`Severity` Class Cheat Sheet

m `Severity(name, 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_lb, sev_ub, sev_conditional=True)`

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

1. Specification & creation

`name` *name for object*
`sev_name` *scipy distribution name, or* `(c|d)histogram`
`exp_attachment` *gross loss attachment or* `None`
`exp_limit` *gross loss limit* `sev_a` *shape parameter 1*
`sev_b` *shape parameter 2*
`sev_mean` *ground-up loss mean*
`sev_cv` *ground-up loss CV*
`sev_loc` *location (shift)*
`sev_scale` *scale factor*
`sev_xs` *vector of outcomes*
`sev_ps` *vector of probabilities; missing for equal likelihood*
`sev_wt` *ignored, mixing handled by* `Aggregate`
`sev_lb` *lower bound for conditional range*
`sev_ub` *upper bound*
`sev_conditional` *gross losses conditional on attaching layer (default) or unconditional*
Specify the ground-up loss, optionally converted to gross loss by the limit clause.

2. Update

m `cv_to_shape`, m `mean_to_scale`, `pattach`, `pdetach`,

3. Moments

m `generic_moment`, m `mean`, m `median`, m `moment`, m `moment_type`, m `moms`, `sev1`, `sev2`, `sev3`, m `stats`, m `std`, m `support`, m `var`,

4. Statistical functions

m `cdf`, m `entropy`, m `expect`, m `interval`, m `isf`, m `logcdf`, m `logpdf`, m `logsf`, m `nnlf`, m `pdf`, m `ppf`, m `rvs`, m `sf`, m `vecentropy`,

5. Validation

None

6. Output dataframes

None

7. Reinsurance

None

8. Visualization

m `plot`,

9. Risk and pricing

None

10. Approximations

m `fit`, m `fit_loc_scale`, m `freeze`,

11. Meta

`fz`, `random_state`, `xtol`,

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

`aggregate v.0.20.0`
Confidence and precision meets ease of use in actuarial analysis

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