

Solution: Exercise 1



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Result presentation

Findings on the net portfolio: structure NP+ML50

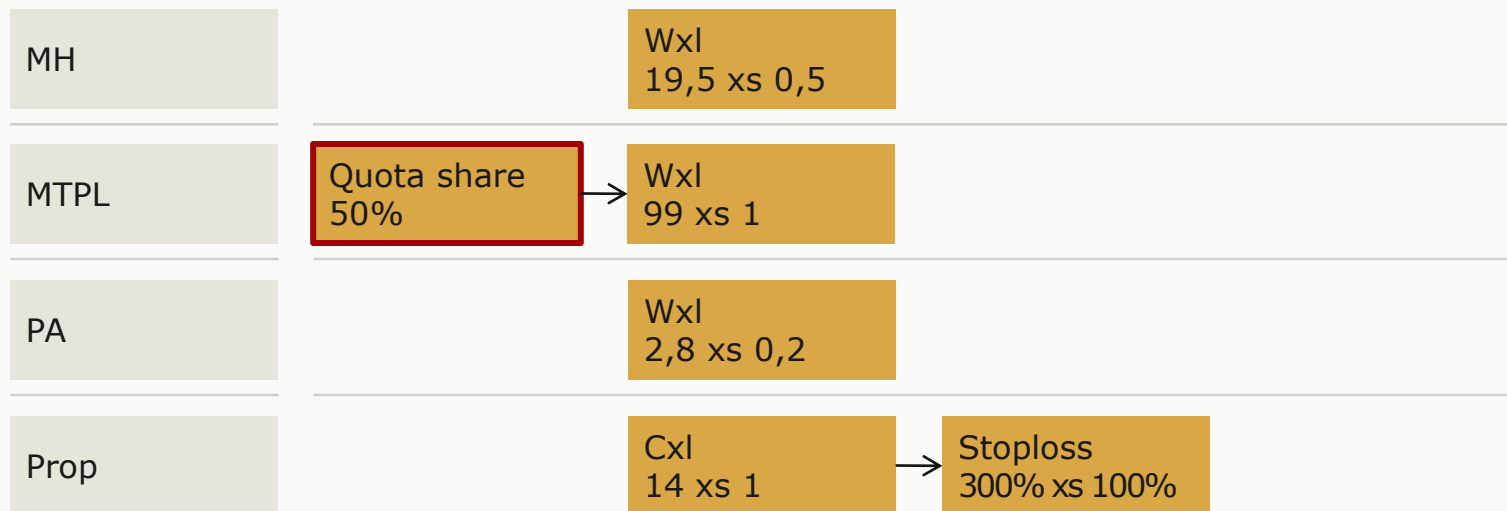
- Description of risk situation under current reinsurance cession

Answers to:

- What is the net capital requirement (SCR)?
- What is the main risk driver of the net portfolio?
- What capital relief does the client get from this reinsurance structure?
- Capital requirements below which level may supersede this reinsurance structure?



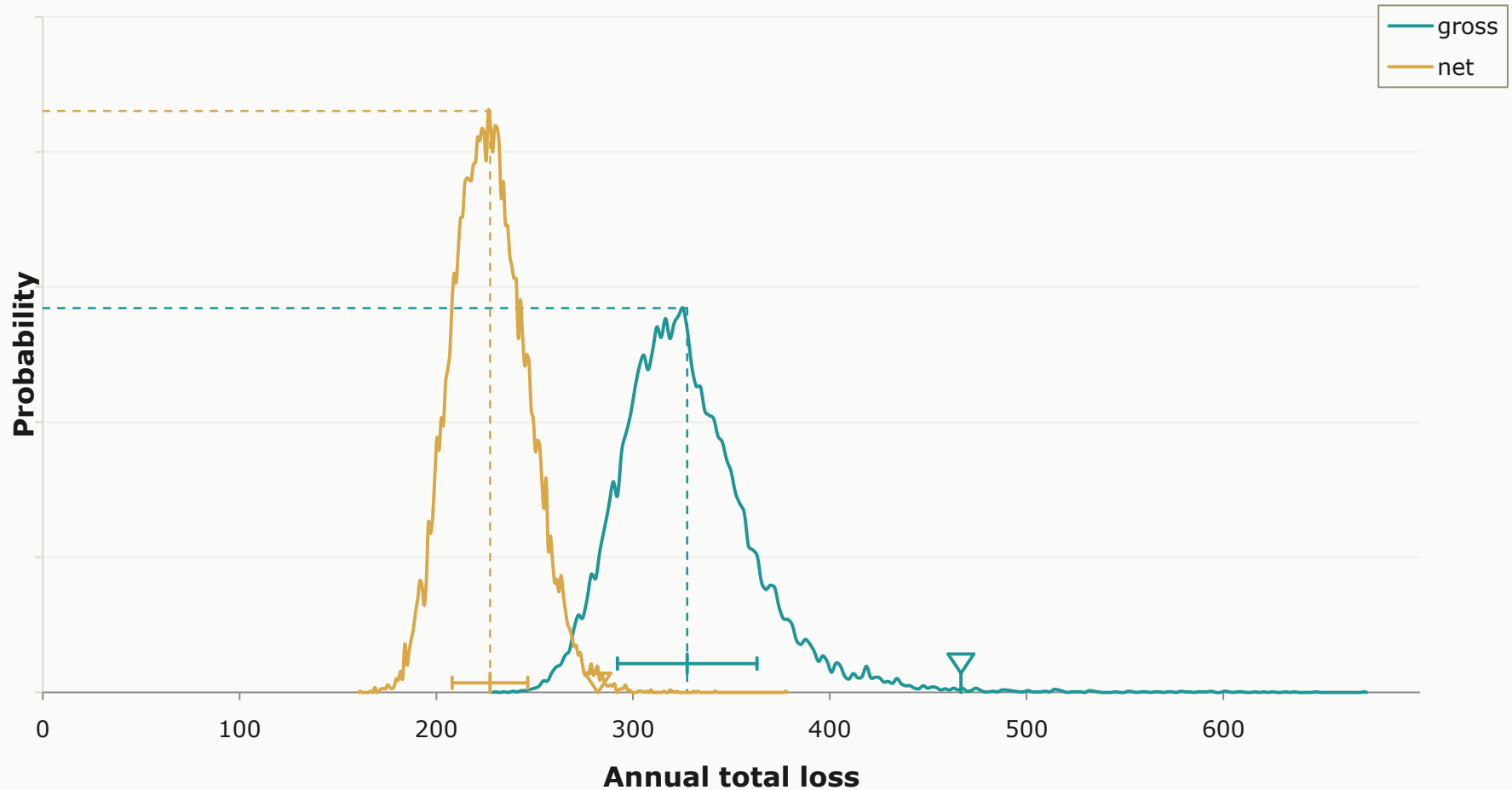
Reinsurance programme: NP+MTPL50



MTPL	Quota share 50%	WXL 99 xs 1
Based on	GNPI	Net
Limit	-	99.0
Att. Point	-	1.0
Rate	-	5.73%
AAL	-	990.0
Reinstatement	-	0
Share	50%	100%
Commission	16.7%	-

Annual total loss Gross vs net (NP+MTPL50)

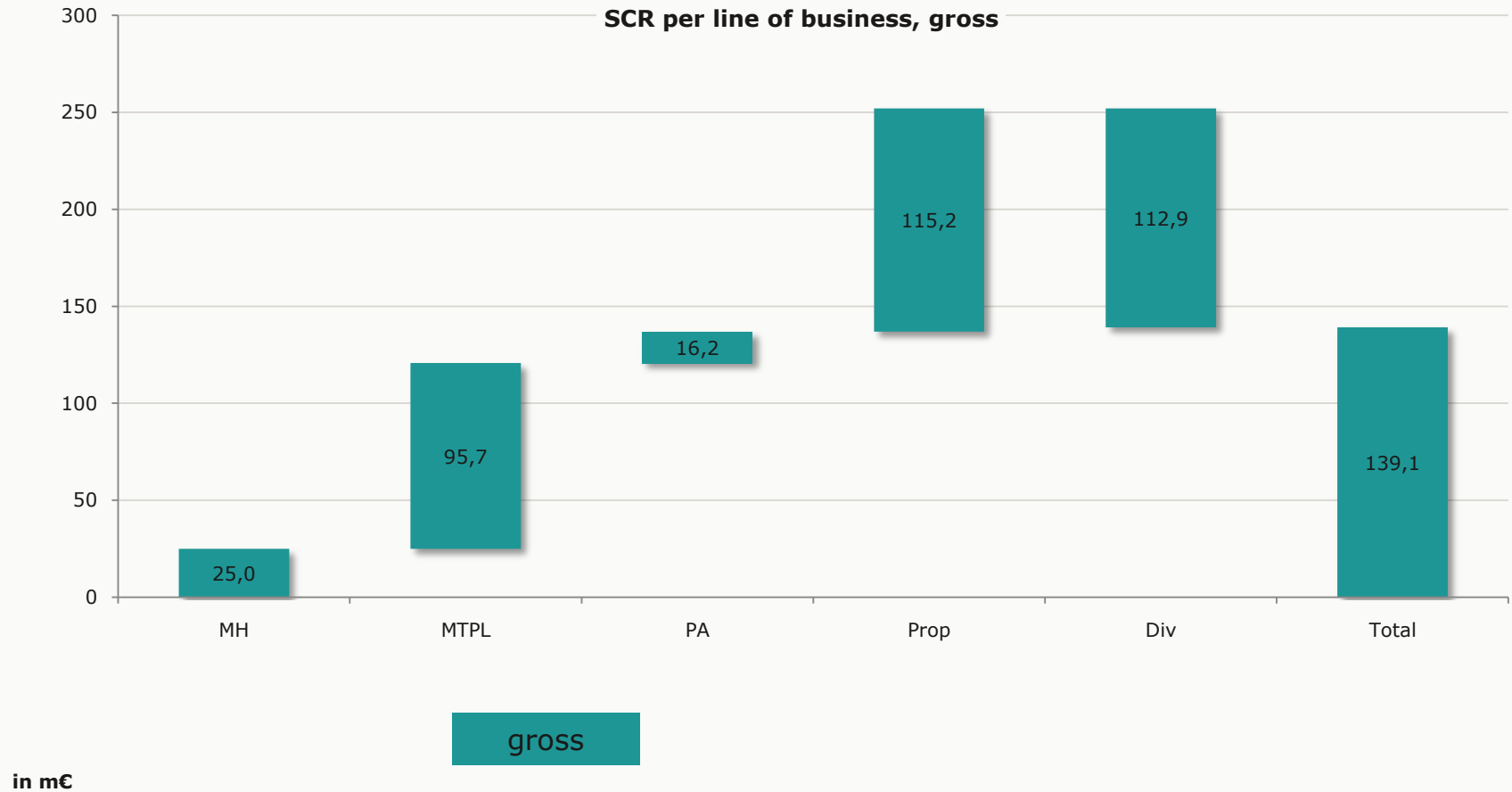
CapitalEagle: Annual total loss distribution



in m€

Net evaluation (NP+MTPL50)

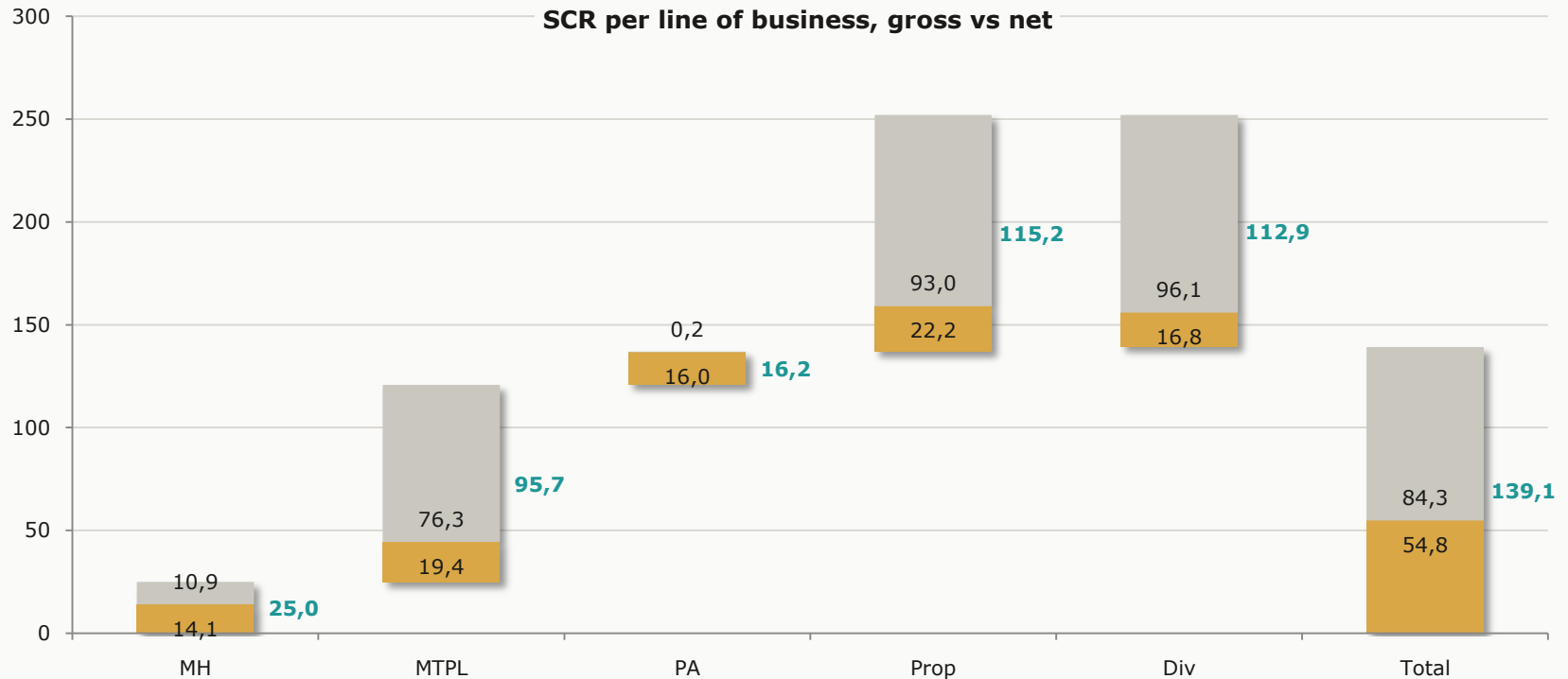
All lines of business, gross



Very heterogenous portfolio

Net evaluation (NP+MTPL50)

All lines of business, gross vs net



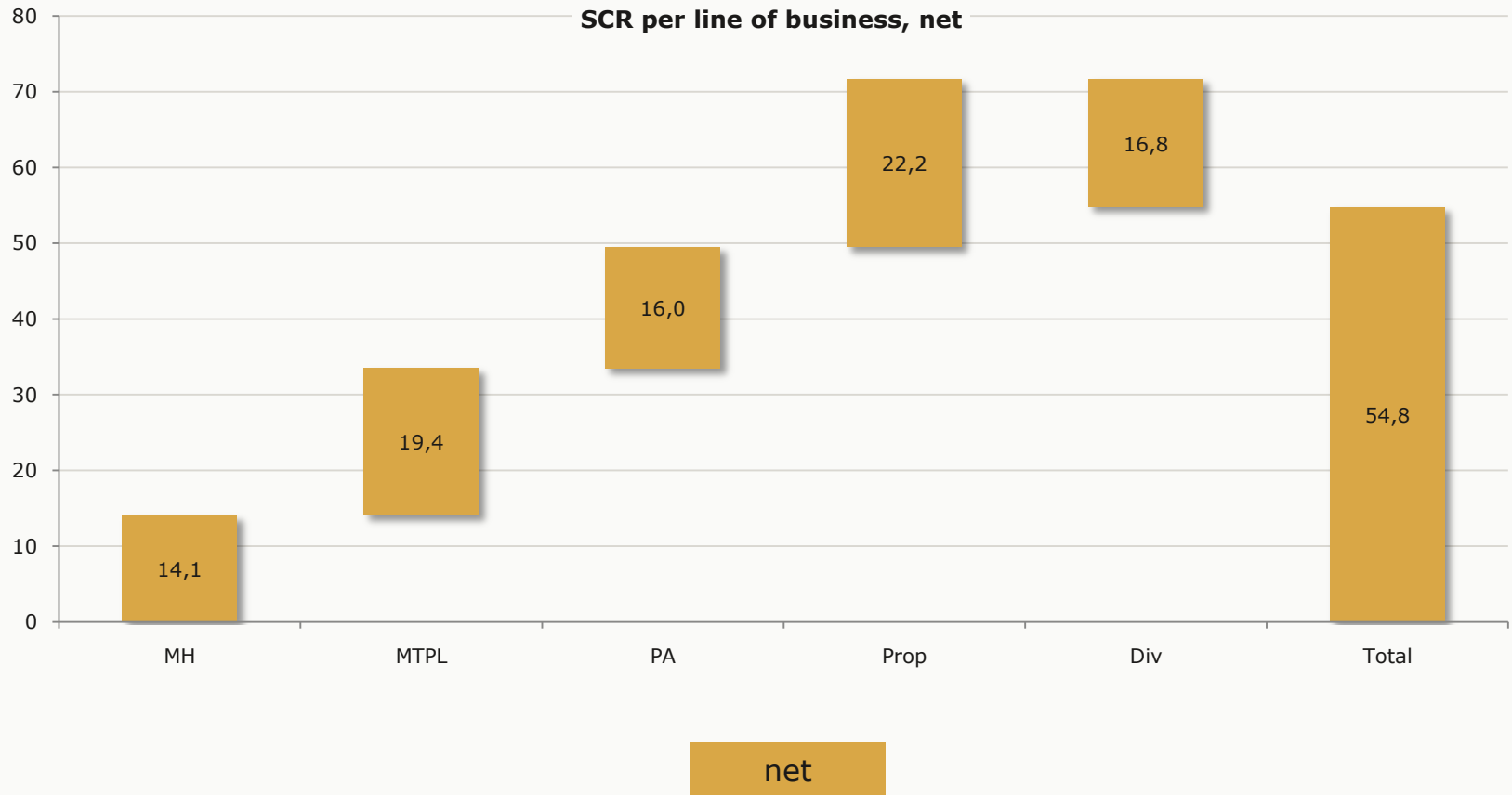
gross = net + ceded

in m€

The effects of reinsurance are made obvious

Net evaluation (NP+MTPL50)

All lines of business, net

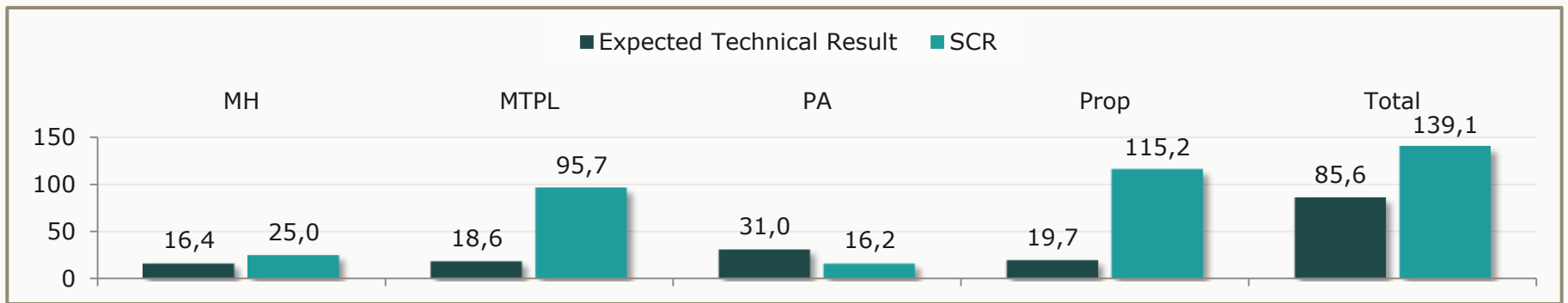


in m€

The net portfolio is more homogenous than the gross portfolio

Risk measures gross

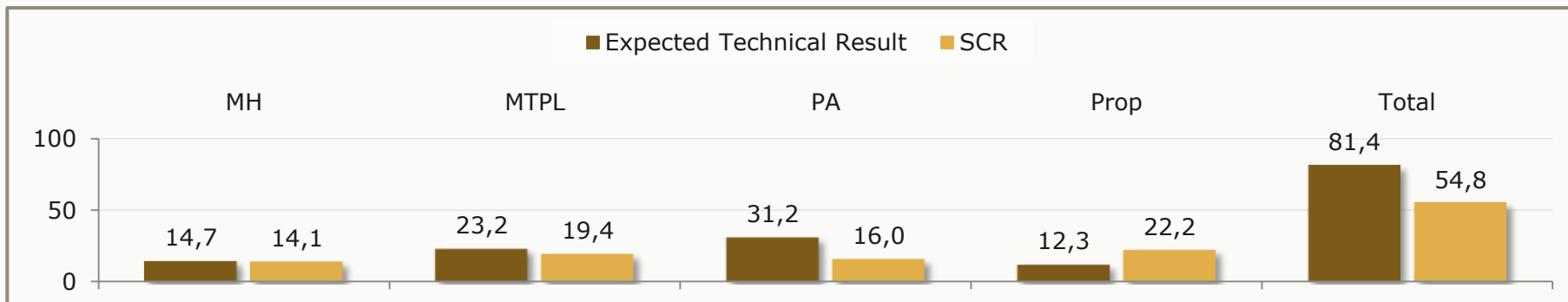
Gross						
	Premium	Expected loss	Expected techn. result	Loss ratio	Standard deviation	SCR
Motor hull	97.0	80.6	16.4	83.1%	7.1	25.0
Motor third party liability	189.2	170.7	18.6	90.2%	20.2	95.7
Personal accident	53.9	22.9	31.0	42.5%	5.0	16.2
Property	72.9	53.3	19.7	73.1%	22.4	115.2
Simple sum	413.1	327.5	85.6		54.7	252.1
Diversification					19.3	112.9
Total	413.1	327.5	85.6	79.3%	35.5	139.1



in m€

Risk measures net (NP+MTPL50)

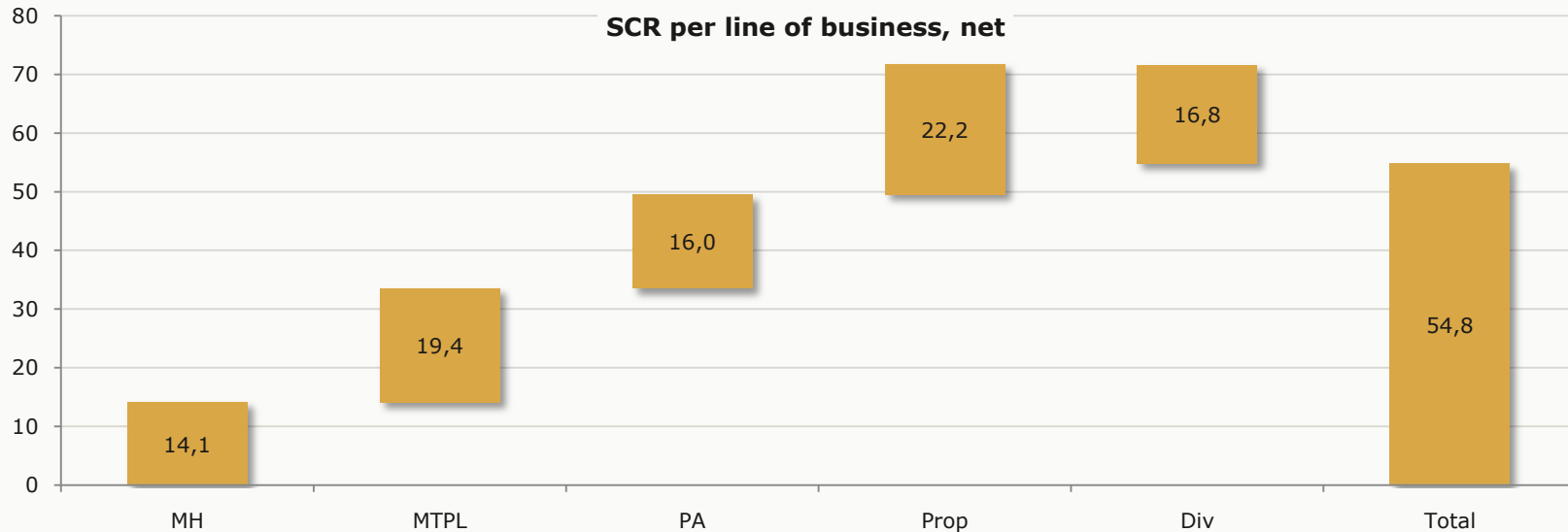
Net after RI (NP+MTPL50)						
	Premium + RI commission	Expected loss	Expected techn. result	Loss ratio	Standard deviation	SCR
Motor hull	92.8	78.1	14.7	84.1%	5.2	14.1
Motor third party liability	105.0	81.8	23.2	77.9%	6.9	19.4
Personal accident	52.9	21.8	31.2	41.1%	4.9	16.0
Property	57.9	45.6	12.3	78.8%	9.4	22.2
Simple sum	308.7	227.3	81.4		26.3	71.7
Diversification					7.1	16.8
Total	308.7	227.3	81.4	73.6%	19.2	54.8



in m€

Net evaluation

Impact of current reinsurance (NP+MTPL50)



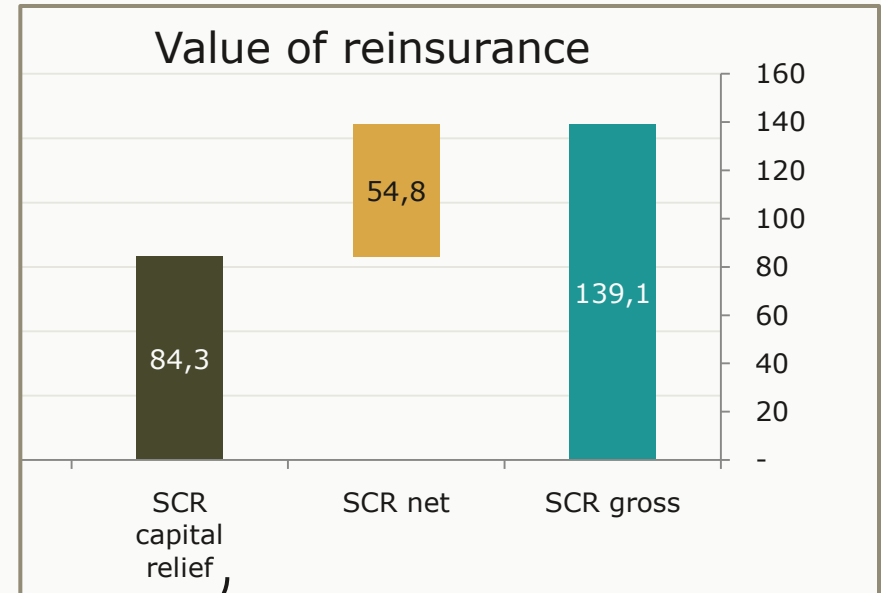
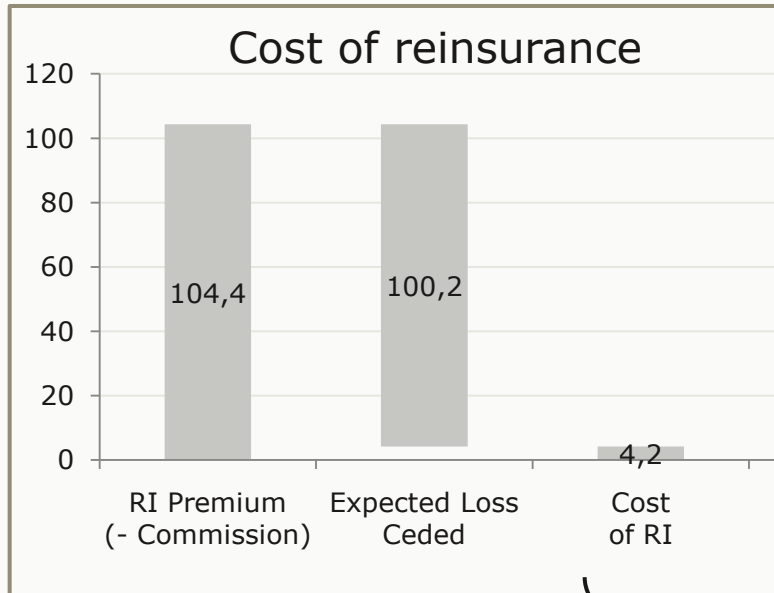
- Capital requirement of net portfolio (SCR) is 54.8 m€
- Capital relief of reinsurance structure NP on SCR is 84.3 m€

- Property now requires the most risk capital
- MTPL is not dominating the portfolio anymore

in m€

The net portfolio is very homogenous

Capital Cost Ratio of reinsurance programme NP+MTPL50



Compare this ratio with other financial instruments

Capital Cost Ratio change for different target rating (NP+MTPL50)

SCR relief



'A+' rating capital relief

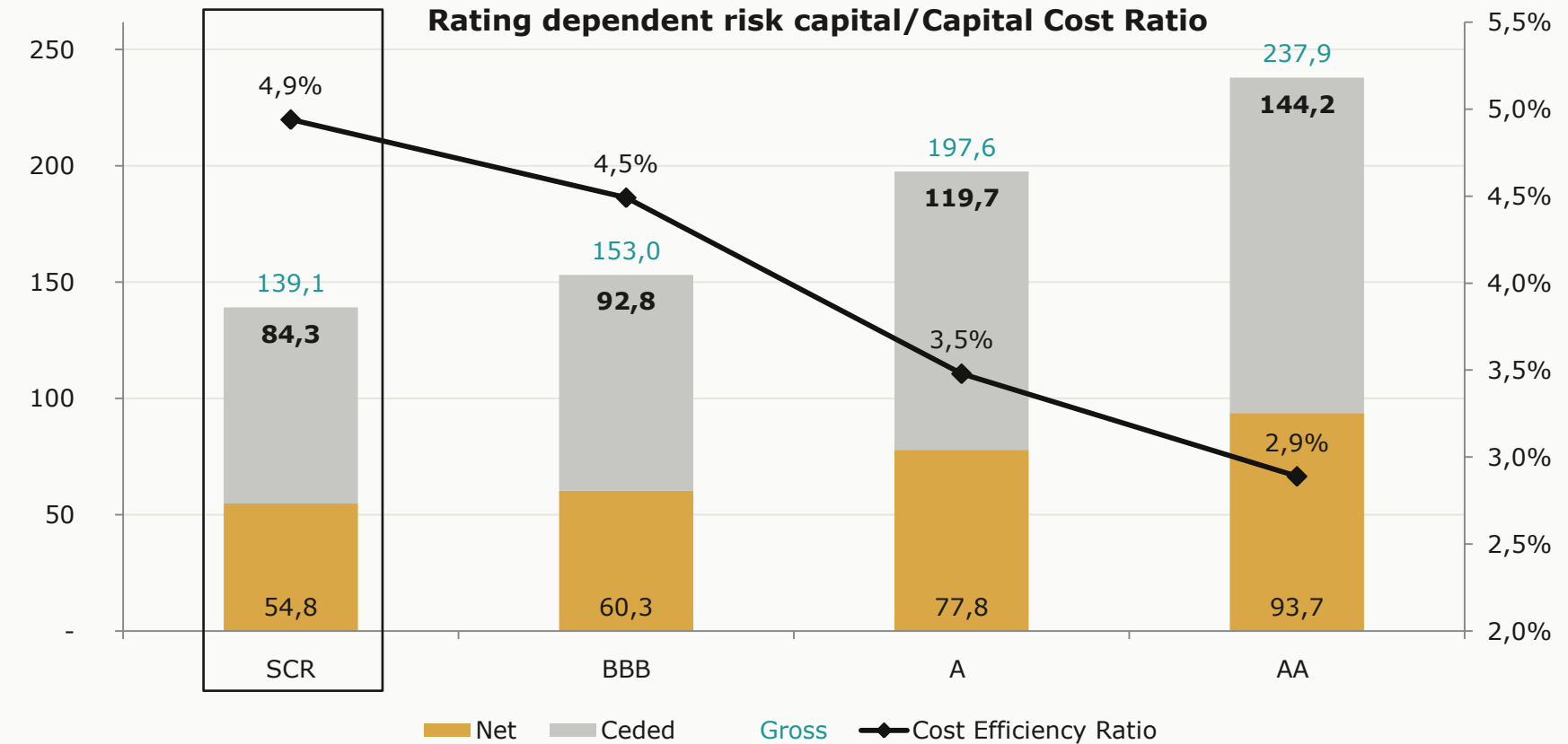


Values obtained by scaling SCR relief and are only illustrative

Higher target rating capital improves the Capital Cost Ratio

Net evaluation (NP+MTPL50)

Influence of rating



in m€

Values obtained by scaling SCR relief and are only illustrative

Superior Capital Cost Ratio of RI at higher ratings

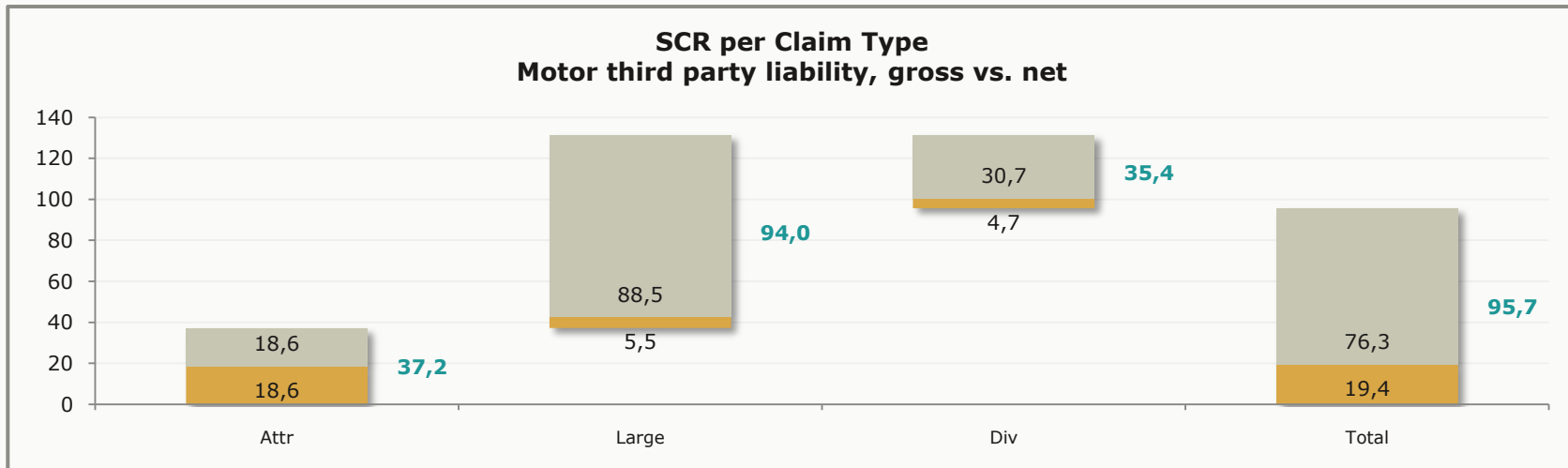
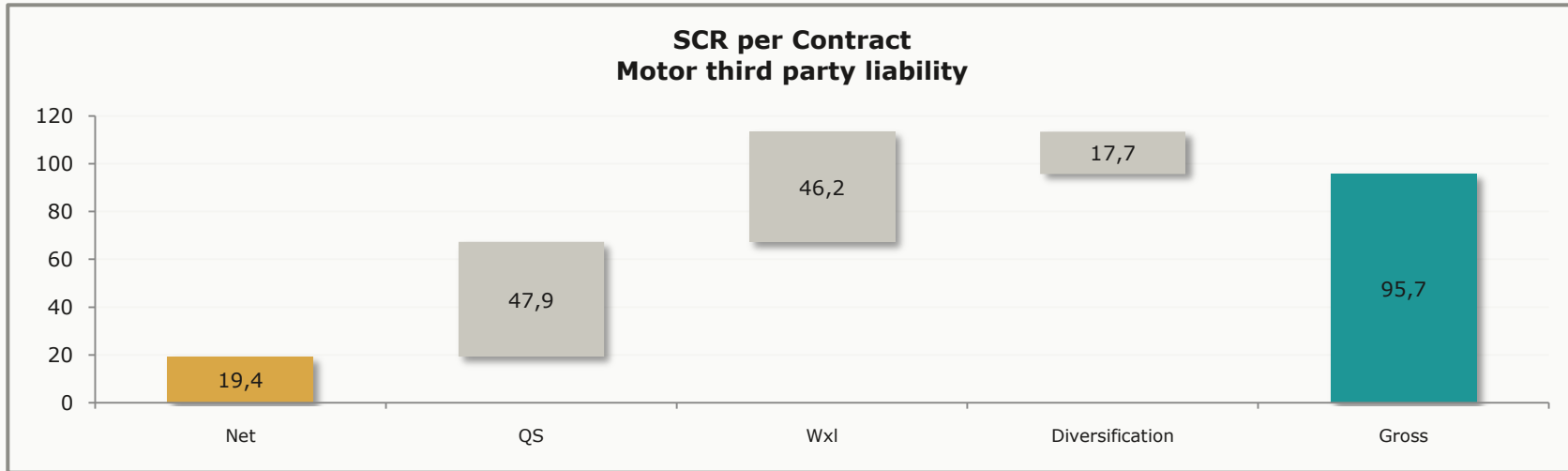
Gross-Net comparison

NP+MTPL50, reinsurance view

- The Risk Capital Relief from the gross portfolio to the net after reinsurance portfolio is as follows:
 - Motor hull: 10.9 m€
 - Motor third party liability: 76.3 m€
 - Personal accident: 0.2 m€
 - Property: 93.0 m€

- Where does the Risk Capital Relief come from?

Motor third party liability gross vs net (NP+MTPL50)



in m€

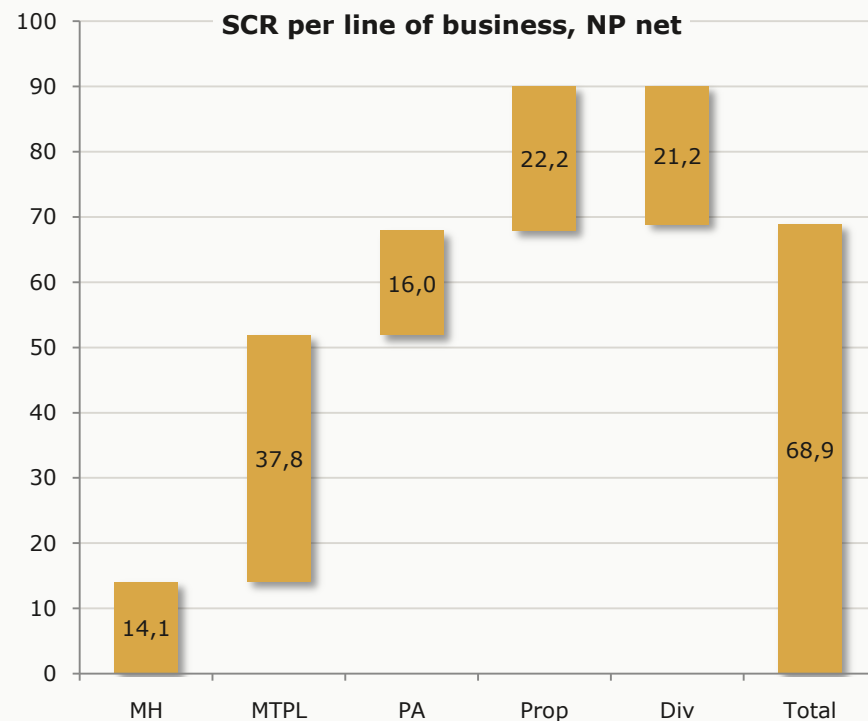
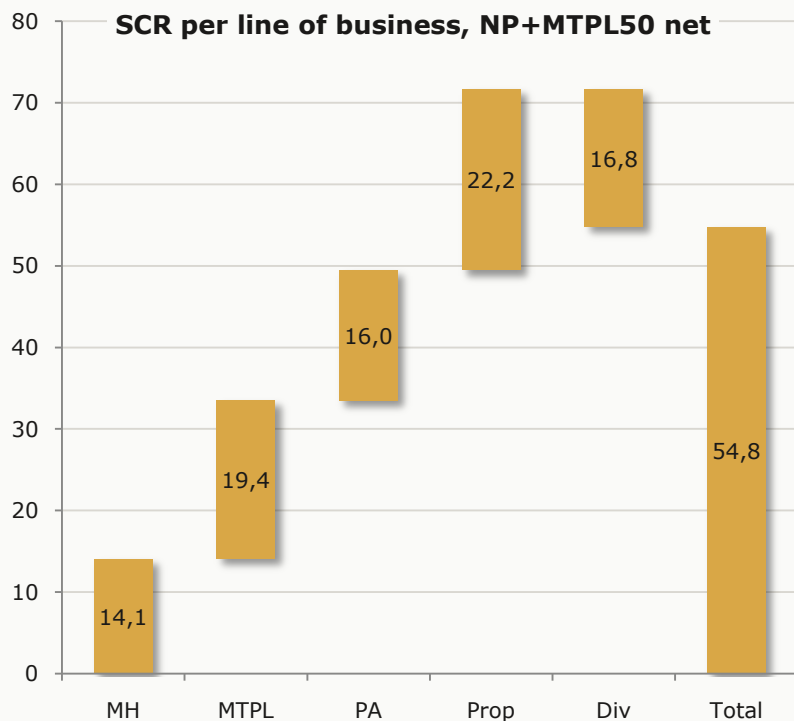
Motor third party liability gross vs net (NP+MTPL50)

Motor third party liability (NP+MTPL50)						
	Premium + RI commission	Expected loss	Expected techn. result	Standard deviation	Solvency Capital Requirement (SCR)	
Net (NP+MTPL50)	105.0	81.8	23.2	6.9	19.4	
Quota share	78.8	85.3	-6.5	10.1	47.9	
Wxl	5.4	3.5	1.9	6.9	46.2	
Simple sum	189.2	170.7	18.6	23.9	113.4	
Diversification				3.7	17.7	
Gross	189.2	170.7	18.6	20.2	95.7	

- The 50% Quota Share takes approx. 50% of the entire risk
- WXL treaty captures almost the entire remaining risk capital requirement for the Large Loss component
- All risk components are addressed by the reinsurance structure

Net comparison NP+MTPL50 vs NP

All lines of business, net



net

in m€

The net portfolio is more homogenous than the gross portfolio