

**Practical examples of Variation and Maintenance Margin.**

**Scenario (1); US Wind 1st Event \$10B at an initial contract price of ROL - 36.40 % ; Increasing threat, but ultimately no event exceeding the LTL occurs; At Expiration the Contract Settles at -0- (Event is NOT Triggered).**

Please note that this scenario of 'Hurricane Sam' is fictitious – used for demonstration purposes only.

Notional Amount		\$10000		Protection Buyer						
Date	Event	Daily Price (%)	Daily Price (\$)	Maintenance Margin % of Notional	Maintenance Margin (\$)	Variation Margin (\$)	Incremental Cash Flow (\$)	Cash Position Year to Date *	Maintenance Margin Account Balance (\$)	
02-Jan	Enter Contract	36.40%	\$3,640	2.0%	(\$200)	-	(\$200)	(\$200)	\$200	
02-Jun	Start of Hurricane Season	38.00%	\$3,800	6.0%	(\$400)	\$160	(\$240)	(\$440)	\$600	
01-Sep	Hurricane Sam Formation	46.00%	\$4,600	6.0%	-	\$800	\$800	\$360	\$600	
02-Sep	Sam heads towards US	41.90%	\$4,190	6.0%	-	(\$410)	(\$410)	(\$50)	\$600	
03-Sep	Sam heads towards US	38.75%	\$3,875	6.0%	-	(\$315)	(\$315)	(\$365)	\$600	
04-Sep	Sam heads towards US	41.25%	\$4,125	6.0%	-	\$250	\$250	(\$115)	\$600	
05-Sep	Sam heads towards US	41.25%	\$4,125	6.0%	-	-	-	(\$115)	\$600	
06-Sep	Sam heads towards US	41.25%	\$4,125	6.0%	-	-	-	(\$115)	\$600	
07-Sep	Sam heads towards US	41.25%	\$4,125	6.0%	-	-	-	(\$115)	\$600	
08-Sep	Sam heads towards US	45.75%	\$4,575	6.0%	-	\$450	\$450	\$335	\$600	
09-Sep	Sam heads towards US	50.00%	\$5,000	6.0%	-	\$425	\$425	\$760	\$600	
10-Sep	Moderate threat declared	52.00%	\$5,200	30.0%	(\$2,400)	\$200	(\$2,200)	(\$1,440)	\$3,000	
11-Sep	Moderate threat declared	60.00%	\$6,000	30.0%	-	\$800	\$800	(\$640)	\$3,000	
12-Sep	Moderate threat declared	62.00%	\$6,200	30.0%	-	\$200	\$200	(\$440)	\$3,000	
13-Sep	Sam dissipates before landfall	40.00%	\$4,000	6.0%	\$2,400	(\$2,200)	\$200	(\$240)	\$600	
14-Sep	Review of potential damage	38.00%	\$3,800	6.0%	-	(\$200)	(\$200)	(\$440)	\$600	
15-Sep	Initial PCS Estimate \$8.1bn	35.00%	\$3,500	6.0%	-	(\$300)	(\$300)	(\$740)	\$600	
30-Oct	No additional storm activity	15.00%	\$1,500	6.0%	-	(\$2,000)	(\$2,000)	(\$2,740)	\$600	
31-Dec	Contract Settles at -0-	0.00%	\$0	6.0%	\$600	(\$1,500)	(\$900)	(\$3,640)	\$0	
02-Jan	Position Closed	0.00%	\$0	0.0%	\$0	\$0	\$0	(\$3,640)	\$0	
						<b>Cumulative Cash Flow</b>	<b>(\$3,640)</b>	<b>(\$3,640)</b>	<b>(\$3,640)</b>	
				Protection Seller						
Date	Event	Daily Price (%)	Daily Price (\$)	Maintenance Margin % of Notional	Maintenance Margin (\$)	Variation Margin (\$)	Incremental Cash Flow (\$)	Cash Position Year to Date *	Maintenance Margin Account Balance (\$)	
02-Jan	Enter Contract	36.40%	\$3,640	8.0%	(\$800)	\$0	(\$800)	(\$800)	\$800	
02-Jun	Start of Hurricane Season	38.00%	\$3,800	24.0%	(\$1,600)	(\$160)	(\$1,760)	(\$2,560)	\$2,400	
01-Sep	Hurricane Sam Formation	46.00%	\$4,600	24.0%	\$0	(\$800)	(\$800)	(\$3,360)	\$2,400	
02-Sep	Sam heads towards US	41.90%	\$4,190	24.0%	\$0	\$410	\$410	(\$2,950)	\$2,400	
03-Sep	Sam heads towards US	38.75%	\$3,875	24.0%	\$0	\$315	\$315	(\$2,635)	\$2,400	
04-Sep	Sam heads towards US	41.25%	\$4,125	24.0%	\$0	(\$250)	(\$250)	(\$2,885)	\$2,400	
05-Sep	Sam heads towards US	41.25%	\$4,125	24.0%	\$0	\$0	\$0	(\$2,885)	\$2,400	
06-Sep	Sam heads towards US	41.25%	\$4,125	24.0%	\$0	\$0	\$0	(\$2,885)	\$2,400	
07-Sep	Sam heads towards US	41.25%	\$4,125	24.0%	\$0	\$0	\$0	(\$2,885)	\$2,400	
08-Sep	Sam heads towards US	45.75%	\$4,575	24.0%	\$0	(\$450)	(\$450)	(\$3,335)	\$2,400	
09-Sep	Sam heads towards US	50.00%	\$5,000	24.0%	\$0	(\$425)	(\$425)	(\$3,760)	\$2,400	
10-Sep	Moderate threat declared	52.00%	\$5,200	30.0%	(\$600)	(\$200)	(\$800)	(\$4,560)	\$3,000	
11-Sep	Moderate threat declared	60.00%	\$6,000	30.0%	\$0	(\$800)	(\$800)	(\$5,360)	\$3,000	
12-Sep	Moderate threat declared	62.00%	\$6,200	30.0%	\$0	(\$200)	(\$200)	(\$5,560)	\$3,000	
13-Sep	Sam dissipates before landfall	40.00%	\$4,000	30.0%	\$0	\$2,200	\$2,200	(\$3,360)	\$3,000	
14-Sep	Review of potential damage	38.00%	\$3,800	24.0%	\$600	\$200	\$800	(\$2,560)	\$2,400	
15-Sep	Initial PCS Estimate \$8.1bn	35.00%	\$3,500	24.0%	\$0	\$300	\$300	(\$2,260)	\$2,400	
30-Oct	No additional storm activity	1.00%	\$100	24.0%	\$0	\$3,400	\$3,400	\$1,140	\$2,400	
31-Dec	Contract Settles at -0-	0.00%	\$0	24.0%	\$0	\$100	\$100	\$1,240	\$2,400	
02-Jan	Position Closed	0.00%	\$0	0.0%	\$2,400	\$0	\$2,400	\$3,640	\$0	
						<b>Cumulative Cash Flow</b>	<b>\$3,640</b>	<b>\$3,640</b>	<b>\$3,640</b>	

\*

The 'Cash Position YTD' column shows what the protection buyer and protection seller had to deposit during the life of the contract to meet Maintenance Margin requirements.

**Practical examples of Variation and Maintenance Margin.**

**Scenario (2); US Wind 1st Event \$10B at an initial contract price of ROL - 36.40 % ; Increasing threat, and ultimately an event exceeding the LTL occurs; The Contract Settles at – 100 - (Event is Triggered).**

Please note that this scenario of 'Hurricane Sam' is fictitious – used for demonstration purposes only.

Notional Amount		Protection Buyer								
\$10000		Daily Price (%)	Daily Price (%)	Maintenance Margin % of Notional	Maintenance Margin	Variation Margin	Incremental Cash Flow	Cash Position Year to Date *	Maintenance Margin Account Balance	
Date	Event									
02-Jan	Enter Contract	36.40%	\$3,640	2.0%	(\$200)	-	(\$200)	(\$200)	\$200	
02-Jun	Start of Hurricane Season	38.00%	\$3,800	6.0%	(\$400)	\$160	(\$240)	(\$440)	\$600	
01-Sep	Hurricane Sam Formation	46.00%	\$4,600	6.0%	-	\$800	\$800	\$360	\$600	
02-Sep	Sam heads towards US	41.90%	\$4,190	6.0%	-	(\$410)	(\$410)	(\$50)	\$600	
03-Sep	Sam heads towards US	38.75%	\$3,875	6.0%	-	(\$315)	(\$315)	(\$365)	\$600	
04-Sep	Sam heads towards US	41.25%	\$4,125	6.0%	-	\$250	\$250	(\$115)	\$600	
05-Sep	Sam heads towards US	41.25%	\$4,125	6.0%	-	-	-	(\$115)	\$600	
06-Sep	Sam heads towards US	41.25%	\$4,125	6.0%	-	-	-	(\$115)	\$600	
07-Sep	Sam heads towards US	41.25%	\$4,125	6.0%	-	-	-	(\$115)	\$600	
08-Sep	Sam heads towards US	45.75%	\$4,575	6.0%	-	(\$450)	(\$450)	\$335	\$600	
09-Sep	Sam heads towards US	50.00%	\$5,000	6.0%	-	(\$425)	(\$425)	\$760	\$600	
10-Sep	Moderate threat declared	52.00%	\$5,200	30.0%	(\$2,400)	\$200	(\$2,200)	(\$1,440)	\$3,000	
11-Sep	Moderate threat declared	60.00%	\$6,000	30.0%	-	\$800	\$800	(\$640)	\$3,000	
12-Sep	Moderate threat declared	62.00%	\$6,200	30.0%	-	\$200	\$200	(\$440)	\$3,000	
13-Sep	US Landfall	65.00%	\$6,500	30.0%	-	\$300	\$300	(\$140)	\$3,000	
14-Sep	Severe threat declared	70.00%	\$7,000	80.0%	(\$4,000)	\$500	(\$3,500)	(\$3,640)	\$7,000	
15-Sep	Initial PCS Estimate \$8.1bn	80.00%	\$8,000	80.0%	(\$1,000)	\$1,000	-	(\$3,640)	\$8,000	
30-Dec	Next Estimate \$10.6bn	93.75%	\$9,375	80.0%	-	\$1,375	\$1,375	(\$2,265)	\$8,000	
31-Dec	Final PCS estimate triggers contracts	100.00%	\$10,000	80.0%	-	\$625	\$625	(\$1,640)	\$8,000	
02-Jan	Position closed	100.00%	\$10,000	0.0%	\$8,000	-	\$8,000	\$6,360	\$0	
						<b>Cumulative Cash Flow</b>	<b>\$6,360</b>	<b>\$6,360</b>	<b>\$6,360</b>	

		Protection Seller							
Date	Event	Daily Price (%)	Daily Price (%)	Maintenance Margin % of Notional	Maintenance Margin	Variation Margin	Incremental Cash Flow	Cash Position Year to Date *	Maintenance Margin Account Balance
02-Jan	Enter Contract	36.40%	\$3,640	8.0%	(\$800)	\$0	(\$800)	(\$800)	\$800
02-Jun	Start of Hurricane Season	38.00%	\$3,800	24.0%	(\$1,600)	(\$160)	(\$1,760)	(\$2,560)	\$2,400
01-Sep	Hurricane Sam Formation	46.00%	\$4,600	24.0%	\$0	(\$800)	(\$800)	(\$3,360)	\$2,400
02-Sep	Sam heads towards US	41.90%	\$4,190	24.0%	\$0	\$410	\$410	(\$2,950)	\$2,400
03-Sep	Sam heads towards US	38.75%	\$3,875	24.0%	\$0	\$315	\$315	(\$2,635)	\$2,400
04-Sep	Sam heads towards US	41.25%	\$4,125	24.0%	\$0	(\$250)	(\$250)	(\$2,885)	\$2,400
05-Sep	Sam heads towards US	41.25%	\$4,125	24.0%	\$0	\$0	\$0	(\$2,885)	\$2,400
06-Sep	Sam heads towards US	41.25%	\$4,125	24.0%	\$0	\$0	\$0	(\$2,885)	\$2,400
07-Sep	Sam heads towards US	41.25%	\$4,125	24.0%	\$0	\$0	\$0	(\$2,885)	\$2,400
08-Sep	Sam heads towards US	45.75%	\$4,575	24.0%	\$0	(\$450)	(\$450)	(\$3,335)	\$2,400
09-Sep	Sam heads towards US	50.00%	\$5,000	24.0%	\$0	(\$425)	(\$425)	(\$3,760)	\$2,400
10-Sep	Moderate threat declared	52.00%	\$5,200	30.0%	(\$600)	(\$200)	(\$800)	(\$4,560)	\$3,000
11-Sep	Moderate threat declared	60.00%	\$6,000	30.0%	\$0	(\$800)	(\$800)	(\$5,360)	\$3,000
12-Sep	Moderate threat declared	62.00%	\$6,200	30.0%	\$0	(\$200)	(\$200)	(\$5,560)	\$3,000
13-Sep	US landfall	65.00%	\$6,500	30.0%	\$0	(\$300)	(\$300)	(\$5,860)	\$3,000
14-Sep	Review of potential damage	70.00%	\$7,000	20.0%	\$1,000	(\$500)	\$500	(\$5,360)	\$2,000
15-Sep	Initial PCS Estimate \$8.1bn	80.00%	\$8,000	20.0%	\$0	(\$1,000)	(\$1,000)	(\$6,360)	\$2,000
30-Oct	Next Estimate \$10.6bn	93.75%	\$9,375	20.0%	\$1,375	(\$1,375)	\$0	(\$6,360)	\$625
31-Dec	Contract Settles at -100-	100.00%	\$10,000	20.0%	\$625	(\$625)	\$0	(\$6,360)	\$0
02-Jan	Position Closed	100.00%	\$10,000	0.0%	\$0	\$0	\$0	(\$6,360)	\$0
						<b>Cumulative Cash Flow</b>	<b>(\$6,360)</b>	<b>(\$6,360)</b>	<b>(\$6,360)</b>

\* The 'Cash Position YTD' column shows what the protection buyer and protection seller had to deposit during the life of the contract to meet Maintenance Margin requirements.