Management Decisions in Insurance

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The decision represents the essential factor of the management development, being the specific tool, and designating an action for achieves one or more objectives. The management decision has one particularity. This particularity is that the management decision represents that decision which has consequences for decisions, actions and the behavior of at least one person. So, we can conclude that the managerial decision always involves at least two persons, namely: the manager – which decide, and one or more persons - which apply the decision.

Keywords: management development, management decision, insurance, risk management.

The management decision affects directly the group, influencing the individual behavior, actions and results. For the conception of the decision is important to consider the characteristics of each person on training, interest and motivation, and who this can be modified.

In insurance, the management decision affects the departments and the employees of the insurance company, but affect and the group from which the company take part.

For example, on 6 august, Asiban Insurance was bought by Groupama Insurances. This French financial group holds and the companies BT Insurance and OTP Garancia Insurance. All managerial decision taken by the manager of Asiban, affect directly Groupama Insurance and indirectly BT Insurance and OTP Garancia. Actually, any managerial decision taken in one of this companies affect the other companies from the financial group.

On 25 January 2008, the Board of Administration decided an increase of the Cash net premiums with 30% for all company, and for each branch. Each branch will be spreading the cash net premiums at the agencies, which are subordinated. Also, the Board of Administration decided that:

- the car insurance class should not exceed 45% from portfolio
- the motor vehicle liability insurance class should not exceed 25% from portfolio
- the portfolio of each branch should be composed of a minimum 7 class of insurance.

In the situation in which where are required only an increase of the cash net premiums with 30% for all company, compared to net premiums earned in the previous year, the largest share of the entire portfolio will be car Insurance, taking into account the financial result. But in this new conditions, director of the branch Unirii plan annually distributed as follows:

<table>
<thead>
<tr>
<th>No. Crt</th>
<th>Insurance class</th>
<th>The plan of the cash net premiums</th>
<th>The share of the class in portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Life insurance</td>
<td>330,769,50</td>
<td>2,53</td>
</tr>
<tr>
<td>2</td>
<td>Accident and sickness insurance</td>
<td>7,220,88</td>
<td>0,06</td>
</tr>
<tr>
<td>3</td>
<td>Health insurance</td>
<td>1,320,00</td>
<td>0,01</td>
</tr>
<tr>
<td>4</td>
<td>Car insurance</td>
<td>5,888,566,21</td>
<td>45,00</td>
</tr>
<tr>
<td>5</td>
<td>Rail insurance</td>
<td>0,00</td>
<td>0,00</td>
</tr>
<tr>
<td>6</td>
<td>Aircraft insurance</td>
<td>0,00</td>
<td>0,00</td>
</tr>
<tr>
<td>7</td>
<td>Shipping insurance</td>
<td>0,00</td>
<td>0,00</td>
</tr>
<tr>
<td>8</td>
<td>Goods in transit insurance</td>
<td>373,304,13</td>
<td>2,85</td>
</tr>
<tr>
<td>9</td>
<td>Fire and natural calamities insurance</td>
<td>2,576,450,70</td>
<td>19,69</td>
</tr>
<tr>
<td>10</td>
<td>Damage to property insurance</td>
<td>209,727,48</td>
<td>1,60</td>
</tr>
<tr>
<td>11</td>
<td>Motor vehicle liability insurance</td>
<td>3,271,425,67</td>
<td>25,00</td>
</tr>
</tbody>
</table>
Asibán Insurance – Unirii Branch has concluded a tripartite contract with Omega Insurance Broker and EFG Eurobank Leasing IFN, for 01.03.2006-01.03.2009. In this contract it is set that the policies made by EFG Eurobank Leasing IFN for user FMS, commission will be made by Omega Insurance Broker. In the case of car insurance class, the grid commission is:

<table>
<thead>
<tr>
<th>Net premiums earned/months</th>
<th>Commission percentage of revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>until 150 000</td>
<td>10,00</td>
</tr>
<tr>
<td>250 000</td>
<td>12,00</td>
</tr>
<tr>
<td>350 000</td>
<td>14,00</td>
</tr>
<tr>
<td>450 000</td>
<td>16,00</td>
</tr>
<tr>
<td>over 450 000</td>
<td>18,00</td>
</tr>
</tbody>
</table>

Under the new conditions Asibán – Unirii Branch has concluded a partnership with another company in the group, OTP Garancia Insurance – Bucharest Branch. The protocol stipulates that where ASIBAN – Unirii Branch cannot meet demand of EFG Eurobank Leasing IFN, will redistribute the policies to the OTP Garancia Insurance – Bucharest Branch for a higher fee of 1% above the grid of Omega Insurance Broker.

The contract signed with Omega Insurance Broker SRL provides that if the broker does not cover the insurer bid, it will be penalized by subtracting commission with 1% to the original grid commission, for each difference of 100 000 lei.

The evaluation is done in light of the outcome of the sale.

<table>
<thead>
<tr>
<th>N1</th>
<th>N2</th>
<th>N3</th>
<th>N4</th>
<th>N5</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1</td>
<td>135000</td>
<td>133000</td>
<td>131000</td>
<td>129000</td>
</tr>
<tr>
<td>V2</td>
<td>136500</td>
<td>220000</td>
<td>216000</td>
<td>212000</td>
</tr>
<tr>
<td>V3</td>
<td>138000</td>
<td>222500</td>
<td>294000</td>
<td>295000</td>
</tr>
<tr>
<td>V4</td>
<td>139500</td>
<td>225000</td>
<td>308000</td>
<td>378000</td>
</tr>
</tbody>
</table>

To determine the best option we can apply decision-making criteria in terms of uncertainty. Applying the criterion of Wald, called crite-
rion pessimistic, obtain the following result:
\[
\max_{i} \min_{j} V_{ij} = \max_{i} \left[ \begin{array}{c}
127500 \\
136500 \\
138000 \\
139500
\end{array} \right] = 139500 \text{ lei}.
\]

According to the criterion of Wald, the best result is that of the 4th option.

Applying the criterion of Hurwicz, called criterion optimistic, obtain the following result:
\[
\max_{i} \max_{j} V_{ij} = \max_{i} \left[ \begin{array}{c}
135000 \\
220000 \\
295000 \\
378000
\end{array} \right] = 378000 \text{ lei}.
\]

According to the criterion of Hurwicz, the best result is that of the 4th option.

Applying the criterion of Savage, called criterion regrets, obtain the following result:
\[
\sum_{i} \max_{j} V_{ij} - V_{ij} = \left[ \begin{array}{cccc}
4500 & 92000 & 177000 & 249000 & 243000 \\
3000 & 5000 & 92000 & 166000 & 162000 \\
1500 & 2500 & 14000 & 83000 & 81000 \\
0 & 0 & 0 & 0 & 0
\end{array} \right],
\]
\[
\min_{i} \max_{j} r_{ij} = \left[ \begin{array}{c}
249000 \\
166000 \\
83000 \end{array} \right] = 0.
\]

According to the criterion of Savage, the best result is that of the 4th option.

Applying the criterion of Laplace, called criterion insufficient grounds, obtain the following result:
\[
\max \left( \sum_{j} \frac{1}{n} V_{ij} \right) = \max_{i} \left[ \begin{array}{c}
131100 \\
198600 \\
247800 \\
284200
\end{array} \right] = 284200.
\]

According to the criterion of Laplace the best result is that of the 4th option.

Applying the criterion of average-variation, obtain the following result:
\[
M(V_{1}) = 131100 \quad D(V_{1}) = 7500 \\
M(V_{2}) = 198600 \quad D(V_{2}) = 83500 \\
M(V_{3}) = 247800 \quad D(V_{3}) = 157000 \\
M(V_{4}) = 284200 \quad D(V_{4}) = 238500
\]

The first rule of this criterion may not apply, because
\[
M(V_{1}) < M(V_{2}) < M(V_{3}) < M(V_{4})
\]

\[
D(V_{1}) < D(V_{2}) < D(V_{3}) < D(V_{4}).
\]

Applying the second rule, obtain:
\[
\frac{M(V_{1})}{D(V_{1})} = 17.46 \quad \frac{M(V_{2})}{D(V_{2})} = 1.58 \\
\frac{M(V_{3})}{D(V_{3})} = 2.38 \quad \frac{M(V_{4})}{D(V_{4})} = 1.19
\]

It notes that \( V_{1} > V_{2} > V_{3} > V_{4} \). Therefore, according to this criterion the preferred option is the first one.

In this situation, the expected earnings (average) and the risk (variation between the best and the least good option), lead to the preferred solution. From this point of view, the first option is less risky, because it leads to the biggest expected earnings for a given risk assumed. But the decision is the one who decides, according to his inclination to the risk.

So, as we see version 4 is the best for the most criteria. Concluding, is the ideal situation that the intermediary to cover the exact needs of the branch, to bring the net premiums collected as close to monthly plan.

In most situations, the manager does not provide a range of information. This information can be essential, because the objective of determining the probability on possible results is difficult to achieve.

Bibliography