



Cefor

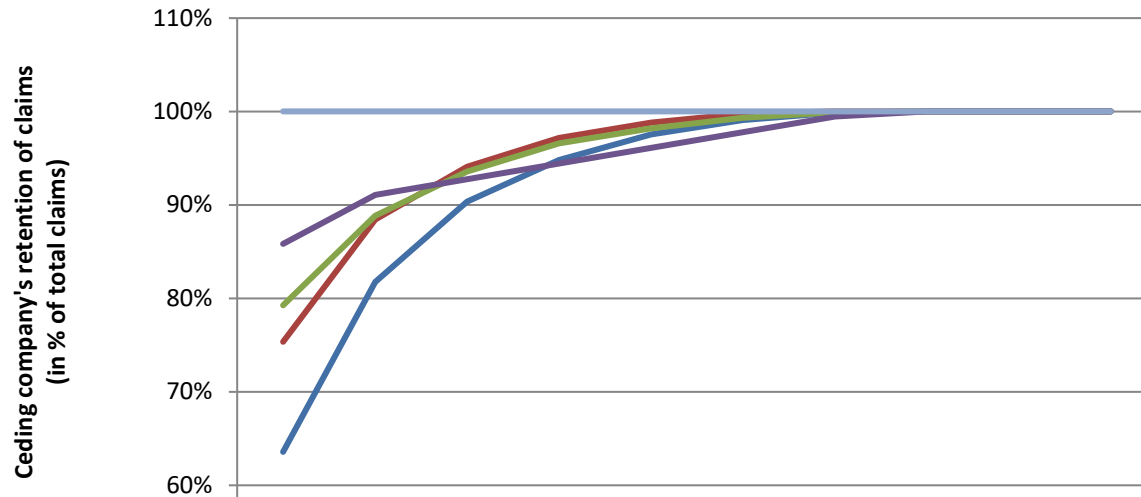
EXPOSURE CURVES – OCEAN HULL

VESSELS WITH VALID IMO NUMBER

Nordic Marine Insurance Statistics as of 31 December 2020

OCEAN HULL – EXPOSURE CURVES

Exposure curves by Sum Insured Partial Claims only ($\leq 75\%SI$)



PA claims in % of all claims* :

- 0-5 MUSD: 82%
- 5-20 MUSD: 86%
- 20-75 MUSD: 93%
- > 75 MUSD: 100%*

PAID & OUTSTANDING CLAIMS AS REPORTED

Sum Insured:

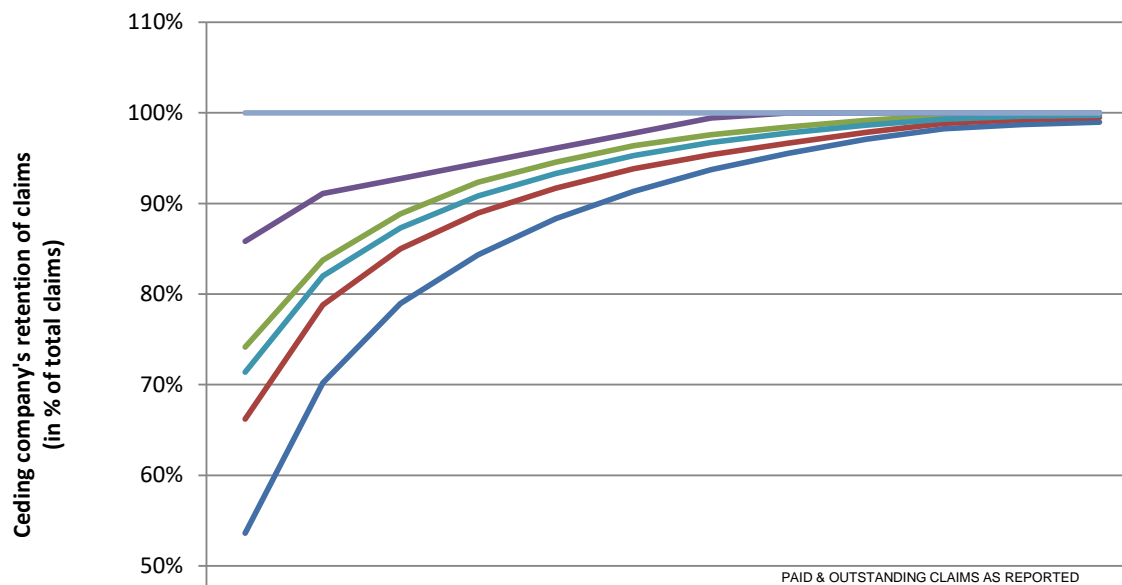
	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
— 0-5 Mio USD	0.636	0.817	0.903	0.948	0.975	0.991	0.999	1.000	1.000	1.000
— 5-20 Mio USD	0.753	0.884	0.941	0.972	0.988	0.997	1.000	1.000	1.000	1.000
— 20-75 Mio USD	0.792	0.888	0.936	0.966	0.982	0.993	0.999	1.000	1.000	1.000
— > 75 Mio USD	0.858	0.911	0.928	0.944	0.961	0.978	0.994	1.000	1.000	1.000
— 100%	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

The curves are based on 100% shares. For a ceding company writing 10% shares, the exposed values in the given bands are " ≤ 0.5 MUSD", "0.5-2 MUSD", "2-7.5 MUSD", ">7.5 MUSD".

Ceding company's retention as % of SI

OCEAN HULL – EXPOSURE CURVES

Exposure curves by Sum Insured All claims including total losses



The curves are based on 100% shares. For a ceding company writing 10% shares, the exposed values in the given bands are "<0.5 MUSD", "0.5-2 MUSD", "2-7.5 MUSD", ">7.5 MUSD".

	Sum Insured:											
	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	110%	120%
0-5 Mio USD	0.536	0.702	0.790	0.843	0.883	0.913	0.937	0.956	0.971	0.982	0.987	0.990
5-20 Mio USD	0.662	0.788	0.850	0.890	0.917	0.938	0.954	0.967	0.978	0.988	0.993	0.995
20-75 Mio USD	0.741	0.837	0.889	0.923	0.946	0.964	0.976	0.984	0.992	0.997	0.999	1.000
> 75 Mio USD	0.858	0.911	0.928	0.944	0.961	0.978	0.994	1.000	1.000	1.000	1.000	1.000
All	0.714	0.820	0.873	0.908	0.933	0.953	0.967	0.978	0.986	0.993	0.996	0.997
100%	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Ceding company's retention as % of SI

EXPOSURE CURVES – EXPLANATIONS

- **Exposure Curves**

- Exposure curves are used by reinsurers to price excess of loss reinsurance.
- The curves indicate the ceding company's retained share of PA claims after ceding claims in excess of a given percentage of a vessel's sum insured.
- The curves should be applied on individual vessels or groups of vessels with similar values and written shares.
- The curves are calculated for 100% values. In applications the choice of curve should thus also be based on 100% values.
- The curves are based on USD claims amounts. Due to exchange rate fluctuations, the ratio between claim cost and insured value may deviate in the original currency.
- Compared to previous editions, the share of total losses as % of all claims has reduced in the SI groups 0-5 and 5-10 USD million.

- **Exposure Curves technicalities**

- The curves are based on H&M covers only for vessels with valid IMO-No.
- The curves are based on claims incurred in the **years 2015-2020**
(17,687 partial claims; 17,756 claims in all; only claims with reported cost > 1 USD included)
- The curves are calculated as follows:
 - x = percentage retained
 - C = Individual claims ¹⁾
 - V = Vessel value
 - $f(x) = \frac{\sum \min[C, V*x]}{\sum C}$

- ¹⁾ First set of exposure curves: based on partial claims only; Second set of exposure curves: based on all claims, including total losses / claims exceeding the Sum Insured