

# **Institute of Actuaries of India**

## **Subject SA1 – Health and Care Insurance**

**September 2016 Examination**

**INDICATIVE SOLUTION**

**Solution 1:****i) Experience Analysis**

Experience analysis is performed to calculate the actual experience for each of the parameters as below and then compare with the expected pricing experience. Appropriate actions may be required to be taken in case the actual experience is significantly different from the expected pricing experience.

**Morbidity Experience**

Morbidity claims should be investigated by incidence and claim cost. For PMI there are various levels of investigation, namely:

- by product type
- by distributor / sales channel
- by Service provider / hospital
- by medical procedure or policy benefit section
- by age
- by gender
- by occupation (if known)
- by region / area of residence
- by duration from entry
- by NCD level (if appropriate)
- by member cost-sharing, e.g. excess levels
- by underwriting method
- by group size (for group business)
- by industry (for group business).

Some of these subdivisions will be more important for group arrangements than for individual contracts. Industry and group size are rating factors for group risk pricing but may be ignored for individual premium assessment. However, occupation may be important for individual pricing.

A broad-brush approach to the analysis might be to consider the overall loss ratio (claims incurred expressed as a percentage of premium). However, this would be very simplistic and a more detailed approach is likely to be followed.

PMI is written on an indemnity basis so the amount insured is the same for everybody in the policy class, i.e. everyone is generally entitled to a full refund of costs, subject to exclusions. However, there are likely to be some variations within the policy classes in that larger policy limits (e.g. maximum outpatient benefit level) will give rise to higher average claim amounts.

In analysing average claim amounts under PMI, the actuary will examine the experience, broken down into suitable categories. The costs of all the major diseases and procedures will be investigated separately.

The exposed to risk and the number of claims considered should be for the same period. I.e. should be consistent.

These may be further sub-classified, depending on available data, by:

inpatient, day case or outpatient  
type of hospital or band  
source of distribution, e.g. broker or direct sales  
group or individual arrangement  
geographical region  
policy type  
presence of pre-agreed fee schedules.

The analyst would focus particularly on whether new procedures, drugs or equipment were being used to treat illnesses differently than formerly. This will have a major effect on average costs.

In determining the overall morbidity experience, one should allow for possible delay in claims reporting or settlement within the investigation period. The claims incidence rates should be adjusted accordingly.

The Company may also decide to monitor the early claims, non-disclosure and anti-selection trends so that appropriate actions can be taken.

The company may decide to do the analysis annually or more frequently depending on the policies sold and the number of claims.

### **Expenses**

We start by knowing the expenses, such as salary costs, computer costs, etc.

We know commission, so this can be excluded from the analysis.

We then need to subdivide the non-commission costs into the required "cells" – i.e. into initial, renewal, termination, claim and investment, and whether related to per policy, premium, or sum assured.

Some expenses can be allocated directly to a particular cell.

Staff expenses may need to be subdivided between cells by the use of timesheets.

Overhead expenses need to be allocated pragmatically, eg in proportion to the split in direct expenses.

Property expenses can be allowed for by charging a notional rent to each department in proportion to the floor space occupied, then allocated to the different cells in proportion to the department's salary costs.

Costs of new computer equipment can be spread over their future expected lifetimes and then allocated to departments in proportion to usage.

Investment costs would be subdivided by asset class and usually allowed for by a reduction in yield for each class.

One-off capital costs would be spread over the expected future lifetime of the item, then just treated as an overhead.

Expense experience is expected to be conducted more frequently than annually.

### **Investment Returns**

A company will want to assess the return it is achieving on its investments.

An approximate formula for calculating the rate of return over the time period [t, t+1] might be:

$$I_t = \frac{A_{t+1} - (A_t + CF_t)}{A_t + 1/2CF_t}$$

$A_t$  = value of assets at time t

$CF_t$  = amount of net positive cash flow over [t, t+1]

The experience is likely to be analysed by main asset types and may be done both gross and net of investment expenses.

For PMI investment pool is likely to be small and hence, investment return is of low significance. Also, as the Company has been selling only for last 4 years, again the pool is likely to be small.

### **Lapse / Persistency Analysis**

PMI policies do not normally make a profit until the policy has been with the same company for perhaps two, three or more years due to high expenses of selling the business. Hence, lapse investigation is critical parameter towards profitability.

Lapse rates will be calculated as number of lapses divided by the exposed to risk. In calculating both, care should be taken to ensure the lapse do not include other decrements like mortality etc. and the exposed to risk is also allowed for accordingly.

Lapse rates can be sub divided by region, policy type and distribution channel.

While calculating lapses, allowance must be made for premium payments received in the grace period. i.e. they should not be considered as lapses.

The analysis could be performed on the number of policies or premium. It might be alarming if only the small policies are renewing as it might have an impact on expenses.

The analysis is more likely to be performed monthly (number of policies that were due to be renewed in that month and the number that actually renewed).

### **New Business Mix and Volumes**

The Company might have projected the volume, mix and nature of new business. It is important to compare the actual new business sold to the expected numbers used for the business plan purposes. A deviation could impact the total profitability, expense collection, capital requirements etc. In case cross subsidy has been considered at the time of planning, this analysis gains more importance.

### **Other investigations**

These may include mortality investigation (not considered important for PMI), Inflation, Medical Inflation, Analysis of surplus, trend analysis for particular diseases etc.

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### **ii) Practical challenges of offering portability and impact on experience.**

“Portability” means the right accorded to an individual health insurance policyholder (including family cover), to transfer the credit gained for pre-existing conditions, and time bound exclusions and no claims discount, from one insurer to another or from one plan to another plan of the same insurer. Practical challenges in case of offering portability:

- Delay in getting the response, claims history etc. from the previous insurer
- Portability applicable only to Sum insured under previous policy. Hence, waiting periods for certain covers waived off but only up to certain amount – system complications.
- This will also result in underwriting complications. It makes it unclear as to what Sum Insured should be considered for underwriting when looking into the underwriting grid of the porting Insurer.
- Cost of porting but the same cannot be charged to the policyholder
- Lack of policyholder knowledge in understanding the complex regulations around different waiting periods leading to customer dissatisfaction.
- Portability can lead to selective lapsing. If the average experience for a portfolio has been poor that warrants a premium increase, healthy lives may leave the policy and port out without losing accrued benefits.
- Pricing Challenges – Cannot price differently for porting policies and newly issued policies even though the expected morbidity experience will be different due to waiting period, selection effect etc.
- The renewals may be impacted due to portability as a result of which it may be difficult to project renewal assumptions.
- Initial expenses not recouped for policies porting out early.
- Portability expenses incurred but cannot be charged back.

### **Impacting the experience**

- Alters the experience as no waiting periods etc. No selection benefit.
- No control on the target market affecting the morbidity experience

- Expense cost but possible increase in the number of policies sold leading to lower per policy expenses for fixed costs.
- Increase in lapse as existing policyholders may opt to port out

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### iii) Reasons for Morbidity profits and expense losses

#### Possible reasons for Morbidity profits could include:

- Appropriate underwriting – Very selective in offering cover. This will also mean lowers sales as underwriting is seen as sales hindrance and hence, higher per policy expenses
- More sophisticated market than priced for. The morbidity benefit may have been priced for keeping in mind a certain socio-economic mix of business. The actual mix may have turned out to be more sophisticated and health conscious than assumed.
- Selection effect due to early years / waiting periods. E.g. cataract and knee replacements etc. may have been priced for but no benefits payable in the first few policy years due to applicable waiting periods.
- Prudent pricing leading to better morbidity experience. In determining the morbidity profits, the expected morbidity experience would be compared with the actual morbidity experience. The assumptions underlying the expected experience might be very prudent leading to higher morbidity profits per policy. However, it may mean higher premium and hence lower sales leading to lower overall morbidity profits at a portfolio level.
- Claim delays not captured appropriately in the analysis. In deriving the actual morbidity pay-outs, one needs to allow for incurred but not reported claims as well as incurred but not enough reported claims. Inadequate provisioning of these reserves may lead to higher morbidity profits.
- Random fluctuation in the experience for certain years.
- Policy may have no claims bonus due to which insured may not be claiming small amounts (in cases where the claims amount could be lower than the overall no claims discount available).
- Controlled Claims management. If claims management is in line with pricing norms (only pay for what has been priced for), one would expect release of expected profits considered in the pricing basis.
- Good negotiations with the service providers. Morbidity experience will depend on the claims incidence and claims amount compared to the pricing basis. The Company may have managed claims amount well through continuous negotiations with service providers but not altered the pricing basis for the same.
- Claims pre-authorization required that leads to controlled claims.

#### Possible reasons for Expense Losses include:

- Heavy underwriting costs that may have not been priced or mis-estimated.
- Expenses not priced appropriately. In determining the expense experience, one needs to compare the expected to actual experience. All expected expenses may have not been considered in final pricing due to competitive pressures to keep the premium low.

- Lower volumes than expected leading to rise in per policy cost compared to pricing assumptions. Due to lower volumes sold, the fixed expenses is spread across a small pool of policies leading to higher per policy expenses.
- Vendors not managed properly leading to leakages and burden on the expenses.
- High commission paid to boost sales
- Exceptional cost in certain years (SII development cost, system upgradation etc.)
- Frauds or other leakages
- Regulator capping certain costs that could be built in the pricing

[8]

iv)

**a) Free Health Check-up**

Morbidity Experience - It is expected that the free health check-ups are expected to provide additional health information. Through effective use of this information, the insurer may be able to manage its morbidity experience well.

Higher incidence rates as a result of detection which otherwise could been missed. However, lower per claim cost as diagnosed early and hence, treated faster.

Expenses - Expenses for check-up have to be met but cannot be charged to the policy holder. At the same time, this may lead to higher sales and hence lower per policy fixed costs.

Lapses - Lower lapses and there is an incentive to renew now. However, aging of the portfolio could increase claims. Hence, needs to balance with good NB volumes by selling to younger population.

Will help in stopping policies from porting out partially.

Investment Income - Increased sales, bigger pool for investment more economies of scale and risk taking capability possibly leading to higher returns.

New Business: Expected to increase as long as premiums continue to be competitive.

[4]

**b) Recapture**

Morbidity - Technical support reduced that might impact future pricing and morbidity experience.

Also, high value claims in future will have to be covered internally. Hence, might worsen the experience.

The impact depends on type of reinsurance. May not have much impact under QS. Under Stop loss, depends on what the reinsurance experience actually was.

Expenses – Savings of reinsurance expenses. If benefit passed to policyholder by way of lower premiums, might leads to higher sales and hence, further lower per policy expenses.

Might need to employ consultants for technical support resulting in additional expenses. Also, may increase the cost of capital.

Higher cost of capital

Lapses – As reinsurer is never in touch with the policyholder directly, recapture is not expected to impact the lapses experienced on the portfolio. However, in case the reinsurer is driving the claims management policy, some secondary impact may be there after recapture.

Investment Income - Higher profits retained. Hence, more free assets leading to more risky investments for increased returns.

However, more capital required that needs to be invested only in approved investments that may offer lower returns.

New Business: Might not be in the position to price innovative products due to lack of technical expertise and data. Hence, lower sales.

Also, may stop writing large risks.

[4]

### **c) Group PMI**

Morbidity - Varies depending upon varies factors like pricing basis, underwriting, target market, industry, discounts offered, past experiences, mandatory or optional cover etc.

Groups generally experience rated. However, market forces exist as there will be existing players. Hence, will depend whether the Company is able to charge appropriate premiums or have to reduce premiums in initial years to be competitive and gain market share.

Also, group policies lead to aggregation and concentration of risk that may deteriorate the experience.

Expenses - Economies of scale. Hence, lower expenses per policy

However, may require system upgradations to cope with group policies. Also, may need to develop a separate distribution channel or enhance the existing ones leading to one of expenses.

Lapses - Will fluctuate more depending on group sizes taking or exiting the policy

Investment - Increased sales, bigger pool for investment, more economies of scale.

As the capital requirements are dependent on claims experience, bad claims experience could mean money invested in less risky assets and hence, lower returns.



## Achieving Objecting

Free Health Check-up: Really depends on cost of providing check-up vs benefits of increased sales and lower lapses

Recapture: Should help as Company now retains more morbidity profits , doesn't pay for reinsurer expenses and profit. However, claims volatility in future years may erode the insurer's profits.

Group PMI: Per policy profit certainly would reduce but could possibly increase overall profits in a longer run as a result of amortization of one off costs. Also benefit from bigger investment pool.

[4]

### v) Additional cost of providing free health check-up

To calculate the additional cost of providing the additional benefit of free health check-up, the company might compare the total premium with and without the benefit.

In calculating the premium with the benefit, it's not only expenses that are impacted by providing the health check-up. Premium calculations should also allow for various other improvements or worsening of experience parameters like morbidity, lapses, NB etc.

Assumptions needed to calculate the revised premium:

- Health check-up take up rate: This could be expressed as the % of inforce policyholders at the 3<sup>rd</sup> policy year opting to take the free health check up
- Health Check-up cost: This is the expected cost of providing free health check up to each policy holder. For this, the company needs to decide the type of check-ups, the associated costs allowing for medical inflation and whether the check-ups need to vary by age or not.
- Lapse rates: % of policyholders not renewing policies at each renewal. Historical lapse rates need to be adjusted to allow for the new benefit provided.
- Expected new business due to benefit provided: It is expected that the sales would increase due to providing the free health check-up. Hence, this should be allowed for while determining the total cost for providing this benefit.
- Revised incidence rates in light of Free Health Check up

Once the new premium is calculated with the health check-up, this could be compared with the original premium without the health check-up and additional expenses may be expressed as a % of the original premium.

[5]

**vi) Appropriateness of recapture fee**

The first reference point to review the appropriateness of the recapture fee will be recapture clause in the reinsurance treaty. It is almost certain that the treaty will specify the methodology for calculating the recapture fee.

For existing business, it is likely that the method will relate to calculating the value in force (VIF) and then may or may not apply certain adjustments.

For new business, the treaty will define whether ceding Company has the right not to reinsure any business from any point in time in future.

Hence, for determining the appropriateness of the recapture fee, the insurer is likely to calculate the VIF of the inforce book that is being reinsured.

The policy data would be based on the most recent data used for reinsurance accounts. Depending upon the treaty terms, new business model points may or may not be considered.

Reinsurance cash flows are to be projected for the policy durations using realistic assumptions and then discounted back using an appropriate risk discount rate.

The risk discount rate will be based on the current risk-free rate. The discount rate or overall price may be adjusted to include a risk margin and the profit margin.

Morbidity assumptions will be largely based on the treaty's own experience, subject to credibility considerations.

Allowance for commission should be based on the terms set out in the treaty.

Expenses should be based on the treaty's share of the reinsurer's overall expenses, taking into account expense inflation.

Persistency will be based on the most recent experience, particularly in respect of this cedant.

The investment return assumption will be consistent with the risk discount rate and expense inflation assumption and take into account the reinsurer's current investment strategy.

The cost of capital needs to be factored in using the reinsurer's existing solvency requirements relating to the treaty concerned.

Suitable allowance for any existing deposit back, profit share or collateral arrangements between the ceding company and the reinsurer needs to be made.

Tax will be based on the current tax position of the reinsurer.

Sensitivity tests may be performed before determining the final value.

[5]

**vii) Group PMI only to large groups**

Possible reasons for choosing to offer the policy to large groups may include:

- It may result in economies of scale and hence, may be able to keep per policy cost lower
- Target well established organizations with better health and safety standards and policies may be priced accordingly
- Reduced administration through one master policy for a large group. Lesser administration cost.
- To avoid anti-selection or fraud - Unlikely that the Group is formed with the main purpose of availing itself of insurance
- Possibility to customize the policy. It may be difficult to customize the benefits for smaller groups. However, for larger groups, it's more feasible to give the option to the master policyholder to decide on the benefits they would like to be covered and accordingly premium may be charged.
- To be able to provide better services like dedicated contact points, worksite claims support etc.
- It is likely that big schemes are easier to experience rate and hence, provide discounts or load premiums
- Data Management are likely to be more streamlined for larger groups.
- Likely lower claims volatility due to random fluctuations.

[5]

[58 Marks]

**Solution 2:****i) Index Construction**

The index shall reflect change in cost of medical treatment between two observation periods. In other words, the change in index value shall reflect the underlying medical inflation.

Medical inflation is a result of change in cost of medical care due to change in general price inflation, increase in health hazards, improvement in medical technology, accessibility of information, infrastructure developments, fiscal policy, social structures and mobility.

**Development process**

The index development can be summarized into following steps:

- Select a group of illness / procedures. It may depend on the range of diseases/ illnesses to be included in the index. One of the ways could be to group the illnesses by International classification of Diseases (ICD) published by the World Health Organisation (WHO)
- Choose a base year that will be used as reference and the index value for the base year will be 100. Since the company is well established, it is likely to have credible claims experience. Hence, the base year could well be few years ago in the past.

- Split the total claim cost (reported in the base year) into groups of illnesses selected in step 1. It is important to take into reported claims to understand the inflationary behaviour. This will provide weights of each of the group in the total reported claim cost. Remove any one-off high value claims as it may distort the averages. Similarly for communicable diseases, the incidence and overall claim costs need to be adjusted for epidemics, if any.
- Obtain average cost of each of the groups of illnesses / procedures for all years starting from base year to current period. Since the actual treatment cost would vary by location, treatment facility, age, gender and other morbidity factors, it is advisable to take the average reported claim cost.
- For each of the group, the costs will then need to be split broadly into following categories:
  - Hospital charges- include room rent, board expenses
  - Doctors/ technicians fees
  - Drugs
  - Equipment
  - Others- include nursing, ambulance etc.
- This can be done by analysing the details of claims reported to the insurer.
- The index value for each group of illnesses is the change in the weights of the component costs between the observation period.

This can be explained with the help of the following table

Items	Hospital charges	Physicians/ technicians fee	Drugs	Equipment	Others	Medical cost index
Proportion to total cost- Base year (A)	30%	40%	15%	10%	5%	100%
Increase in cost during First year (B)	10%	20%	7%	35%	10%	=sum[A*(1+B)] =116%
Increase in cost during second year (C)	13%	15%	7%	28%	12%	=sum [A* (1+B) *(1+C)] / sum [A* (1+B)] =115%
Cost inflation for 2 years	24%	38%	14%	73%	23%	==sum[A*(1+B) )*(1+C)] 133%

The index values of each disease group once calculated using the above methodology can then be combined by assigning weights calculated in step number 3 to arrive at a single medical inflation index value.

The change in weights between cost components for each of the group of illnesses and between the groups over years could be attributed to change in utilisation of medical care.

Utilisation of medical care varies due to change in

1. Demand side factors
2. Supply side factors

### **Demand side factors**

This includes factors that impact the demand of medical care. The higher the demand higher will be utilisation and hence impact on cost. So increase in demand, all other things being constant, is likely to increase the cost of medical care and hence inflation.

Below is a list (not exhaustive) of factors that have an impact on demand for medical care

- Increased disease burden- increase in prevalence of diseases e.g. diabetes, hypertension could increase the demand of medical care.
- Ageing
- Increase in awareness
- Change in disease pattern (e.g. more chronic illnesses) - shifting disease patterns also impact the demand for health care.
- Political factors – change in government or government policies impact on demand. E.g. free medical insurance for poor is likely to significantly increase the demand for medical care.
- Economic factors – economic cycles often exhibited strong correlation with claims behaviour. Demand for medical care increases during weak macroeconomic situation
- Adverse selection (underwriting) – this is important for insurance. Change in underwriting practices or adverse selection against the insurer could impact the demand. If more unhealthy lives join the insured portfolio then the demand will rise
- Epidemics Etc.

### **Supply side factors**

Similar to demand side, availability or constraints of supply side factors could also affect the medical cost. Below are some examples:

- Undersupply of doctors – reduced supply of doctors per 1,000 population would lead to increase in demand and hence in doctors fee.
- New technology and procedures – Newer technology can impact the availability of services. Increase in supply of new technology could reduce the treatment cost.
- New hospitals – availability of new hospitals would increase the supply and could also create demand.

- Government decisions

Combination of above factors will impact medical inflation in the future years. However, it is extremely complicated to quantify the impact of some of the factors and hence actuarial judgement will be key to project the future index values. The future value of index will be mainly used for pricing and valuing long term index linked liabilities.

[15 Marks]

## ii) Proposal Evaluation

Following aspects need to be evaluated:

### Product Design

The product aims to solve the problem of inadequate cover due to rise in medical inflation. Existing products in market offer increase in Sum Insured (SI) through No Claims Bonus following a claim free year. However, the SI is reduced if the policy holder makes a claim. This may lead to gap in cover if customers claim benefits every year and medical inflation is higher than anticipated.

Under the proposed product, SI will increase every year irrespective of the claim history. This will ensure the initial cover chosen by the insured remains adequate.

Given such a product doesn't currently exist in the market; it will help insurer to gain market share and grow profitably.

The challenge is that premiums will be recomputed for the revised SI and attained age. This means at every renewal the premiums will increase both for higher SI and attained age. This can be unattractive to healthy customers having claim free years. Their premiums will increase even though they haven't made any claims. This may trigger anti-selective lapses.

For policyholders who have claimed in the previous years, increase in SI will be welcomed. This product may be more attractive to policyholders who claim frequently. However, the proportion of such policyholders is expected to be low even with a 10% incidence / frequency.

Another challenge may be over insurance if medical inflation is higher than salary inflation. The SI may increase faster than salary and if SI is not restricted then it may lead to over insurance. Since the customer can't control the increase in SI, it may not be anti-selective.

The product also offers No Claim Bonus that will appeal to healthy customers. NCB is typically offered as increase in SI. Since, SI will increase each year irrespective of claims history, NCB can be offered as reduction in premium. This may help in offsetting the increase in premium due to increase in SI. Offering higher SI with same or lower premium for healthy customers and may also help in avoiding anti-selective lapses. Although, it may make the premium computation process complex.

Customers would want certainty in terms of premium outgo and hence this product may not be attractive to them. Further, a communication strategy needs to be developed.

Insurer must also consider synergies with respect to existing products since there could be a risk of lapse and re-entry.

Hence, it is important to establish the need for the proposed product. The marketing team may conduct either a market survey or create focussed research groups to evaluate the need for such product. Alternatively, feedback can be sought from distribution channels.

The regulator may find the product very complex and product design may need to be revised at the time of approval.

### Pricing

The crucial part for pricing actuary will be to project claim cost for the next year. The index value will be based on claims history and the actuary needs to project the index value till middle of the projection period.

The index value will be used to increase SI. However, actuary needs to ascertain the impact of increased SI on expected claim cost. The average claim cost varies by SI and increase in cost due to increase in SI shall vary. For e.g. increase in average claim cost due to inflationary increase in SI for base 1 Lakh SI may be much higher than for INR 10 Lakhs SI. Hence, the actuary will need to establish the overall increase in claim cost due to higher SI.

Claims inflation may anyway be part of original pricing and hence, index value may not necessarily impact pricing approach for this product.

The company is well-established which means it may have sufficient past claims history. The methodology and approach for building an index is explained in the earlier part of the question.

The frequency of calculation of the index value and its applicability needs to be decided. For e.g. if index values are calculated yearly then it needs to be decided when it will be calculated and its effective date say 01 April – 31 March

The inflation rate may be volatile year-on-year and using it without any adjustment may create fluctuation in the SI. This may lead many Sum Insured levels and hence the pricing actuary may decide to use banded approach for pricing.

The actuary will also need to ascertain if the business mix will be different for this product. For e.g. this product may be attractive to more educated individuals who are able to better understand the product features. At the same time, the guaranteed increase in SI may attract lives with substandard health.

Pricing for No Claim Bonus (NCB) will be tricky. If NCB is to be offered as reduction in premium then it has to be priced accordingly and impact on renewal premium is to be quantified. Impact of premium due to offering NCB on SI may not be significant due to reasons explained above. Similarly for offering a discount on premium due to no claims in previous year has to be quantified.

Further, expense assumptions will need to take into account one-off product development, marketing and product launch expenses. There may be a need for additional training to the distribution channel which needs to be factored into pricing.

The reinsurance rates could be impacted depending on the reinsurance arrangement. Hence clarity could be sought from the reinsurer.

The insurer will have an opportunity to reset the premium at each renewal for the increase cost of medical treatments. This may result in reduction in margins required in pricing for expected future inflation and hence sharp pricing.

If the pricing profitability of this product is less than the existing product then there is a risk that this new product may replace an existing profitable product.

Overall, impact on premium due to higher SI and NCB should be analysed together and final premiums must be stress tested for profitability and competitiveness.

### **Underwriting & Claims**

Indemnity products typically are not medically underwritten up to a certain sum insured and age. The proposed product design doesn't significantly vary from an indemnity product except the SI will keep increasing during each year. This is irrespective of the claims behaviour. Hence, the Sum-Under-Consideration may need to be increased for the purpose of underwriting. So if an individual applies for an INR 3 Lakhs SI under this product, the sum insured for the purpose of underwriting could be taken as INR 4.5 lakhs and be underwritten accordingly.

This may increase the proportion of medically underwritten business if the medical grid under the proposed product remains same as the existing product. However, the customer has no choice in increasing the SI and it will purely reflect medical inflation. So, it a higher SI may not reflect any anti-selective behaviour.

So, the current underwriting approach could be extended for the proposed product.

Similarly for claims, there may not be any change at all from the existing product.

### **Sales & Marketing**

The insurer will need to decide the distribution channels that can be used to sell this product.

The Sales process may be more complicated than the existing product. The premium structure and product features will be very different for this product and will need to be explained to the potential customer.

Hence, the product may be best suited to be sold through agents and brokers. However, the acquisition cost of sourcing business from these channels will need to be factored into pricing.

The direct-to-customer channels may be used to generate leads followed by a discussion with the customer to conclude the sales process.



Overall Sales time for each case is likely to be increased and so is the remuneration for the distribution channels.

The marketing for this product will be very crucial given that similar product doesn't currently exist in the market. The insurer may want to aggressively market this product to quickly capture the market before a similar product is launched by competition.

The company may already have a rich database of customer and it can reach out to customers who have lapsed or exited in the past.

The company can also target a select profile of customers who may be well equipped to understand the complexity of the product.

Overall the cost of sales and marketing will increase for this product.

### **Administration**

Administration for this product will be more complicated than the existing product. The administration systems will need to be modified to capture index values for each successive year and capture new SI each year.

Similarly, the entire premium calculation process will need to be modified.

This may require additional investment by the insurer.

[22]

### **iii) Recommendation**

The student is expected to make a recommendation and use the info he /she has provided in in the previous 2 questions to back the recommendation.

[5]

[42 Marks]

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