

## Margin Example

The initial margin is calculated as the portfolio volatility. This can be done as shown in the following example, using a portfolio consisting of 5 equity instruments, in different quantities and directions (long or short).

The positions vector, which is the market value pr. ISIN, is multiplied by its corresponding margin rate. The correlation matrix is pre and post multiplied by the positions vector in order to obtain the portfolio variance, or the portfolio volatility, which in effect is the required margin.

	Qty.	Price	Position	MarginRate	Positions Vector
FOE	1000	189,9	189 900	10 %	18 990
NPRO	-25000	10,5	-262 500	20 %	-52 500
SEVAN	30000	7,265	217 950	16 %	34 872
SONG	30000	19,97	599 100	20 %	119 820
TGS	-5000	89,25	-446 250	16 %	-71 400
Total			298 200		

Transposed pos vector					Correlation Matrix				
18 990	-52 500	34 872	119 820	-71 400	1	0,58	0,6	0,66	0,49
					0,58	1	0,64	0,66	0,49
					0,6	0,64	1	0,52	0,53
					0,66	0,66	0,52	1	0,58
					0,49	0,49	0,53	0,58	1
Margin =		99 547							

The required margin is NOK 99 547. Should the margin have been calculated without taking the correlations in to account, the requirement would have been NOK 297 582.