Innovation in the Indian life insurance industry

Improving customer retention through predictive analytics

Predictive analytics provides the necessary tools to Indian life insurance companies to improve customer retention, optimize business processes and improve profitability.

In India, there are 24 life insurance companies. Life Insurance Corporation of India (LIC), a Government of India-owned corporation, has close to 72.6% of all total life premiums and dominates the life insurance market. Out of 23 private life insurers, 15 have less than 1% of the overall life insurance market.

Smaller, private life insurers have a survival risk in the Indian life insurance market. They have low market share, persistency ratios and high operating expenses.

The key problems plaguing the life insurance companies in India are as follows:

- **Industry-wide**
  - Irregular sales periods – The majority of life insurance policies are bought in the last quarter of the financial year
  - Insurance seen only as a tax-saving instrument
  - Lack of proper communication to policy holders
  - New emerging competition in online insurance portals

- **Organizational**
  - Poor data collection & management
  - High churn in the sales force
  - Overlapping channel strategies
  - Departments working in silos
  - Legacy systems designed for human intervention

![Low Persistency Ratios Image](source:Arthur D. Little analysis)

In the 27.4% market share gained by the private life insurers, the Top 8 private life Insurers have most of the market share - 80%.

![Life vs. Non-Life Premium share Image](source:Handbook of Indian Insurance Statistics)

- **Life vs. Non-Life Premium share**
  - Life: 21.04%
  - Non Life: 78.96%

- **India state-owned insurer dominates the life insurance market**
  - LIC: 72.6%
  - Private: 27.4%

- **Top 8 vs. Rest 15**
  - Top 8: 80%
  - Rest 15: 20%
Persistency ratio is defined as the percentage of all existing policies that are renewed by the insurer annually. Policy premiums in India are due monthly, quarterly and yearly. However, due to the factors mentioned earlier, persistency ratios (PR) are low in India.

PR in India is categorized as follows – 13th Month PR (end of 1st year), 25th Month PR (end of 2nd year), 37th Month PR (end of 3rd year), 49th Month PR (end of 4th year) and 61st Month PR (end of 5th year). So, 13th Month PR for the overall industry is 61%, so it means that after 1 year post sale, only 61 out of 100 policies were renewed. Persistency ratio for the overall life insurance industry for the 61st month PR is 28%. This means more than two-thirds of all life insurance policies are not renewed after five years. (See the table below.)

This deeply hurts life insurance companies as they generally struggle to make money in the first five years of the life insurance policy. Customers are also at a disadvantage, as they lose a large proportion of the premiums paid if they don’t renew in the first one to three years.

Life insurers in India are trying to tackle the PR problem by using similar means. The most common approach is to build specialized teams that call policy holders whose policies are up for renewal two to three months before their renewal dates.

The intention is to improve contractibility by systemic calling. However, without an integrated approach (data analysis, analytics, CRM platform, service improvements and process realignment), these efforts are likely to plateau around the industry average, which, in the first case, is not very high.

### Three key steps to improve the persistency ratio

1) Predictive analytics

The scope of predictive analytics can begin by defining the key objective. In regards to improving the persistency ratio, a key objective could be: Can we get to know each of our clients better so as to determine their probability of renewing their life insurance policy? Without clearly defined objectives, predictive analytics will not lead to desired results.

Predictive analytics involves data integration, analysis and insight. The initial objective should be to collect as much data (from both internal and external sources) as possible in any format (structured or unstructured). It should cover factors such as income, age, occupation, interactions with the insurer, number of premiums paid, frequency, mode, location, type of policy, etc.

#### The cycle of creating predictive insights

Source: Arthur D. Little analysis

On collected data sets, multiple algorithms, statistical and analytical models will be created and applied. Initial data analysis will create:

<table>
<thead>
<tr>
<th>Percent</th>
<th>LIC</th>
<th>Private Life Insurers</th>
<th>Overall Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13*</td>
<td>25*</td>
<td>37*</td>
</tr>
<tr>
<td>2014</td>
<td>59</td>
<td>56</td>
<td>53</td>
</tr>
<tr>
<td>2015</td>
<td>66</td>
<td>51</td>
<td>49</td>
</tr>
<tr>
<td>2016</td>
<td>63</td>
<td>60</td>
<td>48</td>
</tr>
</tbody>
</table>

Source: Handbook of Indian Insurance Statistics
Unique customer ID
Household ID
Derived variables

Unique customer ID creates a single view of a customer who has multiple IDs and policies with the insurer. Household ID connects all the policies that were bought by members of the same household. Additional variables that are created include policy vintage, premium-to-income ratio, customer vintage ratio, etc. All these variables act as inputs to the policy-scoring model. This also leads to better data management. A case in point – while working with a private insurer we found 5% of the client base had multiple policies, which is lower than the industry average of 10%+. Most Indian life insurers have products centered around these two themes – (protection and investment) and are broadly classified into these following policies – term, whole life, endowment, unit linked investment and money back policies. Many times the customers also shared numbers which were incorrect, or shared the mobile number of the sales agent who sourced the policy.

The policy-scoring models give a score to each policy holder of the life insurer and determine their probability to pay the renewal premium. Each policy holder will be categorized into one of these three buckets

- More Likely to Pay
- Can Pay and
- Less Likely to Pay

After the policy score is given to each policy holder, it is then compared to actual results, and the predictive model is further calibrated to achieve more accurate results.

As the model steadily starts to mirror actual renewal performance, a second objective can be defined: Can we sell more policies to Likely to Pay Customers? Additional factors will be considered to identify strong potential leads for further policy sales within the existing customer base. Therefore, policy scoring also leads to significant increase in new revenue with small incremental efforts.

II) 360-degree implementation

After the scoring of all the policies via the policy-scoring model, we can direct our focus to policies that are due in the next 90 days. The data regarding the policies that are scored and due in the next 90 days can then be shared with all key departments – renewal call center teams, sales agents, channel sales, business heads – that are responsible for driving renewals premiums. The policy score has to be updated regularly, and feedback based on these scores can be recorded in real time to create a constant loop.

Create a constant loop

The insurer can either hire or develop a cloud-based customer relationship management tool that is integrated with the insurer’s calling software. The CRM platform should show important customer details, multiple policy details (if applicable), policy scores, all past interactions with the insurer, sentiments towards the insurer, etc. Thus, any executive interacting with the customer should be able to get a 360-degree perspective of the customer’s relationship with the insurer and interact with them accordingly.

III) Business process optimization

As the policy-scoring models increase in accuracy, the insurer can begin to answer additional critical questions with evidence. For example: Why do certain sales channels do well in certain policies? Why do certain branches have high failure rates of renewing policies that are renewed comparatively easily elsewhere? Why are certain locations likely to be distressed in terms of renewal results?

For codifying insight from policy scores, a heat map can be created for the organization, highlighting areas where policy-renewal probabilities are high or low. The insurer will start finding insight and correlations on which channels are likely to do better in certain locations, and with what policy plans. The insight will extensively aid in co-ordinated renewal efforts and increasing the persistency ratio.
Discussions can also take place between the product and actuary teams. However, the biggest potential impact can lie in optimizing the incentives and practices of the sales team. Previously, there was no way of identifying the quality of team sales. Now, with the presence of predictive insight, the insurer can determine the quality of sales, and these inputs can be incorporated into the performance reviews and defining of incentives for sales personnel. They also led to changes in sales and HR policies.

**Predictive insight impact in the organization**

<table>
<thead>
<tr>
<th>HR</th>
<th>Sales</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee performance</td>
<td>Channel strategy</td>
<td>Review product fit</td>
</tr>
<tr>
<td>Peer sales</td>
<td>Branch sales strategy</td>
<td>Aid in product development</td>
</tr>
<tr>
<td>Quality of policies sold</td>
<td>Sales agent review</td>
<td>Revenue projections</td>
</tr>
<tr>
<td>Lifetime value of the customer sourced</td>
<td>Zonal strategy</td>
<td>Cost optimization</td>
</tr>
<tr>
<td>Mis-selling</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Arthur D. Little analysis

### Conclusion

Predictive analytics can significantly aid life insurers in increasing their persistency ratios. An increase in persistency ratio is likely to aid in the survival of smaller private life insurers by helping them increase their revenue and lower acquisition cost. An insurer could begin this journey by identifying appropriate vendors and initiating a proof of concept. They can go through the entire cycle, from predictive analytics to business process optimization over a period of 18–24 months.

**Predictive analytics can help in renewal efforts, as-well-as in all the activities within the organization**

Source: Arthur D. Little analysis

---

**Contacts**

- **Belgium**
  - bamberger.vincent@adlittle.com

- **Central Europe**
  - doemer.fabian@adlittle.com

- **China**
  - russell.pell@adlittle.com

- **France**
  - bamberger.vincent@adlittle.com

- **Hong Kong**
  - smith.andrew@adlittle.com

- **India**
  - srinivasan.srini@adlittle.com

- **Italy**
  - nico.mario@adlittle.com

- **Japan/Singapore**
  - harada.yusuke@adlittle.com

- **Korea**
  - lee.kevin@adlittle.com

- **Latin America**
  - casahuga.guilem@adlittle.com

- **Middle East**
  - kuruvilla.thomas@adlittle.com

- **Netherlands**
  - eikelenboom.martijn@adlittle.com

- **Nordic**
  - kiefors.petter@adlittle.com

- **Norway**
  - mackee.diego@adlittle.com

- **Spain**
  - portal.jesus@adlittle.com

- **Turkey**
  - baban.coskun@adlittle.com

- **UK**
  - eagar.rick@adlittle.com

- **USA**
  - guzman.rodolfo@adlittle.com

**Authors**

Srini Srinivasan and Ashutosh Singh

**Arthur D. Little**

Arthur D. Little has been at the forefront of innovation since 1886. We are an acknowledged thought leader in linking strategy, innovation and transformation in technology-intensive and converging industries. We navigate our clients through changing business ecosystems to uncover new growth opportunities. We enable our clients to build innovation capabilities and transform their organizations.

Our consultants have strong practical industry experience combined with excellent knowledge of key trends and dynamics. Arthur D. Little is present in the most important business centers around the world. We are proud to serve most of the Fortune 1000 companies, in addition to other leading firms and public sector organizations.

For further information, please visit [www.adl.com](http://www.adl.com).

Copyright © Arthur D. Little 2017. All rights reserved.