

# Value at Risk (VaR)

Worst expected  
loss to exceed  
only X% or X\$:

1.?

% significance (1-c)

2.?

over Horizon (t)

## Parametric (analytical)

Distribution  
with params; e.g.  
volatility

Normal

Multivariate Normal  
Variance-Covariance

Levy

Stable  
Heavy-tail

Exp Shortfall (ES)

## Hybrid

(weighted  
HS or

semi-  
parametric)

Historical Sim but  
weights via EWMA

HS, Vol.  
Weight

HS,  
Filtered

POT (GPD):  
needs threshold

Block maxima  
(GEV)

Distributions "in the tail"

## EVT

Historical Sim.

Sort & Rank

Bootstrap

"with replacement"

Monte Carlo Simulation

## Non-Parametric (simulations)