2020 Eighth Annual Case Competition

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BLOCK DENTAL

- Founded 2012
- New businesses
- Loss Ratio: 88% → 70%
CASE

OBJECTIVES

01
Problem: Loss Ratio of 88%

Solution: Stricter Renewal Policy
ANALYSIS BASED ON BANDS
Win Rate

Win Cases

Total Cases
Loss Ratio

Win Rate (Loss Ratio)

R² = 0.8822

Win Rate (in %):
- 100%
- 95%
- 90%
- 85%
- 80%
- 75%
- 70%
- 65%
- 60%

Loss Ratio (Band):
- 1
- 2
- 3
- 4
- 5
- 6
Net Dental Renewal Increase

Win Rate (Net Dental Renewal Increase)

Win Rate

Net Dental Renewal Increase (Band)

$R^2 = 0.9865$
Renewal Probability Model
Assumptions

Demand for Dental Insurance

Without Inflation

Same Coverage
Renewal Probability Model

- Loss Ratio (6 bands)
- Renewal Increase (9 bands)
Renewal Probability Model

Classify Groups into Different Bands

Study on Average Group Size

Analyze by Group Stage (closed won/closed lost)

Group Sizes of Closed Win Groups

Total Group Sizes
Renewal Probability Model

Win Rates Based on Rate Increase and Loss Ratio

Win Rate

Rate Increase Band

Loss Ratio Band 1  Loss Ratio Band 5
## Renewal Probability Model - Implementation

The revenue can be calculated as:

\[
\text{revenue} = (1 + \text{rate increase}) \times \text{win rate}
\]

<table>
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<tr>
<th>Rate Increase</th>
<th>Loss Ratio</th>
<th>(75,100]</th>
<th>(100,150]</th>
<th>(150,9999]</th>
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04 BUSINESS STRATEGY
Strategy #1

- Target groups with Loss Ratio > 0.75
- Increase premium
- Decrease Loss Ratio
- Increase Profit
Strategy #2

- Target all groups
- Optimal Rate Increase

- High Customer Retention
- Maximize Revenue
OUR STRATEGIES

Strategy #1
Maximize profit through increasing premium by large increments

Strategy #2
Combined Renewal Strategy
↓
Loss ratio to under 70%

#1 + #2

Strategy #2
Maximize revenue through increasing premium by small increments
Combined Strategy

Rate Increase

Loss Ratio Band

- [0, 25]
- (25, 50]
- (50, 75]
- (75, 100]
- (100, 150]
- (150, 9999]

Renewal Increase

- 0% to 5%
- 5% to 10%
- 10% to 15%
- 15% to 20%
- 20% to 25%

Combined Strategy

21
Projected 3 Year Plan

Strategy #1: Implementation

Expenses decrease and revenue increases steadily

II

Increase profit overall
IMPLICATIONS 05
Projected 3 Year Plan

Combined Strategy Desired Outcome
Decrease loss ratios so that average for all bands is < 70%.
Not Included
Additional Solutions
Solution:

Raise the premium cost by small increments for groups with loss ratios <0.7 and raise premium by large increments for remaining groups.
THANK YOU