






# Distortion Class Cheat Sheet


 `Distortion(name, shape, r0=0.0, df=None, col_x="", col_y="", display_name=")`

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

## 1. Specification & creation

name it name  
shape it name  
r0 it name  
df it name  
col\_x it name  
col\_y it name  
display\_name it name  
*Create using Decl*  
distortion <NAME> <DIST\_NAME> <SHAPE>  
DIST\_NAME=ccoc|ph|wang|dual|tvar  
 `average_distortion`, `col_x`, `col_y`, `df`,  
`display_name`,  `distortions_from_params`,  
`has_mass`, `mass`, `name`, `premium_target`, `r0`,  
 `s_gs_distortion`, `shape`,




## 2. Update

 `bagged_distortion`, `error`,


## 3. Moments

*None*

## 4. Statistical functions

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

## 5. Validation

 `test`,


## 6. Output dataframes

*None*

## 7. Reinsurance

*None*

## 8. Visualization

 `plot`,



## 9. Risk and pricing

 `price`,  `price2`,

## 10. Approximations

*None*

## 11. Meta

 `available_distortions`,  `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

