# ClauseLens + MARL Investor Report

This report summarizes 4 multi-agent treaty bidding episodes powered by ClauseLens. It includes KPIs, winning bids, and full regulatory clause documentation.

# **Portfolio Summary KPIs**

Episodes: 4

Average Profit: \$61,750

Average CVaR: \$61,336

Compliance Rate: 100%

# **Episode 1 - Lakeside Mutual**

Peril: Hail

Region: Texas

Exposure: \$4,800,000

Limit: 35%

Quota Share Cap: 55%

Notes: High hail frequency in Tornado Alley; XOL coverage required.

## Winning Bid (MARL Agent)

Quota Share: 48%

Premium: \$341,177

Expected Loss: \$278,796

Tail Risk: \$87,599

### **ClauseLens Explanation**

This bid proposes a 48% quota share with a premium of \$341,177, covering an expected loss of \$278,796 and tail-risk exposure (CVaR) of \$87,599. It aligns with the following regulatory and structural requirements:

- [Clause 13] (Catastrophe Risk) All catastrophe treaties must comply with local solvency stress testing for hurricane and earthquake scenarios.
- [Clause 6] (Catastrophe Risk) Catastrophe treaty exposures must pass 1-in-200 year Probable Maximum Loss (PML) stress tests.
- [Clause 19] (Emerging Risk) Climate change risk assessments should be incorporated into property catastrophe reinsurance treaties.

### Rationale:

- The premium exceeds the expected loss, ensuring a positive risk margin.
- Quota share and tail-risk are within regulatory thresholds.
- Retrieved clauses confirm compliance with capital and reporting standards.

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### **Retrieved Clauses**

[Catastrophe Risk] All catastrophe treaties must comply with local solvency stress testing for hurricane and earthquake scenarios. (Jurisdiction: Global)

[Catastrophe Risk] Catastrophe treaty exposures must pass 1-in-200 year Probable Maximum Loss

(PML) stress tests. (Jurisdiction: Global)

[Emerging Risk] Climate change risk assessments should be incorporated into property catastrophe reinsurance treaties. (Jurisdiction: Global)

# **Episode 1 - Alpine Re**

Peril: Avalanche

Region: Switzerland

Exposure: \$2,000,000

Limit: 30%

Quota Share Cap: 40%

Notes: Mountain resort exposure requiring seasonal avalanche reinsurance.

# Winning Bid (MARL Agent)

Quota Share: 34%

Premium: \$100,749

Expected Loss: \$78,137

Tail Risk: \$16,016

### ClauseLens Explanation

This bid proposes a 34% quota share with a premium of \$100,749, covering an expected loss of \$78,137 and tail-risk exposure (CVaR) of \$16,016. It aligns with the following regulatory and structural requirements:

- [Clause 19] (Emerging Risk) Climate change risk assessments should be incorporated into property catastrophe reinsurance treaties.
- [Clause 20] (Governance) Reinsurance programs must be reviewed annually to confirm alignment with Board-approved risk appetite.
- [Clause 8] (Risk Transfer) Reinsurance contracts should provide risk transfer under US SSAP No. 62 guidelines.

### Rationale:

- The premium exceeds the expected loss, ensuring a positive risk margin.
- Quota share and tail-risk are within regulatory thresholds.
- Retrieved clauses confirm compliance with capital and reporting standards.

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### **Retrieved Clauses**

[Emerging Risk] Climate change risk assessments should be incorporated into property catastrophe reinsurance treaties. (Jurisdiction: Global)

[Governance] Reinsurance programs must be reviewed annually to confirm alignment with

Board-approved risk appetite. (Jurisdiction: Global)

[Risk Transfer] Reinsurance contracts should provide risk transfer under US SSAP No. 62 guidelines. (Jurisdiction: US)

# **Episode 1 - Alpine Re**

Peril: Avalanche

Region: Switzerland

Exposure: \$2,000,000

Limit: 30%

Quota Share Cap: 40%

Notes: Mountain resort exposure requiring seasonal avalanche reinsurance.

## Winning Bid (MARL Agent)

Quota Share: 28%

Premium: \$136,847

Expected Loss: \$105,118

Tail Risk: \$27,891

### **ClauseLens Explanation**

This bid proposes a 28% quota share with a premium of \$136,847, covering an expected loss of \$105,118 and tail-risk exposure (CVaR) of \$27,891. It aligns with the following regulatory and structural requirements:

- [Clause 19] (Emerging Risk) Climate change risk assessments should be incorporated into property catastrophe reinsurance treaties.
- [Clause 20] (Governance) Reinsurance programs must be reviewed annually to confirm alignment with Board-approved risk appetite.
- [Clause 8] (Risk Transfer) Reinsurance contracts should provide risk transfer under US SSAP No. 62 guidelines.

### Rationale:

- The premium exceeds the expected loss, ensuring a positive risk margin.
- Quota share and tail-risk are within regulatory thresholds.
- Retrieved clauses confirm compliance with capital and reporting standards.

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### **Retrieved Clauses**

[Emerging Risk] Climate change risk assessments should be incorporated into property catastrophe reinsurance treaties. (Jurisdiction: Global)

[Governance] Reinsurance programs must be reviewed annually to confirm alignment with

Board-approved risk appetite. (Jurisdiction: Global)

[Risk Transfer] Reinsurance contracts should provide risk transfer under US SSAP No. 62 guidelines. (Jurisdiction: US)

# **Episode 1 - Euro Allianz**

Peril: Windstorm

Region: Western Europe

Exposure: \$10,000,000

Limit: 45%

Quota Share Cap: 60%

Notes: Seasonal European windstorm coverage with diversified portfolio.

## Winning Bid (MARL Agent)

Quota Share: 28%

Premium: \$552,770

Expected Loss: \$422,491

Tail Risk: \$113,839

### ClauseLens Explanation

This bid proposes a 28% quota share with a premium of \$552,770, covering an expected loss of \$422,491 and tail-risk exposure (CVaR) of \$113,839. It aligns with the following regulatory and structural requirements:

- [Clause 19] (Emerging Risk) Climate change risk assessments should be incorporated into property catastrophe reinsurance treaties.
- [Clause 4] (Underwriting & Retention) Treaty coverage must align with the insurers capital buffer and retention strategy.
- [Clause 6] (Catastrophe Risk) Catastrophe treaty exposures must pass 1-in-200 year Probable Maximum Loss (PML) stress tests.

### Rationale:

- The premium exceeds the expected loss, ensuring a positive risk margin.
- Quota share and tail-risk are within regulatory thresholds.
- Retrieved clauses confirm compliance with capital and reporting standards.

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### **Retrieved Clauses**

[Emerging Risk] Climate change risk assessments should be incorporated into property catastrophe reinsurance treaties. (Jurisdiction: Global)

[Underwriting & Retention] Treaty coverage must align with the insurers capital buffer and retention

strategy. (Jurisdiction: Global)

[Catastrophe Risk] Catastrophe treaty exposures must pass 1-in-200 year Probable Maximum Loss (PML) stress tests. (Jurisdiction: Global)

# Profit vs Tail-Risk (CVaR)

Profit vs Tail-Risk Comparison

