CHAPTER 6

FACTORS AFFECTING THE INSURANCE PURCHASE DECISION AND THE EXTENT OF HEALTH INSURANCE PURCHASE IN INDIA: AN ANALYSIS

BACKGROUND

India is the fifth largest economy in the world in terms of its purchasing power and is fastly emerging as big economy at global level. However, its health status has not improved much. Infant mortality rate is as high as 54 while it is around 23 for China. Similarly life expectancy at birth for India is around 64 (refer Table 1.9, for complete data see Annexure), while it is in the range of 77-80 for many countries like Japan, China, U.K. etc. Health status gets determined the way health care gets financed. In India, health care spending is around 5% of GDP, while the general government health care expenditure is just 25% of total expenditure on health. The private expenditure on health is more than 75% in India and is out-of-pocket (91.4%). This makes it one of the most private health economies in the world. A very small part of this expenditure is covered by insurance.

Health insurance in India is in nascent stage but growing very fast. Private health insurance was introduced in India in 1987 when Mediclaim was introduced by Government owned insurance companies. However, its performance has not been very encouraging. Government of India opened up insurance sector in 2000 for private companies to bring in competition. Very few private insurers ventured in health sector. People do not buy health insurance and total pool remains small making the health insurance schemes less viable. To understand this phenomenon we need to understand the factors which affect health insurance purchase decision.

The objective of this chapter is to analyze factors determining the demand for private health insurance in India. The demand for health insurance has been analyzed at two levels. First we analyze the factors determining the decision to purchase health insurance and second, factors that determine the extent of coverage of health insurance.

This chapter is divided into three sections. Section 6.1 discusses the private health insurance scene in India. Section 6.2 discusses the major health insurance players in India, Section 6.3...
discusses the results of the study and describes key determinants of insurance purchase decision.

6.1 PRIVATE HEALTH INSURANCE SCENE IN INDIA

The insurance sector has experienced significant changes after opening up of insurance sector. Moral hazard risk is peculiar to health insurance especially in an unregulated market where there are no regulations on costs and quantity of care to be provided. After IRDA was set up, it has allowed Third Party Administrators (TPAs) who act as intermediary between insurance companies, providers and customers, to minimize such risks and ensure cash less facility. At present there are 27 licensed TPAs (list is provided in Annexure IX) and 19 major general insurance companies providing health insurance. Table 6.1 gives estimates of health insurance coverage under various schemes in India. About 75 million individuals have been covered by some form of health insurance in India, which is less than 10 percent of the population. The rest of the population has the option of choosing private or public health facilities, or a mix of both. However, numerous quality concerns have been raised about the public health care system, and it has been recognized by the government itself that this infrastructure is not meeting the objectives of a functioning health system. The high-growth private health sector is catering to those who have the ability to pay and is introducing a greater wedge between the private and the public health care system by making the market more segregated.
Table 6.1: Health insurance coverage in India*, various schemes offered and number of beneficiaries

<table>
<thead>
<tr>
<th>Schemes</th>
<th>Beneficiaries (in million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Employees State Insurance Scheme (ESIS)1</td>
<td>25.3</td>
</tr>
<tr>
<td>Central Government Health Scheme (CGHS)2</td>
<td>4.3</td>
</tr>
<tr>
<td>Railways Health Scheme</td>
<td>8</td>
</tr>
<tr>
<td>Defense employees 3</td>
<td>6.6</td>
</tr>
<tr>
<td>Ex-servicemen</td>
<td>7.5</td>
</tr>
<tr>
<td>Mining and plantations (public sector)4</td>
<td>4</td>
</tr>
<tr>
<td>Health insurance (Public sector non-life companies)5</td>
<td>10</td>
</tr>
<tr>
<td>Health insurance (Private sector non-life companies)6</td>
<td>0.8</td>
</tr>
<tr>
<td>Health segment of Life insurance companies (Public and private sector)7</td>
<td>0.23</td>
</tr>
<tr>
<td>State sponsored schemes</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>Employer run facilities/reimbursement schemes of private sector8</td>
<td>6</td>
</tr>
<tr>
<td>Employer run facilities/reimbursement schemes of public sector9</td>
<td>&lt;8</td>
</tr>
<tr>
<td>Community health schemes</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
</tr>
</tbody>
</table>

Source: Health Insurance in India in Micro insurance scheme, A study of IIM Ahmadabad, 2006

*The coverage includes family members of the employees.
1ESIS coverage as on March 20003
2CGHS coverage figures for 2003-04
3Figures for the Railways and Defense as per the officials in the respected ministry
4These figures are based on data from Director General Employment and Training, Ministry of Labour. Approximately 10 million employees work in these two sectors of the government, as of March 2002.
5The number of policies for Mediclaim is about 2 million, which would yield roughly 10 million lives covered. No firm estimates of this are as yet available in India.
6The total number of lives covered has been calculated based on market share of private companies in the health business (premiums), since there is no other reliable estimate.
7All riders related to critical illness benefit, hospitalization benefit and medical treatment.
8Estimates are not available for this; private organized sector covered about 8.4 million employees in 2002. Using a factor of 4, roughly 35 million individuals and their families can potentially be covered. ESI covers about 25 million, and a gap of 10 million remains, of which many are covered under group medical insurance. Insurance companies cover about 11 million, and of these rough data indicate that about 40% is group policies (i.e. corporate sector); this implies about 4.4 million may be covered through insurance out of these 10 million individuals. Plantation and mining workers and their families in the private sector are covered by government regulations and amount to about 4 million individuals. This gives us a gap of 1.6 million. In the column, therefore, we have put a figure of 6 million, which is under the assumption that all of these 1.6 million people may be covered and adding the 4 million plantations and mining in private sector, and rounding off.
9Public sector companies employ 2 million workers; if a family size of 4 is assumed, at most 8 million workers and their dependents can be covered. However, not all PSUs offer health benefits/coverage.
Figure 6.1 provides the description of key stakeholders in Private Health Insurance and their inter relationships.

**Figure 6.1 Standard Health Insurance Model**

From the above diagram, we can see that there are three main stakeholders in the health insurance system. These are insurance companies, health care providers, and customers. Other than these, two more parties which are important and involved in the process are third party administrators and regulators. In case of health insurance there are more stakeholders which make the whole process more complex and difficult to control. Other than the number of stakeholders, there are different types, based on profit motive and ownership, for each stakeholder which makes health insurance even more complex as shown in figure 6.2.

**Figure 6.2 Types of insurance companies**

**Types of Insurance Companies**

<table>
<thead>
<tr>
<th>Private</th>
<th>Public</th>
<th>For Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Insurance Companies</td>
<td>General Insurance Companies</td>
<td>For Profit</td>
</tr>
<tr>
<td>Community Based Health Insurance</td>
<td>Employee State Insurance</td>
<td>Not For Profit</td>
</tr>
</tbody>
</table>
Private Health Insurance in India

Development of health insurance is one of the goals of the government health strategy and is a stated view of the IRDA. With healthcare costs increasing in India and the expanding need for healthcare services, private health insurance is developing as a necessity. With government subsidizing premiums for those who are below poverty line, there is a need to focus on the formal sector which primarily comprises the middle class and the upper class and who form about 30% of India’s population. While some people of this section have benefits through their employers or through voluntarily purchased ‘Mediclaim’ policies, a large strata is still uncovered by any form of health insurance. Actually, the industry has been trying to promote health insurance, but not with much confidence, as they are afraid of the ‘loss making portfolio’ tag that health insurance carries with it. This section of the study tries to present a focused approach to private health insurance and states some of the prerequisites that insurance companies and the government need to put in place if they want to profitably tap this huge market and improve coverage from the current 1% of the population. Some private health insurance schemes are given in Table 6.2

The objective of the private health insurance (PHI) is to improve access to affordable, quality healthcare through policies that cover a major portion of their healthcare spending. PHI aims at spreading the reach of health insurance in the country and enhancing the market share of health insurance in health financing by developing specific insurance schemes for the formal sector. Currently a large section of the middle and upper classes is not covered by any form of health insurance. Promoting PHI in this group would not only improve access to quality care but would also have equity implications. NSSO data from 52nd round clearly shows the upper quintile of the population consumes about 30% of the public funds earmarked for healthcare. Introducing health insurance could release these resources for the poorer sections of the society.
### Table 6.2 Some Private Health Insurance Schemes Offered in India in FY 2009

<table>
<thead>
<tr>
<th>Name of the Scheme</th>
<th>Insurance company Offering the Scheme</th>
<th>Eligibility Criteria</th>
<th>Annual Premium</th>
<th>Benefit Package</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mediclaim</td>
<td>All Insurance companies</td>
<td>3 months to 80 years</td>
<td>Depends on the age, risk and the benefit package. The minimum is Rs.201.</td>
<td>Includes cover for hospital expenses only. For Rs.201 the maximum limit is Rs. 15,000</td>
<td>Existing diseases and maternity are excluded. Cashless system only if linked with TPA</td>
</tr>
<tr>
<td>Universal health Insurance Scheme</td>
<td>All GIC Companies</td>
<td>3 months to 80 years</td>
<td>Rs. 248 for a family of five</td>
<td>Hospital expenses up to a maximum of Rs. 15000 per patient and Rs. 30000 per family of five</td>
<td>Limited only to BPL families. Exclusions like in a Mediclaim policy</td>
</tr>
<tr>
<td>Jan Arogya</td>
<td>All GIC Companies</td>
<td>3 months to 80 years</td>
<td>Age rated 45 years Rs. 70 Special family premiums</td>
<td>Hospital expenses up to a maximum of Rs. 5000 per patient per year</td>
<td>Exclusions like in a mediclaim policy</td>
</tr>
<tr>
<td>Rural Women’s Package</td>
<td>All GIC Companies</td>
<td>Women between 18 and 65</td>
<td>Rs. 93 for women member and Rs. 146 for women plus family</td>
<td>Hospital expenses up to a maximum of Rs. 5000 per patient per year. Plus life cover up to Rs. 15000</td>
<td>Only for SHG women members and their families (children not included)</td>
</tr>
</tbody>
</table>

Source: [www.healthsites.com](http://www.healthsites.com)

### Characteristics of the current private health insurance products:

The existing products of the GICs have some differences but they largely share the following characteristics:

1. All of them are hospitalisation policies with add-ons like ‘critical care’ cover.
2. Most of them are indemnity policies, though there has been a recent move towards cashless systems.
3. Individuals and groups are canvassed through agents and distributors whose main responsibility is to market the product. Third-party administrators, who are supposed
to service the product, usually limit themselves to administering claims and reimburments.

4. The requirements for a hospital to be empanelled are very basic—usually 25 beds. There is limited control on quality and costs.

5. The premiums are risk rated—decided on the basis of the age of the insured and the pre-existing illnesses. The pricing of the premium is based on the inadequate data resulting in either under-pricing or over-pricing.

6. The benefit package has several exclusions and the coverage is to the limit of the sum insured. Administration is difficult.

7. Purchase of individual health insurance largely driven by tax benefits.

8. There is definitely a gap between people’s expectations and the products offered.

9. According to data offered by insurance companies, the claims ratio is about 120%, resulting in the losses for the insurance companies. This is due to combination of reasons like poor pricing, adverse selection, over utilization and over billing and fraud.

Contextual issues in private health insurance:

Currently we have most of the requirements (as given in figure 6.3) to implement a successful private health insurance programme. With most of them are effective, there are some that are not perfect and need to be looked into to improve the effective implementation of a private health insurance programme.

The government has accepted the importance of protecting its citizens through a risk pooling mechanism. The people also are affected because of high medical costs and would like to insure themselves against unfavourable events. The employers are also interested in protecting the health of their employees, as it enhances productivity. While the insurance companies are being effectively regulated through the IRDA, there is unfortunately very little regulation of the health sector. This is one of the weakest points in the Indian Health Insurance scenario. Today there are 19 insurance companies supported by 27 TPAs that provide health insurance. The health insurance products being currently offered by these players are unprofitable and there is a need to improve pricing and its quality. Currently there is a network of agents and distributors, especially in the urban areas to market the products. In India we have mix of public and private healthcare providers, most of whom provide
healthcare of questionable quality. This healthcare is also priced very highly, and usually not related to actual costs.

Due to above mentioned problems; there is a very limited reach of private health insurance among the middle and the upper class. NSSO data shows that only about 2 million policies, which would yield roughly 10 million (out of 300 million) lives covered, are sold.
Given the current problems with PHI and its limited reach, an improved approach to widening the reach of private health insurance in our country is proposed. The main emphasis should be on:

- Improving the quality of the product
- Developing an efficient pricing model
- Using different channels to reach out to the community
- Regulating the services so that quality is ensured and costs are contained

Before initiating any new steps, some pre-requisites need to be in place. These are:

- Basic information for health insurance should be available like:
  - List of ailments that the target population suffers from, region wise, age and gender wise.
  - Data on frequency of various illnesses in the above mentioned population.
  - Data on the average quantity of services used for each illness.
  - Data on the unit cost for treating the above list of illness for two or three levels of hospitals.
    Currently only company specific data is available or as provided by the TPAs.
- List of providers in a region
- Provider regulation mechanism.

At present PHI schemes in India are serving a very small population, if lessons learnt from each of these schemes can be used to design more of such schemes in different parts and at a much larger level, they can be very beneficial.

6.2 MAJOR HEALTH INSURANCE PLAYERS IN INDIA

The insurance sector is booming like never before. Banks in both public and private sector are getting into insurance. Existing insurance companies are expanding their base in the country and newer ones are eagerly awaiting clearance from the regulatory authorities. Though the penetration of health insurance in the country is very low, there is a huge market for insurance companies to tap and more players are entering in to the market. The major players in health insurance are:

Public sector non-life insurers
Private sector non-life insurers

Specialised Institutions

- Star Health and Allied Insurance Company Limited

Public sector non-life insurers

General insurance business was nationalized with effect from 1st January 1973 by the General Insurance Business (Nationalization) Act 1972 (GIBNA) and four companies are operating under General Insurance Corporation (GIC). These are:

- New India Assurance Company Limited
- Oriental Insurance Company Limited
- National Insurance Company Limited
- United India Insurance Company Limited

All the above four subsidiaries of GIC operates all over the country. GIC and its four subsidiary companies are government companies registered under Companies Act. GIC as a holding company of the above four companies is super intending, controlling and carrying on the business of general insurance. GIC undertakes mainly re-assurance business and aviation insurance. The general insurance business for fire, marine, motor, health and miscellaneous insurance business is undertaken by its four subsidiaries.

New India Assurance Company Limited

The House of Tata Founder member Sir Dorab Tata incorporated the New India Assurance Company Limited in 1919. In 1973, the company was nationalized with merger of Indian companies. New India is the largest non-life insurer in Afro-Asia excluding Japan. It is the first Indian non-life company to cross INR5000 crore gross premium mark. The company has its presence in Japan, UK, Middle East, Fiji and Australia.

New India is the first domestic company to be rated as 'A' (Excellent) by A.M. Best & Co (Europe) for superior capital position, strong operating performance, strong market position.

Products offered: The Company offers products in various categories: personal, commercial, industry, liability and social.

Health insurance policies
### a) Mediclaim policy

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of policies sold</th>
<th>No. of persons covered</th>
<th>Premium amount (Rs.)</th>
<th>No. of claims reported</th>
<th>No. of claims settled</th>
<th>Amount of claims settled (Rs.)</th>
<th>Claims ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-2005</td>
<td>609,255</td>
<td>2,951,010</td>
<td>23,915.71</td>
<td>275,774</td>
<td>305,406</td>
<td>20,349.96</td>
<td>85.09</td>
</tr>
<tr>
<td>2005-2006</td>
<td>822,534</td>
<td>2,794,510</td>
<td>26,996.00</td>
<td>165,368</td>
<td>116,819</td>
<td>18,853.00</td>
<td>69.84</td>
</tr>
<tr>
<td>2006-2007</td>
<td>937,012</td>
<td>3,086,763</td>
<td>35,443.00</td>
<td>201,108</td>
<td>196,300</td>
<td>31,053.00</td>
<td>87.61</td>
</tr>
<tr>
<td>2007-2008</td>
<td>949,648</td>
<td>2,856,675</td>
<td>36,641.73</td>
<td>167,898</td>
<td>161,959</td>
<td>30,068.12</td>
<td>82.06</td>
</tr>
<tr>
<td>2008-2009</td>
<td>1,060,028</td>
<td>3,617,132</td>
<td>45,539.48</td>
<td>232,712</td>
<td>237,053</td>
<td>48,980.00</td>
<td>107.56</td>
</tr>
</tbody>
</table>

Source: Company Annual Report; Claims Ratio = (Amount of Claim Settled ÷ Premium Amount)× 100

This policy provides cashless hospitalization in India for the treatment in case of illness or disease or accidental injury suffered by the insurer during the policy period. The payment of claim is made through ‘third party administrators’ who have been appointed by the company to see forth the admission and discharge of the insurer without any problem in the network hospital. The number of polices sold and the claims settled is shown in the Table 6.3.

### b) Overseas mediclaim policy

This is a special type of policy where the premium is paid in rupees and claims are settled in foreign currency. This policy is suitable for frequent corporate travelers. The policy covers reimbursement of medical expenses incurred by the insured persons outside India as a result of injuries caused by accident or sickness. Eight plans are available under this policy. The policy is selected based on the requirement of the insured. Add-on benefits like loss of baggage, loss of passport and personal liability can also be compensated. People between 6 months to above 70 years are eligible to enroll for this policy.
c) Bhavishya arogya policy

Bhavishya arogya policy is mainly designed to cater to the needs of people more than 55 years of age. In this policy, the insured has to insure himself during his earning phase i.e. between 25 to 55 years so that the medical benefit can be attained after his retirement age. The retirement age has to be selected by the insured at the time of taking the policy.

d) Personal accident insurance for Kisan credit card holders

The scheme provides for compensation to the kisan credit card holder in the event of death or permanent disablement as a result of an accident. The company has an agreement with the National Bank for Agricultural Reconstruction and Development (NABARD) for this scheme. The number of polices sold and the claims settled are shown in the Table 6.4.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of policies sold</th>
<th>No. of persons covered</th>
<th>Premium amount (Rs.)</th>
<th>No. of claims reported</th>
<th>No. of claims settled</th>
<th>Amount of claims settled (Rs.)</th>
<th>Claims ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-06</td>
<td>2,895</td>
<td>650,356</td>
<td>135.91</td>
<td>20</td>
<td>1</td>
<td>0.50</td>
<td>0.37</td>
</tr>
<tr>
<td>2006-07</td>
<td>3,986</td>
<td>1,169,856</td>
<td>223.40</td>
<td>381</td>
<td>137</td>
<td>65.94</td>
<td>29.52</td>
</tr>
<tr>
<td>2007-08</td>
<td>4,579</td>
<td>1,792,263</td>
<td>275.53</td>
<td>425</td>
<td>290</td>
<td>102.99</td>
<td>37.30</td>
</tr>
<tr>
<td>2008-09</td>
<td>4,683</td>
<td>2,087,971</td>
<td>374.53</td>
<td>881</td>
<td>520</td>
<td>134.87</td>
<td>36.01</td>
</tr>
</tbody>
</table>

Source: Company Annual Report

e) Universal health insurance scheme

This policy was started in 2003 for providing hospitalization benefits to economically weaker sections of the society. The people living below poverty line were unable to pay the premium and the policy could not be marketed to the target population. So, to enhance this, the government has introduced subsidy in premium payable by the insured and directed to sell this policy exclusively to the families living below the poverty line.

The number of polices sold and the claims settled are shown in the Table 6.5.
Table 6.5: Universal health policies sales during 2007-09

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of policies sold</th>
<th>No. of persons covered</th>
<th>Premium amount (Rs.)</th>
<th>No. of claims reported</th>
<th>No. of claims settled</th>
<th>Amount of claims settled (Rs.)</th>
<th>Claims ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-08</td>
<td>66,290</td>
<td>236,490</td>
<td>365.07</td>
<td>185</td>
<td>54</td>
<td>2.18</td>
<td>0.60</td>
</tr>
<tr>
<td>2008-09</td>
<td>5,311</td>
<td>15,641</td>
<td>21.82</td>
<td>74</td>
<td>58</td>
<td>2.50</td>
<td>11.46</td>
</tr>
</tbody>
</table>

Source: Company Annual Report

Financial performance

The net profit for the FY2009 was INR7,163.8m against INR4,022.3m in FY2008. The net premiums earned for the year 2009 accounted to INR41,210m against INR38951.1m in 2008. The total commission earned during the year 2009 was INR3,762.8m against INR3,318.8m in 2008.

Future plans

New India Assurance Company is set to become the first insurance company to launch a health insurance policy for which the premium would be based on policyholder's geographical location. The product may be launched shortly, waiting for IRDA approval.

Oriental Insurance Company Limited

The Oriental Insurance Company Ltd was incorporated in 1947. The company was a fully owned subsidiary of the Oriental Government Security Life Assurance Company Ltd and was formed to carry General Insurance business. The Company was a subsidiary of LIC of India from 1956 to 1973 (till general insurance was nationalized in the country). In 2003, all shares of the company held by the GIC of India have been transferred to Central Government.

Products offered

The company has developed various types of insurance covers to cater to the needs of both the urban and rural population of India. The company has a technically qualified and competent team of professionals to render the best customer service, which forms their key
strength. The products include health, engineering, motor, agriculture, animals, birds, animation and marine.

Health policies

a) Gramin accident insurance

This policy provides compensation in the event of death or permanent total disablement or loss of limbs or sight in eyes. The number of polices sold and the claims settled are shown in the Table 6.6.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of policies sold</th>
<th>No. of persons covered</th>
<th>Premium amount (Rs.)</th>
<th>No. of claims reported</th>
<th>No. of claims settled</th>
<th>Amount of claims settled (Rs.)</th>
<th>Claims ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-2005</td>
<td>83,698</td>
<td>251,093</td>
<td>21.20</td>
<td>458</td>
<td>382</td>
<td>26.16</td>
<td>123.40</td>
</tr>
<tr>
<td>2005-2006</td>
<td>72,308</td>
<td>578,461</td>
<td>48.84</td>
<td>1,200</td>
<td>1,000</td>
<td>68.47</td>
<td>140.19</td>
</tr>
<tr>
<td>2006-2007</td>
<td>4,207</td>
<td>578,453</td>
<td>72.95</td>
<td>386</td>
<td>322</td>
<td>32.2</td>
<td>44.14</td>
</tr>
<tr>
<td>2007-2008</td>
<td>71,800</td>
<td>214,943</td>
<td>43.22</td>
<td>299</td>
<td>281</td>
<td>70.95</td>
<td>85.82</td>
</tr>
<tr>
<td>2008-2009</td>
<td>31,474</td>
<td>255,311</td>
<td>21.44</td>
<td>148</td>
<td>62</td>
<td>7.43</td>
<td>34.65</td>
</tr>
</tbody>
</table>

Source: Company Annual Report

b) Group mediclaim policy

Mediclaim insurance covers the medical expenses incurred due to hospitalization or domiciliary in case of sudden illness, accident or any surgery, which has arisen during the policy period. The major benefit for taking a group mediclaim policy is that the insured gets a group discount; hence the premium per person is low.

c) Jan arogya bima
This policy provides for hospitalization and domiciliary hospitalization for a premium as low as INR70 for an adult male or female and INR50 for each dependent son/daughter not exceeding 25 years of age. This insurance is available to persons between the age of 5 years and 70 years.

d) Janata personal accident policy

This policy provides compensation in the event of death or permanent disablement or loss of limbs or sight in eyes to the insured. The number of polices sold and the claims settled are shown in the Table 6.7.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of policies sold</th>
<th>No. of persons covered</th>
<th>Premium amount (Rs.)</th>
<th>No. of claims reported</th>
<th>No. of claims settled</th>
<th>Amount of claims settled (Rs.)</th>
<th>Claims ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003-2004</td>
<td>73,188</td>
<td>219,564</td>
<td>494.02</td>
<td>7,146</td>
<td>5,955</td>
<td>813.55</td>
<td>164.68</td>
</tr>
<tr>
<td>2004-2005</td>
<td>84,893</td>
<td>254,680</td>
<td>573.03</td>
<td>7,240</td>
<td>6,033</td>
<td>824.19</td>
<td>143.83</td>
</tr>
<tr>
<td>2005-2006</td>
<td>84,983</td>
<td>2,419,482</td>
<td>1,444.37</td>
<td>2,658</td>
<td>2,215</td>
<td>1107.4</td>
<td>76.67</td>
</tr>
<tr>
<td>2006-2007</td>
<td>818,924</td>
<td>2,925,249</td>
<td>1,092.51</td>
<td>5,369</td>
<td>3,653</td>
<td>1,127.12</td>
<td>103.17</td>
</tr>
<tr>
<td>2007-2008</td>
<td>295,967</td>
<td>4,194,974</td>
<td>1,259.74</td>
<td>5,639</td>
<td>3,389</td>
<td>885.74</td>
<td>70.31</td>
</tr>
</tbody>
</table>

Source: Company Annual Report

e) Universal health insurance scheme

The people covered under this policy are below poverty line in the states of Delhi, Haryana, Himachal, J&K, Punjab, Rajasthan, UP, Uttarakhand and Chandigarh. This policy covers medical reimbursement, personal accident and disability cover. The number of polices sold and the claims settled are shown in the Table 6.8.
Table 6.8: Coverage of Universal policy and claims reported (FY2005-FY2008)

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of policies sold</th>
<th>No. of persons covered</th>
<th>Premium amount (Rs.)</th>
<th>No. of claims reported</th>
<th>No. of claims settled</th>
<th>Amount of claims settled (Rs.)</th>
<th>Claims ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>74,079</td>
<td>298,796</td>
<td>468.20</td>
<td>552</td>
<td>318</td>
<td>14.26</td>
<td>3.05</td>
</tr>
<tr>
<td>2006-2007</td>
<td>40,865</td>
<td>107,858</td>
<td>265.52</td>
<td>2,493</td>
<td>2,333</td>
<td>109.85</td>
<td>41.37</td>
</tr>
<tr>
<td>2007-2008</td>
<td>36,484</td>
<td>142,586</td>
<td>298.93</td>
<td>1,570</td>
<td>2,118</td>
<td>135.37</td>
<td>45.28</td>
</tr>
</tbody>
</table>

Source: Company Annual Report

f) HOPE Health policy (Health of Privileged Elder): Started in 2007 it is exclusively designed for citizens aged 60 years and above, sum insured is Rs. 1 lakh to Rs.5 lakhs, covers specified diseases only, compulsory copayment of 20% on admissible claim amount, cashless service through TPA only limited up to Rs. 1 lakh.

Besides the above-mentioned health insurance policies there are other policies such as individual mediclaim policy, overseas medical policy, group and individual personal accident policy. The insured can select the type of policy he required.

Financial performance

Table 6.9: Financial Performance during FY 2005-08 of Oriental Insurance Company limited

<table>
<thead>
<tr>
<th>Particulars</th>
<th>2005–06 (INR m)</th>
<th>2006–07 (INR m)</th>
<th>2007–08 (INR m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net profit</td>
<td>3,164.70</td>
<td>3,305.20</td>
<td>2,839.20</td>
</tr>
<tr>
<td>Net premium earned</td>
<td>20,330.30</td>
<td>22,180.20</td>
<td>25,004.60</td>
</tr>
<tr>
<td>Net health insurance premium earned</td>
<td>1,989.03</td>
<td>2,199.91</td>
<td>2,881.72</td>
</tr>
<tr>
<td>% of health premium in total premium</td>
<td>9.78</td>
<td>9.92</td>
<td>11.52</td>
</tr>
<tr>
<td>Net health insurance claims incurred</td>
<td>1.97</td>
<td>2.51</td>
<td>3.41</td>
</tr>
<tr>
<td>Health insurance commission expenses</td>
<td>0.14</td>
<td>0.20</td>
<td>0.25</td>
</tr>
</tbody>
</table>

Source: Company Annual Report
- Health insurance portfolio registered a claim ratio of 118.13% in FY2008 compared to 114.35% in FY2007. Medical inflation, increasing life expectancy, increasing load of lifestyle diseases and uncertainties in individual employability and earnings are the main reasons for increase in health insurance.

- Health department has shown more than 20% growth. The health insurance premium was INR2,881.72m in 2007–08, which is the fourth largest portfolio among the main twelve portfolios. Health portfolio has recorded a growth of 31.12% in 2008 as compared to 2007.

- In health insurance segment, there is a premium deficiency of INR262.7m as compared to INR149.9m in previous year.

- Growth rate in Health premium is 18.74% though less than last year. This is because of profitability review whilst underwriting of group policies.

**National Insurance Company Limited**

National Insurance Company Limited (NIC) was incorporated in 1906. Due to GIBNA, 21 foreign and 11 Indian companies were amalgamated with it in 1972 and ‘National’ became a subsidiary of GIC which is fully owned by the Government of India. After the notification of the GIBNA in 2002, National has been de-linked from its holding company GIC and is presently operating as a Government of India undertaking.

*Products offered*

There are more than 180 products, which are offered by NIC to cater to different insurance requirements of 10 million policyholders. An innovative and customized policy is the key for success for any product.

**Health products**

*a) BOI national swasthya bima*

This is a unique health policy designed especially for the account holders of Bank of India. The family of account holder including spouse and two dependent children up to the age of 21 years can be covered under this policy. This policy covers hospitalization expenses for account holder and family in case of any accident or injury.

*b) Critical illness policy*
Critical illness policy is an exclusive policy for individuals between the age group 20–65 years. This policy covers coronary artery surgery, cancer, failure of kidneys, stroke, multiple sclerosis and major organ transplants. If the insured is suffering from these illnesses, the insurance company pays according to sum insured.

c) Mediclaim policy

This policy covers reimbursement of hospitalization expenses incurred in the form of room, boarding expenses, and nursing expenses, fees of surgeon, anesthetist and medical practitioner. This insurance is available to a person between the ages of 18 to 59 years. The number of polices sold and the claims settled are shown in the Table 6.10.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of policies sold</th>
<th>No. of persons covered</th>
<th>Premium amount (Rs.)</th>
<th>No. of claims reported</th>
<th>No. of claims settled</th>
<th>Amount of claims settled (Rs.)</th>
<th>Claims ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-2005</td>
<td>897,480</td>
<td>2,497,801</td>
<td>1,761.45</td>
<td>213,313</td>
<td>189,595</td>
<td>1,457.26</td>
<td>82.70</td>
</tr>
<tr>
<td>2007-2008</td>
<td>588,370</td>
<td>7,560,666</td>
<td>3,640.75</td>
<td>245,448</td>
<td>269,934</td>
<td>4,342.99</td>
<td>135.01</td>
</tr>
<tr>
<td>2008-2009</td>
<td>688,842</td>
<td>2,957,739</td>
<td>3,988.57</td>
<td>236,481</td>
<td>202,597</td>
<td>4,917.37</td>
<td>128.71</td>
</tr>
</tbody>
</table>

Source: Company Annual Report
Financial performance

Table 6.11: Financial Performance during FY 2005-08 of National Insurance Company limited

<table>
<thead>
<tr>
<th>Particulars</th>
<th>2005-06 (INR m)</th>
<th>2006-07 (INR m)</th>
<th>2007-08 (INR m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net profit</td>
<td>770.70</td>
<td>1,311.80</td>
<td>-1,146.40</td>
</tr>
<tr>
<td>Net premium earned</td>
<td>25,086.50</td>
<td>28,321.70</td>
<td>26,830.00</td>
</tr>
<tr>
<td>Net health insurance premium earned</td>
<td>2,196.70</td>
<td>2,818.50</td>
<td>3,180.76</td>
</tr>
<tr>
<td>% of health premium in total premium</td>
<td>8.76</td>
<td>9.95</td>
<td>11.86</td>
</tr>
<tr>
<td>Net health insurance claims incurred</td>
<td>2,564.77</td>
<td>3,891.03</td>
<td>4,249.55</td>
</tr>
<tr>
<td>Health insurance commission expenses</td>
<td>375.79</td>
<td>493.53</td>
<td>490.21</td>
</tr>
</tbody>
</table>

Source: Company Annual Report

The company has shown a negative growth during the FY2008 with a loss of INR1, 146.4m. Health premiums showed a growth of 12.85% in spite of losses incurred during the period.

United India Insurance Company Limited

United India Insurance Company Limited was incorporated in 1938. Nationalization in 1972 made 12 Indian insurance companies, 4 cooperative insurance societies and Indian operations of 5 foreign insurers to merge with United India. United India presently has a work force of 18,300 spreads across 1,340 offices providing insurance cover to more than one crore policyholders. The company has a wide range of insurance products to provide insurance cover from bullock carts to satellites.

Products offered

The company is offering products covering almost all non-life items. The products include travel, fire, marine, industry products, and motor and liability coverage. The company offers products, which are unique, and customer centric.

Health products

a) Mediclaim policy
The expenses incurred due to hospitalization for any illness, disease or injuries by the insured are reimbursed as per the policy. These include hospital charges, surgeon fee, anesthetist nursing, cost of appliances like pacemaker, artificial limbs, etc. It covers people in the age group of 5–75 years under this policy including employees of government or private institutions, members of clubs or association, groups. The number of polices sold and the claims settled are shown in the Table 6.12.

Table 6.12: Coverage of Mediclaim policy and claims reported (FY2004-FY2009)

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of policies sold</th>
<th>No. of persons covered</th>
<th>Premium amount (Rs.)</th>
<th>No. of claims reported</th>
<th>No. of claims settled</th>
<th>Amount of claims settled (Rs.)</th>
<th>Claims ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-2005</td>
<td>140,441</td>
<td>482,133</td>
<td>14,518.57</td>
<td>30,130</td>
<td>25,626</td>
<td>14,425.35</td>
<td>108.96</td>
</tr>
<tr>
<td>2005-2006</td>
<td>245,000</td>
<td>772,000</td>
<td>21,569.87</td>
<td>40,000</td>
<td>37,889</td>
<td>21,627.51</td>
<td>103.46</td>
</tr>
<tr>
<td>2006-2007</td>
<td>305,000</td>
<td>845,000</td>
<td>23,528.24</td>
<td>50,500</td>
<td>42,585</td>
<td>23,520.49</td>
<td>106.33</td>
</tr>
<tr>
<td>2007-2008</td>
<td>348,000</td>
<td>918,000</td>
<td>25,208.24</td>
<td>62,700</td>
<td>48,350</td>
<td>28,209.00</td>
<td>136.48</td>
</tr>
</tbody>
</table>

Source: Company Annual Report

b) Overseas mediclaim policy

This policy covers medical treatment expenses incurred due to accident or disease during overseas trips. It also covers loss of passport. Different types of policies are there to cover for business, holiday, employment, studies and frequent traveling.

c) Uni-Medicare insurance

This policy reimburses hospitalization expenses due to illness, diseases or injury sustained. This insurance scheme also covers discount on premium, cumulative bonus, and cost of health check-up. In case of any claims incurred by the insured, the company will pay through TPA to the hospital. The number of polices sold and the claims settled are shown in the Table 6.13.
Table 6.13: Coverage of Uni-Medicare policy and claims settled (FY2006-2009)

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of policies sold</th>
<th>No. of persons covered</th>
<th>Premium amount (Rs.)</th>
<th>No. of claims reported</th>
<th>No. of claims settled</th>
<th>Amount of claims settled (Rs.)</th>
<th>Claims ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006-2007</td>
<td>172,586</td>
<td>541,879</td>
<td>964.95</td>
<td>510</td>
<td>162</td>
<td>9.14</td>
<td>0.95</td>
</tr>
<tr>
<td>2007-2008</td>
<td>80,293</td>
<td>280,452</td>
<td>564.11</td>
<td>591</td>
<td>502</td>
<td>481.71</td>
<td>85.39</td>
</tr>
<tr>
<td>2008-2009</td>
<td>63,034</td>
<td>242,395</td>
<td>511.60</td>
<td>5,338</td>
<td>2,209</td>
<td>393.44</td>
<td>68.39</td>
</tr>
</tbody>
</table>

Source: Company Annual Report

Financial performance

Table 6.14: Financial Performance during FY 2005-08 of United India Insurance Company limited

<table>
<thead>
<tr>
<th>Particulars</th>
<th>2005–06 (INR m)</th>
<th>2006–07 (INR m)</th>
<th>2007–08 (INR m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net profit</td>
<td>3,804.47</td>
<td>3,077.12</td>
<td>4,252.28</td>
</tr>
<tr>
<td>Net premium earned</td>
<td>21,366.30</td>
<td>21,626.50</td>
<td>21,943.30</td>
</tr>
<tr>
<td>Net health insurance premium earned</td>
<td>2,127.91</td>
<td>2,294.83</td>
<td>2,612.67</td>
</tr>
<tr>
<td>% of health premium in total premium</td>
<td>9.96</td>
<td>10.61</td>
<td>11.91</td>
</tr>
<tr>
<td>Net health insurance claims incurred</td>
<td>2,279.78</td>
<td>2,829.54</td>
<td>3,280.40</td>
</tr>
<tr>
<td>Health insurance commission expenses</td>
<td>175.45</td>
<td>195.19</td>
<td>246.19</td>
</tr>
</tbody>
</table>

Source: Company Annual Report

During 2007–08, there was a resurgence in business performance on several fronts marking a turn around from the under performance last year. The company’s profit has increased by 37% as compared to 2004–05 due to growth in almost all segments. Health and hospitalization portfolio has shown a growth of 22.23% with a growth of 13.85% in premiums.
Universal health insurance scheme is mainly introduced for people below poverty line, but the scheme has been opened up for above poverty line families with effect from April 2008.

**Future plans**

- The company during 2005 designed six new products, which were aligned to the needs of customers and the intermediaries. Most of the products were related to bank assurance channel such as IOB Healthcare plus and SBT Uni health (hospitalization expenses and personal accident covers for Indian Overseas Bank and State Bank of Travancore) and SBT NRI Care and IOB NRI Shield for health insurance needs of NRI’s and their families. To cater the needs of micro-insurance segment the company is planning to release policies, which are already filed with IRDA and are expected to be launched shortly.
- Overseas mediclaim policy was relaunched with attractive rates and terms and a variant of the product was also designed for persons traveling to SCHENGEN countries.

**Private sector non-life insurers**

**Bajaj Allianz General Insurance Company Limited**

Bajaj Allianz General Insurance Company Limited is a JV between Bajaj Auto Limited and Allianz AG of Germany. Bajaj Allianz received the IRDA Certificate of Registration in 2001 to conduct general insurance business (including health insurance business) in India. In its first year of operations, the company has acquired the top position among the private non-life insurers. The JV is 74:26 between Bajaj Auto Limited and Allianz AG.

Investment Credit Rating Agency (ICRA) rated Bajaj Allianz iAAA, for its highest claims paying ability. The Business World's 'Most Respected Companies Survey 2006' has ranked Bajaj Allianz as the second in the insurance sector.

**Products offered**

The company offers products in various categories: Asset insurance, health insurance, travel insurance and corporate insurance. Besides these, the company offers various customized insurance solutions, which suit the needs of a business unit.

**Health insurance policies**
Healthcare costs are high and getting higher. To protect the individual at the time of serious illness or hospitalization, Bajaj Allianz has introduced health insurance. There are various policies or packages introduced by the company to protect patient from sudden burden of huge payment in the form of hospital’s rent, doctor’s fee, etc. The insured can choose the policy based on his requirement. Given below are some of the health policies:

a) Health guard policy

Health guard policy covers the insured and his family members in the case of serious accident or major illness. The policy offers cashless benefit and medical reimbursement for hospitalization expenses and provides extra benefits such as family discount of 10%, cumulative bonus of 5% to the sum assured, health check up to INR1,000 at the end of continuous four years and income tax benefit on the premium under section 80D of Income Tax (IT) Act.

b) Hospital cash policy

This policy is unique and includes reimbursement of hospital expenses for each day within 24 hours. It means cash benefits are provided for each and every completed day of hospitalization. The benefit is doubled in case of ICU admission (for maximum 7 days) and premium paid up to INR15,000 per annum is eligible for tax exemption.

c) Critical illness policy

A critical illness policy states that a person can insure against the risk of serious illness. The policy covers the security of guaranteed cash sum on unexpected happening and illness. Insured can opt for sum assured from INR100,000 to 5,000,000 with premium exempted from tax.

d) Personal guard policy

This policy includes some additional features such as children's educational bonus; cover includes both death and permanent disability and reimbursement of daily expenses in case of hospitalization. Highest compensation of 125% of sum insured is paid in case of permanent total disability.

e) Silver health plan
Silver health plan offers cashless benefit or medical reimbursement for hospitalization expenses due to illness or accident and is particularly for people aged between 46-75 years, which protects insured, and his spouse in case of expensive medical care. Cumulative bonus of 5% and family discount of 5% is covered under this policy. Income tax benefit on the premium under section 80D of the IT Act is also applicable.

f) E-opinion

This policy provides benefits like sending medical reports in digitized form to World Care consortium and taking their opinions on further course of treatment. Three opinions are available per year of coverage and six opinions in case it is renewed continuously. The insured can use this opportunity if he is covered under this scheme.

Financial performance

<table>
<thead>
<tr>
<th>Particulars</th>
<th>2005–06 (INR m)</th>
<th>2006–07 (INR m)</th>
<th>2007–08 (INR m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net profit</td>
<td>217.00</td>
<td>471.00</td>
<td>516.00</td>
</tr>
<tr>
<td>Net premium earned</td>
<td>2,306.00</td>
<td>3,709.00</td>
<td>5,846.00</td>
</tr>
<tr>
<td>Net health insurance premium earned</td>
<td>133.93</td>
<td>232.30</td>
<td>420.46</td>
</tr>
<tr>
<td>% of health premium in total premium</td>
<td>5.81</td>
<td>6.26</td>
<td>7.19</td>
</tr>
<tr>
<td>Net health insurance claims incurred</td>
<td>150.16</td>
<td>223.70</td>
<td>542.10</td>
</tr>
<tr>
<td>Health insurance commission expenses</td>
<td>1.70</td>
<td>15.95</td>
<td>35.40</td>
</tr>
</tbody>
</table>

Source: Company Annual Report

The net premiums earned by the company for the year ended 31 March, 2008 stood at INR5,864m, a growth of 58.1% compared to INR3,709m in FY2007. The health insurance premium accounted to INR420.46m, 7.19% of total premium in FY2008. The health premium for FY2007 was INR232.30m.

- The growth rate of health insurance gross premium for FY2008 was 43% compared to 108% of the past year. The net commission ratio has increased to 7% from 5% in FY2008.
Health products like silver health plan for senior citizens and the critical illness cover for women were introduced during the FY2008. The company also introduced a credit insurance product in association with Euler Hermes, Germany.

Royal Sundaram Alliance Insurance

Royal Sundaram Alliance Insurance is a 74:26 JV between Sundaram Finance and Royal and Sun Alliance, which started operations in 2001. The company got license from IRDA in 2000, making it the first foreign JV for doing business in non-life segment. Royal and Sun Alliance is one of the world's leading multinational insurance groups with 20 million customers and 24,000 employees in 27 countries and was rated as ‘A-‘ (strong) by Standard & Poor's and an ‘A-‘ (excellent) by A.M. Best.

Products offered

The company is engaged in providing insurance products, business solutions and employee solutions. The company covered a wide product range with a minimum premium. The health insurance provided by the company includes various policies or schemes and the range of coverage depends upon the type of policy chosen by the insured. The various policies of health insurance are:

a) Health premium platinum policy

Health premium platinum is designed for the employees of the company and their family members. It covers the employees and their family members for hospital and medical expenses incurred due to illness or accident. Family members include spouse and two dependent children. With the health card provided by the company, members can access to the cashless service facility in Medicare hospitals.

b) Group personal accident policy

This policy gives protection to the employees of business against any accidental injuries sustained to the individual resulting in death or disablement. The policy includes reimbursement of hospitalization expenses and compensation if there is a permanent or temporary disablement of arms, legs, toes, etc.

c) Workmen's compensation policy
This policy provides cover for any insured employee who may sustain personal injury by accident or disease arising out of and in the course of his employment. In this policy the company will indemnify the insured against all sums for which the insured is held liable to pay to his employees under Workmen's Compensation Act, 1923, the Fatal Accidents Act 1855 and at Common Law.

d) Gramin arogya raksha

It is a unique health insurance scheme introduced for the benefit of the rural sector, covering critical illness, hospital cash and personal accident. This product has spread across the country with over 120,000 lives insured since it was launched in May 2005.

e) Shakthi health shield

Shakthi health shield is an exclusive policy for women of self-help groups (SHG), designed to provide health insurance to the women and their family members at an affordable cost. It is an ideal package that helps to protect the insured’s spouse and dependent children.

f) Shakthi security shield

Shakthi security shield provides relief to women in the event of body injury due to accident and also pays for loss of or damage to her property (house and contents) due to fire and flood. All women between the age group of 18 to 70 years can be covered under this policy irrespective of their income and occupation.

Financial performance

The company has shown INR4,610m of premium income during the financial year ended March 31, 2008; recording a growth rate of 38% over the previous financial year’s INR3,350m. The company recorded a before tax profit of INR100m. The retail insurance business showed a growth of 45%, with a premium of INR2,930m, while commercial insurance contributed INR1,680m to the company's total premium income with a growth of 27%. During the financial year 2007–08, the market share of Royal Sundaram has grown to 2.2% of the overall market share.

IFFCO TOKIO

IFFCO-TOKIO Insurance Services Limited (ITIS) was incorporated in 2003 as a 100% subsidiary of ITGI. Indian Farmers Fertilizer Co-operative Limited (IFFCO) owns 74% of
ITGI together with TOKIO Marine Asia Ltd with 26%. ITIS had started with general insurance and is now planning to diversify into life and financial products including banking products and ultimately become the one stop shop for all financial products.

**Products offered**

IFFCO-TOKIO provides a wide variety of policies that are customised according to the needs of individual or insured. The non-life policies are grouped under three broad categories: retail, commercial, and specialty.

**Health insurance policies**

**a) Individual med shield**

Individual med shield insurance provides reimbursement of medical treatment costs for diseases and accidents. It covers for all illnesses (except for certain exclusions) and also provides an option to insure for additional amount in case of critical illnesses such as heart surgery, kidney failure, etc., where the treatment cost is very high. Benefits like daily allowance are given during the period of hospitalization, ambulance charges are provided to the insured, pre- and post-hospitalization for 60 days are also given.

**b) Critical illness policy**

Under this policy the insured gets hospital room’s rent, nursing expenses, boarding expenses, doctor’s consulting fee and diagnostic expenses during the stay in hospital.

**c) Surgery protector**

Under the policy, about 600 types of surgeries have been classified into four categories (minor, intermediate, major and supra major) and specified percentages of the sum insured are available as limits of coverage for different categories. Besides this, the normal expenses incurred can also be recovered by the insured.

Besides these policies, the company also covers individual personal accident and group personal accident policies.

**Financial performance**

The company’s net health insurance premium earned during FY2008 was INR303.74m, an increase of 86.83% as compared to FY2007.
- ITGI increased its share capital by INR1,200 million last year, taking the total share capital to INR2,200m.
- ITGI has a market share of 4.4% in 2008 as compared to 2.88% in the past year.

**ICICI Lombard General Insurance Company Limited**

ICICI Lombard General Insurance Company Limited is a 74:26 JV between ICICI Bank Limited and the Canada based Fairfax Financial Holdings Limited. ICICI Bank is India's second largest bank while Fairfax Financial Holdings is a diversified financial corporate engaged in general insurance, reinsurance, insurance claims management and investment management.

ICICI Lombard is the first general insurance company in India to be awarded with ISO 9001:2000 and it is rated as iAAA by ICRA for its highest claims paying ability.

**Products offered**

The company offers a wide range of products in various categories such as business, project, liability, export, rural and personal solutions.

**Health insurance policies**

The company offers various health insurance policies by considering affordability of the people and their need. Some of the policies are discussed below:

a) **Critical care insurance**

Critical care insurance protects the insured and his spouse against the diagnosis expenses and nine major medical illnesses and procedures. The policy offers a lump sum benefit on diagnosis of cancer, bypass surgery, heart attack, kidney failure, major organ transplant, stroke, paralysis, heart valve replacement surgery or multiple sclerosis. In case of death of the insured due to an accident within the policy period, the nominee is compensated with the sum insured. In case of permanent total disablement due to an accident, the sum insured is given as a lump sum benefit.

b) **10K tax saver health insurance policy**

The 10K tax saver health insurance policy has a fixed premium and enables the insured to save up to INR3,366 under Section 80D of the IT Act. Under this policy, the insurance premium INR10,000 will be the same, but the sum insured varies depending on the age and...
the number of members covered. The premium is tax exempt under Section 80D of the IT Act.

c) **Family floater health plan**

One policy—one premium is the concept behind this policy. It covers the entire family with a single policy and a single premium. It includes expenses in case of a sudden illness, accident or planned surgery of the entire family. Premium is free from tax under Section 80D of IT Act.

d) **Personal accident insurance policy**

ICICI Lombard’s personal accident insurance policy covers against accidental death, permanent total disablement (PTD) and permanent partial disablement (PPD). In this policy, there are three additional flexible plan options with a sum insured of INR0.3m, INR0.5m and INR1m. In case of death of the insured due to an accident within the policy period, the nominee is compensated with the sum insured. In case of PTD and PPD compensation is paid to the insured.

e) **Crisis Cover**

This product is a new launch by Lombard and it is a unique plan which offers the widest coverage of against 35 critical illnesses, total and permanent disability, and death over the long-term, making it the most comprehensive critical illness plan available in India today. The 35 conditions covered by Crisis Cover include angioplasty, brain surgery, coronary artery bypass surgery, kidney failure, heart attack, major organ transplant, stroke, etc. With such a comprehensive list of illnesses, the plan would provide cover against disease related to most body organs and even loss of senses such as hearing, eyesight and loss of limbs. The sum assured is paid in the event of being diagnosed with a critical illness or on being rendered totally disabled or on death, whichever occurs first. Under this policy the insured can get the benefit of tax exemption under section 80C and 80D of IT Act.

Financial performance
Table 6.16: Financial Performance of ICICI Lombard General Insurance Company limited during FY 2005-08

<table>
<thead>
<tr>
<th>Particulars</th>
<th>2005–06 (INR m)</th>
<th>2006–07 (INR m)</th>
<th>2007–08 (INR m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net profit</td>
<td>317.84</td>
<td>483.47</td>
<td>503.07</td>
</tr>
<tr>
<td>Net premium earned</td>
<td>790.83</td>
<td>2,156.06</td>
<td>5,276.79</td>
</tr>
<tr>
<td>Net health insurance premium earned</td>
<td>180.30</td>
<td>458.85</td>
<td>1,387.26</td>
</tr>
<tr>
<td>% of health premium in total premium</td>
<td>22.80</td>
<td>21.28</td>
<td>26.29</td>
</tr>
<tr>
<td>Net health insurance claims incurred</td>
<td>268.43</td>
<td>522.21</td>
<td>1,511.43</td>
</tr>
<tr>
<td>Health insurance commission expenses</td>
<td>(19.14)</td>
<td>0.41</td>
<td>65.31</td>
</tr>
</tbody>
</table>

Source: Company Annual Report

- The health insurance premiums are increasing year by year. The company collected health insurance premiums accounting to 26.29% of total premiums during 2007–2008.
- The sudden increase in premiums this year was due to introduction of various innovative schemes and policies, which are customer oriented.

**HDFC Chubb General Insurance Company Limited**

HDFC Chubb General Insurance Company Limited is a JV between HDFC-India's premier financial services company and Chubb-a global leader in non-life insurance. The partnership is in a ratio of 76:26 between HDFC and Chubb. The company has received certificate of operations from IRDA in 2002 and has focused on consumer insight and makes products that are accepted worldwide. Now the company is fully owned by HDFC. Another Company named HDFC Ergo is started and it also provides health insurance policies. Company has just started, so much of data is not available.

**Products offered**
HDFC Chubb offerings are classified into three categories, each of which was designed to meet specific needs of the individual. The categories are personal insurance, accident and health insurance and commercial insurance. The company offers solutions to individual problems related to non-life.

**Health insurance policies**

**Hospital cash policies**

HDFC Chubb’s hospital cash policy protects the people against financial loss from unforeseen hospitalization costs. There are two types of hospital cash policies.

- Group hospital cash policy
- Voluntary group hospital cash policy

In-group hospital cash policy, the organization can decide the benefits they want to provide for each employee in case of any accident or illness. Premiums are paid by the organization on behalf of employees.

In voluntary group hospital policy, the plan is specifically designed for that particular organization. Each employee decides the amount he wants to be insured against. Premiums are deducted from an employee’s salary. The benefits availed from this policy are similar to others like reimbursement of hospitalization expenses, concession fees, etc.

**Financial performance**

- As against a loss of INR79.8m in the FY2005, the company has turned a modest profit of INR44.1m in FY2006. The loss was due to floods in Mumbai and Bangalore during the financial year 2005.

- Accident and health portfolio comprising group and retail personal accident and corporate travel insurance, saw an increase in the business from INR101.2m in 2004–05 to INR126.3m in 2005–06.

- The Company reinsures 20% of its business with the statutory reinsurers, General Insurance Corporation of India (GIC) except for casualty and liability lines.
Cholamandalam MS General Insurance Company Ltd is a JV between Murugappa Group and Mitsui Sumitomo Insurance Group of Japan. Murugappa group is one of India’s largest business groups and Mitsui Sumitomo is one of the top ten general insurance companies globally and Japan’s second largest insurance group.

**Products offered**

Cholamandalam MS offers a wide range of product solutions ranging from motor insurance, health, home, travel, accident, and property, marine and engineering. The organization is very much concentrated on consumers in developing a product or differentiating a product from other company products. Customization is the key concept behind the success of Cholamandalam.

**Health insurance policies**

**24-hour emergency assistance**

Cholamandalam MS has tied up with Paramount Healthcare Management Ltd (PHM) to offer valuable and quick services to its health insurance customers. This policy offers guidance on the hospitalization procedure, reimbursement of pre- and post-hospital expenses, ambulance service, cash-free service and 24-hour help line service.

**TATA-AIG General Insurance Company Limited**

Tata-AIG General Insurance Company Limited is a JV between Tata and American International Group Inc. (AIG) in 74:26 proportions. The company has started its operations in 2001 offering the complete range of general insurance products.

**Products offered**

Tata-AIG offers products and services under three important heads: individual, small business and corporates which covers all areas of general insurance category starting from automobile, home, personal accident, travel, energy, marine, property and casualty, as well as several specialized financial lines. These products are developed in a very helpful way and cater to the needs of an individual.

**Health insurance policies**

a) **Accident guard**
This policy provides insurance to the entire family with less than three rupee a day. If the insured buys more than 10 units, he can avail extra benefits such as accidental weekly benefit, educational allowance to his children, family transportation, etc.

b) Hospital care

Hospital care takes care of all the expenses arising due to unforeseen hospitalization expenses due to accident. Apart from regular hospital charges of operation theatre, surgeon, pathology tests, X-ray, etc., this product also covers incidental expenses like food, accommodation to the insured family members.

c) Maharaksha personal injury plan

This plan is targeted towards the ageing couples and is designed to pay cash benefit for a wide range of ‘everyday’ injuries such as fractures, burns, dislocations or internal injuries that might not require hospitalization. The benefit can be used in any form like availing special care by appointing nurse or by buying a wheelchair.

d) Hospital care+

Hospital care+ is a daily cash benefit, which takes care of any unexpected financial burden in case of hospitalization. Health care+ is a perfect supplement to the health policy and can be taken along with any other health insurance schemes.

e) Criticare

This plan is targeted towards the health conscious of individuals (young to ageing couples) and provides lump sum cash benefit on the diagnosis of 11 critical illnesses. It also provides second opinion benefit by transferring the medical reports and diagnosis to an expert panel in the US for review and gets opinion on diagnosis and line of treatment.

Financial performance

TATA-AIG has posted a profit of INR136m in FY2008 against INR122m in FY2007. Premium has increased to INR6060m against INR4,690m in FY2007 registering a growth of 29%. During the year, the company has issued 595,000 policies and settled 72,456 claims that amounted to INR3,155m with an increase of 88% over previous year. The company has enhanced with a claim settlement ratio of 91% during the FY2008.
Future plans

TATA-AIG has come out with a package ‘general insurance version – 2007’ which includes fire policies for offices with the provision of rent for alternate accommodation in the event of a fire, overseas mediclaim insurance, public liability policies and directors and officers policies. Voluntary accident benefits cover for the employees and their families is also provided.

Reliance General Insurance

Reliance General Insurance (RGICL) is a subsidiary of Reliance Capital and offers an exhaustive range of insurance products that covers most risks including property, marine, casualty and liability.

Reliance insurance caters to the corporate and individual customers with a wide range of products, multiple distribution channels and technology adoption to capture substantial market share across product lines.

Products offered

RGICL products covers risks associated with health, personal accident, fire, engineering, marine, motor and travel. The company offers innovative products and customer service standards which are benchmarked to be the best insurance practices in the world.

Health insurance products

Some of the policies are mentioned below:

a) Individual mediclaim insurance policy

This policy covers hospitalization and domiciliary hospitalization expenses incurred by the insured (including family members) for illness, disease or accidental injury. It also includes hospital charges (room and boarding and operation theatre), fees of surgeon, anesthetist, nurses, cost of medicine, oxygen, blood, cost of appliances like pacemaker, artificial limbs and other organs.

b) Group mediclaim insurance policy

A group hospitalization policy is available to corporate, association or institution or group constituting more than 50 persons. The policy covers hospitalization and domiciliary...
hospitalization expenses incurred by the employees or members, and also include extra maternity benefit subject to the condition that all employees or members of the insured are covered under this extension.

c) Reliance health-wise policy

This policy offers pre- and post-hospitalization and domiciliary hospitalization expenses incurred by the insured according to their age. It includes all benefits like reimbursement, ambulance facility and online advisory. This policy includes an additional feature of covering pre-existing diseases after two–three continuous renewals.

Financial performance

The company has recorded a growth of 146.33% in FY2008 compared to FY2007. The health premium for the FY2008 has increased by 9.07%. Though there was an increase, the percentage of health premiums in total premiums has decreased.

Specialized institutions

Star Health and Allied Insurance Company Limited

Star Health and Allied Insurance Company Limited is a joint venture between Oman Insurance Company, ETA Ascon Group and a host of insurance veterans from India. The company provides affordable and quality health insurance that preserves and values human lives. It is aimed to become the most favored brand in the health insurance segment by providing wide range of health insurance services and related products at affordable prices. The main objective of the company is to offer services in the health segment that enable the customers to manage their stressful situations.

Health products

Health insurance is one of the important products that people always wish to take. It is essential for every individual or a family to plan for the protection their health. Ill-health has huge financial implications.

a) Medi classic policy
Star Health and Allied Insurance Service offers Star Medi Classic policy to provide reimbursement of hospitalization expenses. Some benefits under hospitalization cover (inpatient hospitalization expenses for a minimum of 24 hours), room rent at 2% of sum insured, boarding and nursing expenses, surgeon’s fees, consultant’s fees, anesthetist’s fees, pre-hospitalization expenses up to 30 days prior to date of admission in the hospital and a lump-sum amount calculated at 7% of the specified hospitalization expenses payable towards post-hospitalization, subject to a maximum of INR5,000. Premium paid by cheque under this policy is eligible for tax relief under section 80D of the IT Act.

Rating for family packs

The rating of family packs and groups are shown in the Table 6.17 and Table 6.18 respectively. This scheme is available for persons below 45 years of age. The sum insured is apportioned equally among insured family members.

<table>
<thead>
<tr>
<th>Table 6.17: Rating for family packs under Medi Classic Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum insured INR200,000</td>
</tr>
<tr>
<td>2 adults</td>
</tr>
<tr>
<td>2 adults + 1 child</td>
</tr>
<tr>
<td>2 adults + 2 children</td>
</tr>
<tr>
<td>1 adult + 1 child</td>
</tr>
<tr>
<td>1 adult + 2 child</td>
</tr>
</tbody>
</table>

Source: Company’s website
### Table 6.18: Rating of groups under Medi Classic Policy

<table>
<thead>
<tr>
<th>Group size (persons)</th>
<th>% of discount on premium (excluding add-on covers and service tax)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 500 Persons</td>
<td>NIL</td>
</tr>
<tr>
<td>501 - 1,000</td>
<td>2.5</td>
</tr>
<tr>
<td>1,001 - 3,000</td>
<td>5.0</td>
</tr>
<tr>
<td>3,001 - 7,000</td>
<td>7.5</td>
</tr>
<tr>
<td>7,001 - 10,000</td>
<td>10.0</td>
</tr>
<tr>
<td>&gt; 10,000</td>
<td>12.0</td>
</tr>
</tbody>
</table>

Source: Company’s website

### b) Medi premier benefits

The policy has two sections. While section I offers protection against unexpected health issues, section II ensures a lump sum payment of 50% of the sum insured when certain disorders are diagnosed.

Section I includes hospitalization, boarding and nursing expenses, surgeon’s fees, consultant’s fees, diagnostic expenses, cost of pace-makers, artificial limbs, cost of medicines and drugs, pre-hospitalization expenses up to 30 days prior to date of admission into the hospital. Lump sum compensation is provided for 50% of the sum insured under section II in addition to payment of hospitalization under section I. Such hospitalization expenses would be paid only till the date of diagnosis of the major illness such as stroke, renal failure and cancer. Premium paid by cheque is exempted from tax under section 80D of the IT Act. The premium amount paid by the group is given in Table 6.19.
### Table 6.19: Rating of groups under Medi Premier Benefits

<table>
<thead>
<tr>
<th>Group size (persons)</th>
<th>% of discount on premium (excluding add-on covers and service tax)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 500 Persons</td>
<td>NIL</td>
</tr>
<tr>
<td>501 – 1,000</td>
<td>2.5</td>
</tr>
<tr>
<td>1,001 – 3,000</td>
<td>5.0</td>
</tr>
<tr>
<td>3,001 – 7,000</td>
<td>7.5</td>
</tr>
<tr>
<td>7,001 – 10,000</td>
<td>10.0</td>
</tr>
<tr>
<td>&gt; 10,000</td>
<td>12.0</td>
</tr>
</tbody>
</table>

Source: Company’s website

c) NRI all care

This policy insures the health of family members of non-resident Indians. It provides the financial help and assistance during a medical emergency. Special benefits under this policy include extension of coverage to the pre-existing diseases (other than cardiovascular diseases, cancer and renal complications). Age limit for coverage is not a concern and the waiting period is minimized.

### Table 6.20: Premiums paid under the sum insured

<table>
<thead>
<tr>
<th>Sum insured (INR)</th>
<th>Gross premium (INR)</th>
<th>Plus service tax (ST) at 12.24%</th>
<th>Net premium per spouse (INR)</th>
<th>Additional premium per child (including ST)</th>
<th>Additional premium per adult (including ST)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100,000</td>
<td>1,560</td>
<td>191</td>
<td>1,751</td>
<td>438</td>
<td>875</td>
</tr>
<tr>
<td>200,000</td>
<td>3,020</td>
<td>370</td>
<td>3,389</td>
<td>678</td>
<td>1,695</td>
</tr>
<tr>
<td>300,000</td>
<td>4,240</td>
<td>519</td>
<td>4,758</td>
<td>952</td>
<td>2,379</td>
</tr>
</tbody>
</table>
d) Diabetes

This policy is specially designed for the people who are affected by Diabetes Mellitus type II and offers insurance protection for treating most commonly occurring complications. This policy covers problems and treatment related to eyes (diabetic retinopathy requiring laser treatment), kidneys (diabetic nephropathy leading to chronic renal failure), feet (diabetic foot ulcer requiring micro-vascular surgical correction). The policy covers the cost of treatment up to the limit provided. The premium that is required to be paid under this policy is provided in Table 6.21.

<table>
<thead>
<tr>
<th>Sum insured (INR)</th>
<th>26 - 35yrs</th>
<th>36-45yrs</th>
<th>46-55yrs</th>
<th>56 -65yrs</th>
<th>66-70yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>50,000</td>
<td>805</td>
<td>990</td>
<td>1,235</td>
<td>1,485</td>
<td>2,225</td>
</tr>
<tr>
<td>100,000</td>
<td>1,140</td>
<td>1,615</td>
<td>1,900</td>
<td>2,185</td>
<td>2,470</td>
</tr>
<tr>
<td>200,000</td>
<td>1,885</td>
<td>2,565</td>
<td>3,420</td>
<td>3,765</td>
<td>4,105</td>
</tr>
<tr>
<td>300,000</td>
<td>2,300</td>
<td>3,135</td>
<td>4,180</td>
<td>4,600</td>
<td>5,020</td>
</tr>
<tr>
<td>400,000</td>
<td>4,655</td>
<td>4,990</td>
<td>6,650</td>
<td>7,315</td>
<td>7,980</td>
</tr>
<tr>
<td>500,000</td>
<td>6,385</td>
<td>6,840</td>
<td>9,120</td>
<td>10,035</td>
<td>10,945</td>
</tr>
</tbody>
</table>

Source: Company’s website

e) Family health optima

The company provides family health optima to protect all members of a family from financial setbacks in the event of a serious illness. The coverage of the policy is applicable equally to all members of the family. The policy coverage includes hospitalization cover (includes room boarding expenses to a maximum of INR1,500 per day in class A cities, INR750 in class B cities and INR500 in other locations), nursing expenses, surgeon's fees, consultant's fees, anesthetist and specialist fees.
f) Senior citizens red carpet

This policy is mainly introduced keeping senior citizens requirements in view. It provides cover for anyone over the age of 60 and permits entry right up to the age of 69 with continued cover after that. This policy does not require any pre-medical check up and treatment is provided in network hospitals. This policy covers all pre-existing diseases except those for which treatment or advice was recommended by or received during the immediately preceding 12 months from the date of proposal.

6.3 ANALYSIS AND INTERPRETATION

From the review of literature we can see that there are many areas in the field of demand for health insurance, which are unexplored or need to be explored. Therefore, in this study an attempt has been made to analyse the factors which determine health insurance purchase decision by using model having continuous, categorical and interval variables and estimating the model in two stages: first, factors affecting buying decision of insurance and second, the extent of health insurance purchase.

Data

Primary data is used, collected through survey for studying insurance purchase decision. Data was collected through a questionnaire.

Econometric analysis is used to find the factors affecting health insurance purchase decision. The decision for buying insurance has been formulated in two interrelated choices. First, the choice is related to buy or not to buy health insurance. Second, if decision is to buy the insurance then to buy for how many people in the family and for what kind of coverage i.e. extent or amount of insurance.

The following table provides the definition of the variables used in the study. Dependent variable is a binary variable while independent variables are both continuous variables and ordinal variables.
Table 6.22 Variables and their definitions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance Purchase</td>
<td>Whether any health insurance policy has been purchased in the household. This variable is 1 when policy has been purchased and 0 when not purchased.</td>
</tr>
<tr>
<td>Extent of Health Insurance Purchase</td>
<td>This is calculated by total number of premium paid per year divided by total expenditure per year of the household</td>
</tr>
<tr>
<td>Total Health Expenditure (in Rs)</td>
<td>Sum of hospitalisation expenses and other healthcare expenditures in past one year</td>
</tr>
<tr>
<td>Total Hospitalisation Cost</td>
<td>It contains hospitalisation cost incurred by the household in past one year for the treatment of any of the family member</td>
</tr>
<tr>
<td>Other Health Costs</td>
<td>Health expenditure of the family other than hospitalisation expenditures</td>
</tr>
<tr>
<td>Income (in Rs)</td>
<td>Annual household income. Three variables have been used in the study: Income – income of the household Income^2 – square of the income of the household Income^3 – cube of the income of the household</td>
</tr>
<tr>
<td>Age</td>
<td>Age of the head of the household has been collected and divided into five groups: Group 1- less than 25 years Group 2 – 26 to 38 years Group 3 – 39 to 50 years Group 4 – 51 to 62 years Group 5 – More than 62 years</td>
</tr>
<tr>
<td>Gender</td>
<td>Gender of the head of the household</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Education</td>
<td>Latest educational qualification of the household head. Education has been divided into five categories and is treated as a continuous variable.</td>
</tr>
<tr>
<td>Child</td>
<td>Number of the children in the family (below 18 years)</td>
</tr>
<tr>
<td>Members in family</td>
<td>Number of the people in the household</td>
</tr>
</tbody>
</table>

**Interval variables**

<table>
<thead>
<tr>
<th>Cost</th>
<th>Price of the insurance purchase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td>Actual or perceived quality of the services provided on treatment after purchase of policy</td>
</tr>
<tr>
<td>Accessibility</td>
<td>Distance of service provider from the household</td>
</tr>
<tr>
<td>Coverage of illness</td>
<td>Types of illnesses covered in insurance policy</td>
</tr>
<tr>
<td>Coverage of services</td>
<td>Range of medical services covered in the policy</td>
</tr>
<tr>
<td>Trust</td>
<td>Trust in the insurer and service provider</td>
</tr>
<tr>
<td>Knowledge about insurance</td>
<td>Knowledge and awareness about the insurance policy and its benefits</td>
</tr>
<tr>
<td>Health/ Illness expenditure</td>
<td>Expectation of household about health care expenditure</td>
</tr>
</tbody>
</table>

To find the factors determining the probability of health insurance purchase and at the same time once decided to purchase health insurance which factors will affect the extent of insurance purchase, two separate equations are used. Heckman two step method is used to take care of sample selection bias. In this model, the first equation is a discrete choice model using PROBIT which is related to probability of buying insurance and second equation is a simple OLS where the extent of health insurance purchase has been analysed.
Descriptive analysis of data tells the basic distribution characteristics. The sample size taken for this study is 500 out of which 369 fully responded to the questions relevant to the study. Out of 369 households, 119 households have not bought health insurance. Following table gives the basic characteristics of the main variables:

**Table 6.23 Descriptive Statistics – Total Sample**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL_INC</td>
<td>369</td>
<td>2,480,000</td>
<td>120,000</td>
<td>2,600,000</td>
<td>579,577.24</td>
<td>380,846.262</td>
</tr>
<tr>
<td>TOTAL_EXP</td>
<td>369</td>
<td>2,227,000</td>
<td>100,000</td>
<td>2,327,000</td>
<td>485,781.60</td>
<td>328,738.236</td>
</tr>
<tr>
<td>TOTAL_HE</td>
<td>369</td>
<td>745,000</td>
<td>5,000</td>
<td>750,000</td>
<td>55,954.85</td>
<td>63,469.069</td>
</tr>
<tr>
<td>HE_TE</td>
<td>369</td>
<td>1.21</td>
<td>.04</td>
<td>1.25</td>
<td>.1058</td>
<td>.07092</td>
</tr>
<tr>
<td>AGE</td>
<td>369</td>
<td>52.00</td>
<td>20.00</td>
<td>72.00</td>
<td>42.0596</td>
<td>11.62441</td>
</tr>
<tr>
<td>MEMBERS_IN_FAMILY</td>
<td>369</td>
<td>7.00</td>
<td>2.00</td>
<td>9.00</td>
<td>4.8320</td>
<td>1.19735</td>
</tr>
<tr>
<td>CHILDREN_IN_FAMILY</td>
<td>369</td>
<td>4.00</td>
<td>.00</td>
<td>4.00</td>
<td>1.5447</td>
<td>.83652</td>
</tr>
<tr>
<td>OLD</td>
<td>369</td>
<td>3.00</td>
<td>.00</td>
<td>3.00</td>
<td>1.0379</td>
<td>.75805</td>
</tr>
<tr>
<td>EARNERS</td>
<td>369</td>
<td>3.00</td>
<td>1.00</td>
<td>4.00</td>
<td>1.6667</td>
<td>.65109</td>
</tr>
<tr>
<td>HOSP</td>
<td>365</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2.07</td>
<td>.262</td>
</tr>
<tr>
<td>TOTAL_PREMIUMPAID</td>
<td>369</td>
<td>30,000.00</td>
<td>.00</td>
<td>30,000.00</td>
<td>2,069.3930</td>
<td>2,749.39636</td>
</tr>
<tr>
<td>HEALTH_INS_PRE_TOTAL_EXP</td>
<td>369</td>
<td>.0500</td>
<td>.0000</td>
<td>.0500</td>
<td>.003445</td>
<td>.0035765</td>
</tr>
<tr>
<td>HOSP_COST</td>
<td>369</td>
<td>208,100</td>
<td>1,900</td>
<td>210,000</td>
<td>16,308.13</td>
<td>18,387.760</td>
</tr>
<tr>
<td>OTHER_HEALTH_COST</td>
<td>369</td>
<td>537,000</td>
<td>3,000</td>
<td>540,000</td>
<td>39,646.72</td>
<td>45,136.388</td>
</tr>
</tbody>
</table>

From the table 6.23 we can see that in the sample average annual income of the household is around Rs. 580,000 and average yearly health care expenditure is Rs. 55,954. On an average a household is spending around 11% of its total expenditure on health. In addition a household is spending Rs.16,308 as hospitalisation expenditure per year. Other than hospitalisation costs, other health costs are around Rs. 39,647 per family. Similarly family size on an average household is a little less than 5 and number of children per household on
an average is around 1.5. We can also see that average number of hospitalisation figure is 2.07, which means that on an average a household needs hospitalisation around two times in a year. Another phenomenon is that average number of earning members is 1.67 per household, which indicates that in one out of every third house, two people are earning. In the sample, households are characterized in two broad parts based on their purchase of health insurance status i.e. households which have purchased insurance and households which have not purchased insurance. Following tables give descriptive statistics of households after segregating them on the basis of insurance status.

Table 6.24: Descriptive Statistics - Purchased Insurance

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL_INC</td>
<td>250</td>
<td>2,250,000</td>
<td>350,000</td>
<td>2,600,000</td>
<td>707,204.00</td>
<td>401,992.520</td>
</tr>
<tr>
<td>TOTAL_EXP</td>
<td>250</td>
<td>2,037,000</td>
<td>290,000</td>
<td>2,327,000</td>
<td>594,240.31</td>
<td>348,762.189</td>
</tr>
<tr>
<td>TOTAL_HEALTH_EXP</td>
<td>250</td>
<td>723,000</td>
<td>27,000</td>
<td>750,000</td>
<td>73,566.60</td>
<td>70,510.571</td>
</tr>
<tr>
<td>HE_TE</td>
<td>250</td>
<td>1.18</td>
<td>.07</td>
<td>1.25</td>
<td>.1218</td>
<td>.08102</td>
</tr>
<tr>
<td>AGE</td>
<td>250</td>
<td>52.00</td>
<td>20.00</td>
<td>72.00</td>
<td>43.2720</td>
<td>11.98920</td>
</tr>
<tr>
<td>MEMBERS_IN_FAMILY</td>
<td>250</td>
<td>7.00</td>
<td>2.00</td>
<td>9.00</td>
<td>5.0480</td>
<td>1.21804</td>
</tr>
<tr>
<td>CHILDREN_IN_FAMILY</td>
<td>250</td>
<td>4.00</td>
<td>.00</td>
<td>4.00</td>
<td>1.6400</td>
<td>.86799</td>
</tr>
<tr>
<td>OLD_IN_FAMILY</td>
<td>250</td>
<td>3.00</td>
<td>.00</td>
<td>3.00</td>
<td>1.0520</td>
<td>.75603</td>
</tr>
<tr>
<td>EARNERS</td>
<td>250</td>
<td>3.00</td>
<td>1.00</td>
<td>4.00</td>
<td>1.8440</td>
<td>.65527</td>
</tr>
<tr>
<td>HOSP</td>
<td>248</td>
<td>1.00</td>
<td>2.00</td>
<td>3.00</td>
<td>2.0887</td>
<td>.28490</td>
</tr>
<tr>
<td>TOTAL_PRE_PAID</td>
<td>250</td>
<td>28,800</td>
<td>1,200</td>
<td>30,000</td>
<td>3,054.42</td>
<td>2,854.998</td>
</tr>
<tr>
<td>HEALTH_INS_PRE_TOTAL_</td>
<td>250</td>
<td>.0469</td>
<td>.0031</td>
<td>.0500</td>
<td>.005085</td>
<td>.0032452</td>
</tr>
<tr>
<td>EXP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HOSP_COST</td>
<td>250</td>
<td>208,000</td>
<td>2,000</td>
<td>210,000</td>
<td>21,430.73</td>
<td>20,409.085</td>
</tr>
<tr>
<td>OTHER_HEALTH_COST</td>
<td>250</td>
<td>520,900</td>
<td>19,100</td>
<td>540,000</td>
<td>52,135.87</td>
<td>50,172.757</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>248</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 6.25: Descriptive Statistics _ Non-insured households

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL INC</td>
<td>119</td>
<td>305,000.00</td>
<td>120,000</td>
<td>425,000</td>
<td>311,453.78</td>
<td>65,817.38</td>
</tr>
<tr>
<td>TOTAL EXP</td>
<td>119</td>
<td>247,100.00</td>
<td>100,000</td>
<td>347,100</td>
<td>257,927.18</td>
<td>55,477.61</td>
</tr>
<tr>
<td>TOTAL_HEALTH_EXP</td>
<td>119</td>
<td>26,000.00</td>
<td>5,000</td>
<td>31,000</td>
<td>18,955.38</td>
<td>5,829.19</td>
</tr>
<tr>
<td>HE_TE</td>
<td>119</td>
<td>.07</td>
<td>.04</td>
<td>.11</td>
<td>.0723</td>
<td>.01258</td>
</tr>
<tr>
<td>AGE</td>
<td>119</td>
<td>46.00</td>
<td>20.00</td>
<td>66.00</td>
<td>39.5126</td>
<td>10.4133</td>
</tr>
<tr>
<td>MEMBERS_IN_FAMILY</td>
<td>119</td>
<td>4.00</td>
<td>2.00</td>
<td>6.00</td>
<td>4.3728</td>
<td>1.0167</td>
</tr>
<tr>
<td>CHILDREN_IN_FAMILY</td>
<td>119</td>
<td>2.00</td>
<td>.00</td>
<td>2.00</td>
<td>1.3445</td>
<td>.7299</td>
</tr>
<tr>
<td>OLD_IN_FAMILY</td>
<td>119</td>
<td>2.00</td>
<td>.00</td>
<td>2.00</td>
<td>1.0084</td>
<td>.7646</td>
</tr>
<tr>
<td>EARNERS</td>
<td>119</td>
<td>1.00</td>
<td>1.00</td>
<td>2.00</td>
<td>1.2941</td>
<td>.4575</td>
</tr>
<tr>
<td>HOSP</td>
<td>117</td>
<td>1.00</td>
<td>2.00</td>
<td>3.00</td>
<td>2.0427</td>
<td>.2031</td>
</tr>
<tr>
<td>TOTAL_PRE_PAID</td>
<td>119</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.0000</td>
<td>.0000</td>
</tr>
<tr>
<td>TOTAL_PRE_PAID_TOTAL_ EXP</td>
<td>119</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.0000</td>
<td>.0000</td>
</tr>
<tr>
<td>HOSP_COST</td>
<td>119</td>
<td>7,100.00</td>
<td>1,900</td>
<td>9,000</td>
<td>5,546.53</td>
<td>1,741.98</td>
</tr>
<tr>
<td>OTHER_HEALTH_COSTS</td>
<td>119</td>
<td>19,000.00</td>
<td>3,000</td>
<td>22,000</td>
<td>13,408.84</td>
<td>4,134.26</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>117</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the above two tables we can see that there is a distinct difference between the two groups. It is observed that the households which have bought insurance have higher annual income than that of non-insured households. One reason for this can be the number of earning members, which is higher in case of insured households. Also if the income of the household is higher it will have more money to buy insurance and pay the premium. Total healthcare expenditure of non-insured households is lower than insured households. Healthcare expenditure as a percentage of total expenditure is also higher for insured households. This means that households which spend more of their expenditure on healthcare have more probability of buying health insurance. Another very important figure is hospitalisation cost. Hospitalisation cost is more in case of households which have purchased insurance.
On an average we can see that insured households have bigger family size than non insured households. Similarly, insured households have more children than non-insured households. Also, insured households consume more hospital services as indicated by their hospitalisation costs. Since the present health insurance schemes cover hospitalisation costs, it is expected that households with high hospitalisation cost will have higher probability of buying health insurance.

Results of the Data Analysis

Household income has been found as one important determinant of health insurance purchase decision. Health expenditure is also expected to have positive association with health insurance purchase decision. There are other variables having a role in determining the probability of health insurance purchase and they are incorporated in the model estimation. Based on the discussion with customers, insurance provider and insurance agents additional set of ordinal variables are introduced in model estimation. These variables are on five point Likert scale and treated as interval variables when used in model.

Test for Multicollinearity

Before running the model it is important to see whether the independent variables have problem of multicollinearity. The presence of multicollinearity leads to estimation problems leading to large variances of the OLS estimates of the parameters of the collinear variables. The inverse of the correlation matrix is used in detecting multicollinearity. The diagonal elements of this matrix are used in detecting multicollinearity. The diagonal elements of this matrix are also called Variance Inflation Factors, \( VIF_i \). They are given by \( (1 - R_i^2)^{-1} \) where \( R_i^2 \) is the \( R^2 \) from regressing the \( i^{th} \) independent variable on all other independent variables. A high VIF indicates a \( R_i^2 \) near unity and hence suggests collinearity. As a rule of thumb, for standardized data a \( VIF_i > 10 \) indicates harmful collinearity. VIF for all the independent variables in the current study in both the equations are quite low. Therefore, it can be safely assumed that data does not have problem of multicollinearity.

Model Estimation

We have used SPSS (version 17) software for econometric analysis of data. A special SAS programme macro was used to estimate Heckman two-step model parameters. This program uses PROC PROBIT, and PROC REG to consistently estimate the parameters and their
standard errors in a Heckman selection-correction model. The result of the estimation for first equation is given in the following table 6.27.

The results suggest that health expenditure variable in the form of health expenditure as a percentage of total expenditure is statistically significant.

Total Income variable is also significant and have positive sign. This means that higher the income of the household, higher is the probability of buying health insurance of the households. Income was expected also to come significant and positively associated with probability of purchasing health insurance. Most of the studies which have analysed health insurance purchase decision have found income as a significant factor (Scotton 1969, Propper 1989, Savage 1999).

In other variables, dummy variable for age is coming significant for higher age groups. This shows that in higher age groups people have more probability of purchasing health insurance while in lower age groups, age is not statistically significant. Here age signifies more risk and also may be more maturity to understand risk and try to minimize it by purchasing health insurance.

In the case of perception variables three of the eight variables are statistically significant and positively associated with purchase of health insurance. These variables are coverage of illnesses, knowledge about insurance and health/illness expenditure. From the discussion and interviews it came out that knowledge about insurance is very important and one of the important reasons for buying health insurance and in the results this factor came significant and positive which indicates that building more awareness about health insurance will influence the probability of buying health insurance. Another factor which is significant is that of coverage of illnesses, which indicates that if the policy is better designed in terms of the illnesses which are covered, there is higher chance of people buying it. Last but very important factor which is statistically significant and positive is that of health/illness expenditure. Here it shows that if households perceive that they will have higher health expenditure in the future there is more chance that they will buy health insurance.
From the results we can see that health expenditure is statistically significant factor affecting health insurance purchase decision as both quantitative and qualitative variables. This indicates that present healthcare expenditure (which is reflected by health expenditure...
variable) and their perception about future healthcare risks and expenditure (reflected by qualitative perceptual health/illness variable), both plays an important role in affecting the health insurance purchase decision. Higher the present health care expenditure higher will be the probability of buying health insurance and also the higher the perception about future healthcare expenditure, greater will be the probability of purchasing health insurance.

After analysing the decision to purchase health insurance, the second equation which is also called outcome equation analyses the extent of health insurance purchase decision. Extent of health insurance has been defined as percentage of total expenditure which is paid as premium. Other than regular variables as independent variables one independent variable here is IMR (Inverse Mills Ratio) which has been estimated from the first equation. When added to the outcome equation as an additional regressor, it measures the sample selection effect due to lack of observations on the non-health insurance purchasers. Its addition results in the consistent estimation of the remaining coefficients of the equation (Dolton and Makepeace 1986). This variable should be statistically significant to justify the use of Heckman two-step method. If this does not come significant then there may not be sample selection problem in the data and we do not need to use Heckman method.

Results of second equation are given in the following table:

<table>
<thead>
<tr>
<th>Important Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>R-squared</td>
<td>0.3597</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.2855</td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>0.0048</td>
</tr>
<tr>
<td>Mean dependent var</td>
<td>0.0047</td>
</tr>
<tr>
<td>S.D. dependent var</td>
<td>0.0057</td>
</tr>
<tr>
<td>F-statistic</td>
<td>4.8490</td>
</tr>
<tr>
<td>Prob (F-statistic)</td>
<td>0</td>
</tr>
</tbody>
</table>

Value of parameter estimates of the variables is given in the following table:
Table 6.27: Results of OLS

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-0.0062</td>
<td>0.006464</td>
<td>-0.9597</td>
<td>0.3386</td>
</tr>
<tr>
<td>ri*</td>
<td>-3.73E-07</td>
<td>9.76E-08</td>
<td>-3.8167</td>
<td>0.0002</td>
</tr>
<tr>
<td>INC2*</td>
<td>3.51E-12</td>
<td>1.03E-12</td>
<td>3.4147</td>
<td>0.0008</td>
</tr>
<tr>
<td>INC3*</td>
<td>-8.98E-18</td>
<td>2.76E-18</td>
<td>-3.2473</td>
<td>0.0014</td>
</tr>
<tr>
<td>HE_TE</td>
<td>0.0068</td>
<td>0.0053</td>
<td>1.2672</td>
<td>0.2069</td>
</tr>
<tr>
<td>GENDER</td>
<td>-2.08E-05</td>
<td>0.000978</td>
<td>-0.0213</td>
<td>0.9830</td>
</tr>
<tr>
<td>AGE1*</td>
<td>0.0068</td>
<td>0.0024</td>
<td>2.8402</td>
<td>0.0051</td>
</tr>
<tr>
<td>AGE2*</td>
<td>0.0079</td>
<td>0.0025</td>
<td>3.1447</td>
<td>0.0020</td>
</tr>
<tr>
<td>AGE3*</td>
<td>0.0084</td>
<td>0.0026</td>
<td>3.2035</td>
<td>0.0016</td>
</tr>
<tr>
<td>AGE4*</td>
<td>0.0093</td>
<td>0.0028</td>
<td>3.3341</td>
<td>0.0011</td>
</tr>
<tr>
<td>HOSP_COST</td>
<td>1.86E-08</td>
<td>2.16E-07</td>
<td>0.0859</td>
<td>0.9317</td>
</tr>
<tr>
<td>OTHER_HEALTH_COST</td>
<td>-2.47E-07</td>
<td>1.62E-07</td>
<td>-1.5266</td>
<td>0.1288</td>
</tr>
<tr>
<td>COST</td>
<td>8.12E-05</td>
<td>0.0004</td>
<td>0.1907</td>
<td>0.8490</td>
</tr>
<tr>
<td>QUALITY_OF_CARE</td>
<td>-0.0003</td>
<td>0.0005</td>
<td>-0.5133</td>
<td>0.6085</td>
</tr>
<tr>
<td>NEARBY</td>
<td>-0.0005</td>
<td>0.0005</td>
<td>-1.0168</td>
<td>0.3108</td>
</tr>
<tr>
<td>COVERAGE_OF_ILNESSES</td>
<td>0.0012</td>
<td>0.0007</td>
<td>1.7927</td>
<td>0.0749</td>
</tr>
<tr>
<td>COVERAGE_OF_SERVICES</td>
<td>3.54E-05</td>
<td>0.0005</td>
<td>0.0709</td>
<td>0.9436</td>
</tr>
<tr>
<td>HEALTH_ILLNESS_EXP</td>
<td>0.0015</td>
<td>0.0006</td>
<td>2.3983</td>
<td>0.0176</td>
</tr>
<tr>
<td>CHILD</td>
<td>0.0008</td>
<td>0.0004</td>
<td>2.2960</td>
<td>0.0229</td>
</tr>
<tr>
<td>LAMBDA</td>
<td>0.0086</td>
<td>0.0035</td>
<td>2.4469</td>
<td>0.0155</td>
</tr>
</tbody>
</table>

White Heteroskedasticity-Consistent Standard Errors & Covariance

- Significant at 1%, = Significant at 5%, ~ Significant at 10%

While estimating the second equation we hypothesized that income may not be linearly related to extent of health insurance purchase. This is based on the premise that though income is an important factor, it is used for many purposes and importance of insurance
premium will change with the level of income and therefore, may have a non-linear relationship. We have included income square and income cube to explore the behaviour of insurance coverage at different levels of income and hence test the non-linearity behaviour. The results indicate that unadjusted Income is statistically significant but negative, income square is significant and positive and income cube is significant but again negative. This kind of behaviour validates our hypothesis that income variable is behaving in a non-linear manner indicating income varies negatively with increase in extent of health insurance purchase but after a point it starts increasing and varies positively with extent of health insurance purchase. In the end it again changes direction and start varying negatively with extent of health insurance purchase (indicating S-shaped behaviour). The explanation of this kind of behaviour is intuitive which indicates that up to a certain point of income increase household allocate resources to other uses and purchase less health insurance, after that point income increase will result in more purchase of health insurance as people now can afford to buy more health insurance and it will save them from future potential risk. At higher levels of income household purchase of insurance decreases with increase in income as households are willing to retain the risk.

Number of children in the family variable is also statistically significant and positive indicating that higher the number of children in the family, the household are likely to buy more health insurance. This result is according to the expectations and also similar to few other studies. Age as dummy variable is significant and positive for all age groups. This means that age is an important variable in deciding the extent of insurance and people in higher age groups relatively spend more on insurance. This is indicated by increasing coefficient of variable as age group increases. Two other variables, coverage of illnesses and health/illness expenditure, which are significant in the first equation, are also significant here. This indicates that higher the perception of coverage of illnesses in the policy, more will be the extent of insurance purchase. Similarly, perception about the future healthcare expenditure influences higher expenditure on health insurance. These two variables show that illnesses coverage perception and future expectation about the healthcare expenditure are important for the health insurance purchase decision and also for the extent of health insurance purchase decision. The results also indicate that the IMR (Inverse Mills Ratio) variable estimated from first equation is statistically significant. The significance of IMR suggests that use of Heckman two-step method estimation was correct in this case and if we would have used only one equation model we would have lost some valuable information in
the analysis. When we run second equation without IMR then we can see that results are
different and it would have given us biased results therefore, it was important to use
Heckman method to take care of sample selection bias.

The key results of this study can be summarized as follows:

- In the literature income has been found to be important factor. This study confirms
  this result. Higher income increases the probability of purchasing health insurance.

- Health care expenditure as per cent of total expenditure has significant influence on
  insurance purchase decision. Another variable reflecting individual’s perception
  regarding the expected healthcare expenditure has been found to be significant.

- The perception about the design and coverage of illness in health insurance policy is
  significant and determines the decision to purchase the insurance and also influences
  the amount of spending on insurance. The information and awareness to consumers
  plays important role in insurance buying process. This suggests that in a country like
  India awareness about health insurance and its benefits is a very important factor
  which affects its purchase decision. If more people can be made aware about health
  insurance and its benefits then there is high probability that more people will be
  buying health insurance policies. Also more knowledge about health insurance will
  help them in making an informed choice about their purchase.

- This study analyses the determinants of decision to purchase the insurance and the
  extent of purchase in two stages. Income level has been found significant in affecting
  the probability of decision to buy. The extent of purchase is related to income in a
  non-linear fashion indicating that household spends more on health insurance only
  after certain level of income. At higher level of income the spending on health
  insurance is less suggesting retention of risk at household level and ability to pay for
  healthcare costs.

- The number of children in family is another significant factor which affects the extent
  of health insurance purchase. This result is intuitive and shows that households with
  more children spend more on health insurance.

SUMMARY

The insurance sector in India was liberalized with the opening up of health insurance to
private players. Given the need and health financing situation in India it was expected that
health insurance will emerge as significant component of the non-life insurance sector and
experience a significant growth because of the huge potential of the market coupled with the
new products and efficiency which the private players will bring. Though health insurance
market did grow at around 40 per cent per annum, it is much less than the expected and even
after a decade of opening up of the sector, only less than 2 per cent of people are covered by
private health insurance. A large section of people belonging to lower income groups cannot
afford insurance. This raises important questions focusing on what determines the purchase
of insurance in the first place and what influences the amount of insurance purchase. This
chapter makes an attempt to understand the factors affecting health insurance purchase
decision. The subsequent question which is analysed is what factors determine the amount of
money spent on insurance i.e., extent of insurance purchase. Results of this study have
important implications not only for the insurers but also for the government, healthcare
providers and policy makers.

For insurance companies results of this study provide some important suggestions. The
results show that a very important factor in India for customers to buy health insurance is
related to their awareness and knowledge about insurance. Therefore, it is imperative for
companies to educate people about the concept of health insurance and its benefits. Right
now the awareness level and knowledge about health insurance is abysmally low even in
urban people.

The results also suggest that health insurance purchase decision is positively related to
income of the household. This means that households belonging to lower income groups
would have lesser probability of buying health insurance. If income is an important
determinant here then people belonging to lower income groups have less probability of
purchasing health insurance and therefore, they will be left out. There is need to develop
interventions which would ensure that poor people are covered by partly subsidizing the
premiums by the government.

The results indicate that health expenditure and expectations about the health expenditure are
significant variables which positively determine the health insurance purchase decision. Both
health expenditure amount and perceptions about health expenditure variables are coming as
significant in the study which has significant implications for insurance providers.
6.3 SELECT REFERENCES


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