

Reading: Fisher.AggExcess

Fisher_AggDed (Problem 1)

Model: Source text

Problem Type: Calculate the amount paid by the insured and the insurer under a per-occurrence and aggregate deductible policy.

Given A Commercial General Liability policy has a per-occurrence deductible and an aggregate deductible of:

\$115,000 Per-occurrence deductible

\$450,000 Aggregate deductible

Find Calculate the insurance payments and the insured's cumulative deductible payment for each quarter.

| Date | Dollars of loss on claims that are each less than \$115,000 (1) | Number of claims over \$115,000 (2) | Ground up loss dollars on claims over \$115,000 (3) | Deductible (4) | Insurance payment (5) | Cumulative Deductible (6) |
|------|--|---|--|-------------------|-----------------------------|---------------------------------|
| Q1 | \$118,500 | 0 | \$0 | ? | ? | ? |
| Q2 | \$125,000 | 2 | \$274,000 | ? | ? | ? |
| Q3 | \$108,000 | 0 | \$0 | ? | ? | ? |
| Q4 | \$105,500 | 1 | \$247,000 | ? | ? | ? |

Solution

Each claim under the per-occurrence deductible is covered entirely by the insured unless their cumulative deductible payments reaches the aggregate limit. Each claim over the per-occurrence deductible contributes the per-occurrence limit to the cumulative deductible until the aggregate deductible limit is reached.

We're given the ground-up losses for claims in excess of the per-occurrence limit. To solve the problem, figure out the applicable deductible for each quarter. The insurance payment is the difference between the total claims and the deductible.

Applying this we get

| Date | Dollars of loss on claims that are each less than \$115,000 (1) | Number of claims over \$115,000 (2) | Ground up loss dollars on claims over \$115,000 (3) | Deductible (4) | Insurance payment (5) | Cumulative Deductible (6) |
|------|--|--|--|-------------------|--------------------------|------------------------------|
| Q1 | \$118,500 | 0 | \$0 | \$118,500 | \$0 | \$118,500 |
| Q2 | \$125,000 | 2 | \$274,000 | \$331,500 | \$67,500 | \$450,000 |
| Q3 | \$108,000 | 0 | \$0 | \$0 | \$108,000 | \$450,000 |
| Q4 | \$105,500 | 1 | \$247,000 | \$0 | \$352,500 | \$450,000 |

(4) = min{ (1) + (2) * [Per-occurrence limit], [Aggregate limit] - Prior row (6) }

(5) = (1) + (3) - (4)

Note:

A potential twist is being given aggregate losses in excess of the per-occurrence deductible in column (3) above.

Reading: Fisher.AggExcess

Fisher_AggDed (Problem 2)

Model: Source text

Problem Type: Calculate the amount paid by the insured and the insurer under a per-occurrence and aggregate deductible policy.

Given A Commercial General Liability policy has a per-occurrence deductible and an aggregate deductible of:

\$105,000 Per-occurrence deductible

\$540,000 Aggregate deductible

Find Calculate the insurance payments and the insured's cumulative deductible payment for each quarter.

| | Dollars of loss on claims that are each less than \$105,000 | Number of claims over \$105,000 | Ground up loss dollars on claims over \$105,000 | Deductible | Insurance payment | Cumulative Deductible |
|------|---|------------------------------------|---|------------|----------------------|--------------------------|
| Date | (1) | (2) | (3) | (4) | (5) | (6) |
| Q1 | \$141,000 | 0 | \$0 | ? | ? | ? |
| Q2 | \$137,500 | 1 | \$229,000 | ? | ? | ? |
| Q3 | \$144,500 | 2 | \$292,000 | ? | ? | ? |
| Q4 | \$132,500 | 2 | \$536,000 | ? | ? | ? |

Solution

Each claim under the per-occurrence deductible is covered entirely by the insured unless their cumulative deductible payments reaches the aggregate limit. Each claim over the per-occurrence deductible contributes the per-occurrence limit to the cumulative deductible until the aggregate deductible limit is reached.

We're given the ground-up losses for claims in excess of the per-occurrence limit. To solve the problem, figure out the applicable deductible for each quarter. The insurance payment is the difference between the total claims and the deductible.

Applying this we get

| Date | Dollars of loss on claims that are each less than \$105,000 (1) | Number of claims over \$105,000 (2) | Ground up loss dollars on claims over \$105,000 (3) | Deductible (4) | Insurance payment (5) | Cumulative Deductible (6) |
|------|--|--|--|-------------------|--------------------------|------------------------------|
| Q1 | \$141,000 | 0 | \$0 | \$141,000 | \$0 | \$141,000 |
| Q2 | \$137,500 | 1 | \$229,000 | \$242,500 | \$124,000 | \$383,500 |
| Q3 | \$144,500 | 2 | \$292,000 | \$156,500 | \$280,000 | \$540,000 |
| Q4 | \$132,500 | 2 | \$536,000 | \$0 | \$668,500 | \$540,000 |

(4) = $\min\{ (1) + (2) * [\text{Per-occurrence limit}], [\text{Aggregate limit}] - \text{Prior row (6)} \}$

(5) = (1) + (3) - (4)

Reading: Fisher.AggExcess

Fisher_AggDed (Problem 3)

Model: Source text

Problem Type: Calculate the amount paid by the insured and the insurer under a per-occurrence and aggregate deductible policy.

Given A Commercial General Liability policy has a per-occurrence deductible and an aggregate deductible of:

\$100,000 Per-occurrence deductible

\$500,000 Aggregate deductible

Find Calculate the insurance payments and the insured's cumulative deductible payment for each quarter.

| Date | Dollars of loss on claims that are each less than \$100,000 (1) | Number of claims over \$100,000 (2) | Excess loss dollars on claims over \$100,000 (3) | Deductible (4) | Insurance payment (5) | Cumulative Deductible (6) |
|------|--|---|---|-------------------|-----------------------------|---------------------------------|
| Q1 | \$132,500 | 0 | \$0 | ? | ? | ? |
| Q2 | \$93,000 | 2 | \$350,000 | ? | ? | ? |
| Q3 | \$105,000 | 0 | \$0 | ? | ? | ? |
| Q4 | \$122,500 | 1 | \$150,000 | ? | ? | ? |

Solution

Each claim under the per-occurrence deductible is covered entirely by the insured unless their cumulative deductible payments reaches the aggregate deductible. Each claim over the per-occurrence deductible contributes the per-occurrence limit to the cumulative deductible until the aggregate deductible is reached.

We're given excess losses for claims over the per-occurrence limit, i.e. we need to add the per-occurrence deductible back in to get the ground up loss. Now figure out the applicable deductible in each quarter. The insurance payment is the difference between the total claims and the deductible.

Applying this we get

| Date | Dollars of loss on claims that are each less than \$100,000 (1) | Number of claims over \$100,000 (2) | Excess loss dollars on claims over \$100,000 (3) | Deductible (4) | Insurance payment (5) | Cumulative Deductible (6) |
|------|--|--|---|-------------------|--------------------------|------------------------------|
| Q1 | \$132,500 | 0 | \$0 | \$132,500 | \$0 | \$132,500 |
| Q2 | \$93,000 | 2 | \$350,000 | \$293,000 | \$350,000 | \$425,500 |
| Q3 | \$105,000 | 0 | \$0 | \$74,500 | \$30,500 | \$500,000 |
| Q4 | \$122,500 | 1 | \$150,000 | \$0 | \$372,500 | \$500,000 |

(4) = $\min\{ (1) + (2) * [\text{Per-occurrence deductible}], [\text{Aggregate deductible}] - \text{Prior row (6)} \}$

(5) = $(1) + (2) * [\text{per-occurrence deductible}] + (3) - (4)$

Reading: Fisher.AggExcess

Fisher_AggDed (Problem 4)

Model: Source text

Problem Type: Calculate the amount paid by the insured and the insurer under a per-occurrence and aggregate deductible policy.

Given A Commercial General Liability policy has a per-occurrence deductible and an aggregate deductible of:

\$85,000 Per-occurrence deductible

\$480,000 Aggregate deductible

Find Calculate the insurance payments and the insured's cumulative deductible payment for each quarter.

| | Dollars of loss on claims that are each less than \$85,000 | Number of claims over \$85,000 | Excess loss dollars on claims over \$85,000 | Deductible | Insurance payment | Cumulative Deductible |
|------|--|-----------------------------------|---|------------|----------------------|--------------------------|
| Date | (1) | (2) | (3) | (4) | (5) | (6) |
| Q1 | \$145,000 | 0 | \$0 | ? | ? | ? |
| Q2 | \$93,000 | 2 | \$516,000 | ? | ? | ? |
| Q3 | \$109,000 | 1 | \$298,000 | ? | ? | ? |
| Q4 | \$127,000 | 3 | \$708,000 | ? | ? | ? |

Solution

Each claim under the per-occurrence deductible is covered entirely by the insured unless their cumulative deductible payments reaches the aggregate deductible. Each claim over the per-occurrence deductible contributes the per-occurrence limit to the cumulative deductible until the aggregate deductible is reached.

We're given excess losses for claims over the per-occurrence limit, i.e. we need to add the per-occurrence deductible back in to get the ground up loss. Now figure out the applicable deductible in each quarter. The insurance payment is the difference between the total claims and the deductible.

Applying this we get

| Date | Dollars of loss on claims that are each less than \$85,000 (1) | Number of claims over \$85,000 (2) | Excess loss dollars on claims over \$85,000 (3) | Deductible (4) | Insurance payment (5) | Cumulative Deductible (6) |
|------|---|---------------------------------------|--|-------------------|--------------------------|------------------------------|
| Q1 | \$145,000 | 0 | \$0 | \$145,000 | \$0 | \$145,000 |
| Q2 | \$93,000 | 2 | \$516,000 | \$263,000 | \$516,000 | \$408,000 |
| Q3 | \$109,000 | 1 | \$298,000 | \$72,000 | \$420,000 | \$480,000 |
| Q4 | \$127,000 | 3 | \$708,000 | \$0 | \$1,090,000 | \$480,000 |

(4) = $\min\{ (1) + (2) * [\text{Per-occurrence deductible}], [\text{Aggregate deductible}] - \text{Prior row (6)} \}$

(5) = $(1) + (2) * [\text{per-occurrence deductible}] + (3) - (4)$