods`, and fields or properties (used interchangeably). Comments elucidate the meaning of more obscure entries.

1. Specification & creation

`assets`, m `average_distortion`, `col_x`, `col_y`, `df`, `display_name`, m `distortions_from_params`, `has_mass`, `mass`, `name`, `premium_target`, `r0`, m `s_gs_distortion`, `shape`,

2. Update

m `bagged_distortion`, `error`,

3. Moments

4. Statistical functions

m `g`, m `g_dual`, m `g_inv`, m `g_prime`, m `wtd_tvar`,

5. Validation

m `test`,

6. Output dataframes

7. Reinsurance

8. Visualization

m `plot`,

9. Risk and pricing

m `price`, m `price2`,

10. Approximations

11. Meta

m `available_distortions`, m `convex_example`, `renamer`,

Notes:

[0]: Arguments `sev_pick_attachments=None, sev_pick_losses=None,` omitted; see help.

[1]: matches `Portfolio`

Any vectorizable input accepts numeric or iterable datatypes.

Abbreviations: gcn=gross (subject), ceded, and net; stats: m=mean, cv=coefficient of variation, sd=standard deviation, var=variance, skew(ness); VaR=value-at-risk

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