

Institute of Actuaries of India

Subject SA1 – Health and Care Insurance

May 2015 Examinations

INDICATIVE SOLUTIONS

Solution 1:

i) Possible charges under a unit Linked Health insurance plan could include:

- Allocation charge – Deducted from Premium paid
- Bid offer charge – Difference between the bid and the offer price of the units
- Policy administration fee – Deducted through unit cancellations
- Fund Management Charges – Expressed as a % of fund value
- Morbidity charges - Deducted through unit cancellations
- Early Surrender Charges – Deducted as a fixed charge or % of fund value
- Fund switch charges – Fixed or % of fund value

[2]

ii) Given the unit linked nature of the product, the profit the Insurance Company will be the difference between the charges and the expenses.

- The company will need to decide on the methods of charging to use, eg bid offer spread, reduced allocation, policy fee, fund management charge etc.
- It may choose a charging structure that is consistent with other unit-linked policies that it sells, or one that it thinks will give a marketing advantage.
- It may decide to fix the values of some of these charges. These could be based on the charges applied on similar product or the charges applied by other insurers. The other charges can be refined using the modelling process.
- It needs to build a model and project the development of the unit fund and non-unit cash-flows separately.
- A profit criterion must be decided upon. This is likely to be in the form of a net present value possibly expressed as a percentage of the initial premium or commission.
- The positive cash-flows in the non-unit fund include premiums received, charges from the unit fund including the charges for the hospitalization cover, interest on non-unit reserves and reductions in reserves.
- The negative cash-flows include allocations to the unit fund, commission & other expenses, hospitalization cover claims and increases in reserves.
- For the Unit fund, the positive cash-flows include allocation from the non-unit fund, investment return on unit reserves. The negative cash-flows will be charges deducted and transferred to non-unit fund, reimbursement claims, unit death (if any), maturity and surrender payouts etc.
- Assumptions will be needed for all the relevant parameters.
- The assumptions used will probably be close to best estimates. The level of uncertainty can be allowed for in the risk discount rate.
- Model points must be chosen that reflect the expected mix of new business.

- For each model point, the non-unit reserves would be assessed by first projecting the non-unit cash-flows using prudent assumptions, then choosing reserves which would eliminate any negative profit flows.
- Then the non-unit cash-flows would be projected, probably at monthly intervals, allowing for reserving requirements and any required solvency margin.
- The net cash-flows will be discounted at a risk discount rate that reflects the return required by the company and the level of statistical risk attaching to the cash-flows.
- A deterministic approach is likely to be used unless there are investment guarantees or options under the contracts. A stochastic approach would then be required in order to value such guarantees and options.
- The charges can then be varied and the above procedure repeated to produce the required profit.
- Sensitivity testing should be carried out by varying the key parameters in the model.
- The cash-flows from the model points can be scaled up to match expected new business volumes, and incorporated into a model of the whole company to check the adequacy of the available capital, and the impact on the tax position of the company.

[8]

iii) For the Policyholder

- Under a Unit Linked Health Insurance Product, most of the Investment risk is passed on to the policyholder as investment returns increases the value of the unit fund that belongs to them. A low investment return may mean premiums may not be enough to cover the charges or very little amount available in the health saving account to claim reimbursements.
- Higher premiums may be required to achieve the desired level of the health savings account. The policyholder may or may not be in the position to fund higher premiums.

For Shareholder

- No direct effect on shareholder. However, most often the fund management charges are expressed as % of fund value. Hence, if investment returns are lower, the fund value will be lower and hence, the absolute fund management charges collected may be lower than the actual expenses incurred. To that extent, the shareholder may incur a loss.
- If the fund is unable to achieve at-least equal to the benchmark rate of return, it may lead to reputation risk, higher lapses and reduction in new business sales.
- Whether the non-unit investment return is important depends on the size of any non-unit reserves required, which in turn depends on the charging structure of the product. For example, the levels of (positive) non-unit reserves required will be less for

policies with relatively high levels of regular (rather than initial) charges, and/or for policies with fewer guarantees (eg with frequent reviews).

[4]

iv) Salient product features to protect the policyholder's interest

- Provision to cover not just one person but also an option of family floater
- Life time renewal as per Health Regulation 2013
- Coverage against pre-existing diseases post a certain waiting period eg. 2 years
- No Claim bonus in the form of reduced morbidity cost or increased Sum Assured.
- Option to continue cover even after stopping premiums provided the Unit fund is built upto a particular size so that premiums can be deducted by unit cancellations.
- Simple policy wordings
- Day care treatments covered
- Choice of funds where the money in the Unit fund can be invested in with options to switch at various life stages.
- Death benefit to be offered to cover funeral expenses.
- Outpatient treatment cost
- Sum insured which may increase annually at a pre-defined rate to account for medical inflation
- Any amount spent on in-patient hospitalization which is below a pre-defined deductible mentioned in policy to be funded from the unit fund
- Funding other expenses (e.g. Outpatient treatment cost/Pharmacy cost) through unit fund subject to a minimum size of the unit fund
- Simple pre-acceptance underwriting process
- Competitive premium
- Tax incentive at the time of fund withdrawal for non-medical reason

Salient product features to protect the Shareholder's interest

- Not allowing medical expenses reimbursements from the unit fund in the initial years or putting a maximum amount that may be claimed in the initial years. This will help the fund to build and hence for the Company to be able to collect an appropriate level of fund management charges.
- Have the right to review morbidity rates at regular intervals, for e.g. every 3 years or so. This is to protect the Company from adverse claims due to medical advances, new diseases that were not priced for in the cover.
- Co-pay for hospitalization in out of networks hospitals
- Co-pay per claim if first time entry is beyond a specific age
- A clear list of exclusions and limits around ages, reimbursements, SA, room charges, ambulance cost, etc.

- Medical underwriting beyond a certain age or sum insured option
- Waiting period restriction
- Charging appropriate premium
- Cap on certain diseases for which morbidity frequency is quite high at higher age eg. cataract, joint knee replacement
- Introduction of deductible which will ensure competitive premium which can attract healthy customers

[8]

v) Possible underwriting approach for the product could be:

- Proposal Form requiring details about the Insured's name, age, sex, past medical history, family history, sum assured (SA) requested etc. This may be sufficient for lower SA.
- Medical check-up for higher SA's/ ages. The level of checks required may vary with the SA requested.
- Financial underwriting may be required very high premium proposals to ensure that the premiums paid are commensurate with the income of the individual.

[2]

vi)

- Depending on whether the Company has in the past written such business or not, the Company may decide how much to reinsure and how much to retain.
- Quota Share reinsurance is suitable for such product. The retention level may depend on the Company's ability to retain risks internally and its capital resources.
- Any regulation around reinsurance should also be considered while taking reinsurance decisions.
- If the Company expects to write large number of policies for the product, they may want to consider XoL reinsurance on the entire portfolio.

[3]

vii)

Cap of Charges – Given that the product is offered on a unit linked platform, the cap on charges that the insurer can charge may limit the company's ability to offer certain features into the product. The Net Reduction in Yield restrictions need to adhered to. Also, the charges need to be more flat rather that fronted in the initial few years. This also causes mismatch in timings of charges vs expenses.

Surrender Values – The Regulation requires minimum surrender values to be offered in the product design based on the duration of the contract. This will impact the product design and also the pricing of the product.

Reinsurance – Current regulations has restrictions around the type of reinsurance and the retention levels the Company can go for different products and depending upon years of existence. This may restrict company’s choice of reinsurance and may also affect the product design and pricing.

There can be specific guidance on minimum entry age in the product.

[3]

[30 Marks]

Solution 2:

i) The various possible options available to a General Insurance Companies to grow the Health Insurance business are as follows:

- Enhance product Suit to cover varies target market and diverse age groups. For eg, have women specific health plans, Mass products with low premium for rural areas, appropriate cover for senior citizens etc. Pros: Help in achieving long term growth and an enhanced brand value. Cons: Time consuming with sometimes little benefit if the target market is not willing to buy or if the Company is only able to sell few copies.
- Taking over an existing Health Insurance Company: This would involve reviewing the existing players, performing due diligence and finally taking over an existing firm. A firm that compliments the existing setup might be looked at.
Pros: This will be a ready business for the Company without the need to start from scratch.
Con: This will require regulatory approval and may be a cumbersome process.
- Enhancing distribution: Review the existing product Health insurance distribution strategy and consider newer distribution channel to reach out to a bigger target market for, eg, using direct channel to reach out to internet savvy people, younger population etc.
Pros: This will open the Company to newer target market and save commission
Con: There can be huge set up cost
- Entering into an agreement with existing life/ General Insurance Companies that are not selling Health Insurance products to sell their products.
Pros: This will enhance sales without the need to spend set up costs etc.
Con: May not have control over the customers and the target market
- Cross Selling and Upselling to the existing motor Insurance customers, to corporate policy holders of Fire and Marine insurance.
Pros: Ready customer data available to start working on
Con: Customers may not like the Company contacting them.

Other possible areas could include:

- Purchasing a Health Insurance Portfolio from an existing player.
- Bidding for the government sponsored schemes tendered by the government.
- Relax the pre-acceptance underwriting criteria
- Reduce the premium

[8]

ii) List of data requirements

Appointed Actuary report
 Financial Condition Report
 All IBNR related forms submitted to regulator
 Claims Registers
 Communications with IRDA in relation to solvency, reserving, claims repudiation, litigations
 Methodologies adopted in the calculation of reserves.
 IBNR, IBNER, UPR, URR, PDR, Contingency reserves for each sub-Line of Business (Group, retail, rural, travel, PA etc)
 Quarterly Incurred and paid claim triangles (Claim amount and claim numbers)
 Details regarding total number of policies written, Gross / net written premium and Gross/
 Net earned premium
 Details for the change in the process of identifying amount for outstanding claims.
 Summary of reinsurance treaties and any major change in the reinsurance programme in the past
 Solvency calculations including the information relating to gross premiums, net premiums, gross claims and net claims for the required number of past years.
 Financials
 Public Litigations
 Board Risk Report

Steps involved in performing the actuarial due Diligence:

- **Review the financials for various reserves**
 - Incurred but not reported reserves – This includes reviewing the reserves kept in respect of incurred but not reported claims. This will include reviewing the IBNR calculations pertaining all form of triangles (amounts and counts), reviewing the delay patterns, reviewing appropriateness of methodology used to calculate the Ultimate loss and hence, calculating the IBNR. This also includes reviewing the adjustments made for changes in claim reporting and settlement processes, review of large losses, change in mix of business, external factors like inflation, change in legislation etc. Also includes review of compliance with regulation.

- Premium Deficiency reserves – This includes reviewing the historical loss ratios and basis this reviewing any need for holding premium deficiency reserve for lines where unearned premiums are expected to be insufficient to pay for the future claims in future.
- Case outstanding reserves – Reviewing the Company’s methodology in deciding on the amount to be kept aside for claims that have been reported, however not yet paid. This includes looking into the past experience and claims amount for common types of claims being adjusted for inflation appropriately.
- Incurred but not enough reported reserves – Some paid claims may be paid partially or outstanding claims may hold partial reserves and there may be an expectation that further amounts need to be paid to the PH for these partially paid claims. It is important that the company reserves for these. The review of these reserves could be done by comparing the average paid amount for a fully paid claim with the amount of partially paid claims and holding appropriate reserves for the differences. The nature of claim may be considered in calculating this reserve.
- Unexpired Risk Reserve – Review the methodology for calculation of unexpired risk reserve. This will include compliance with regulation etc.
- **Review of solvency calculations** – Review the calculations for solvency. This will include verifying the inputs relating to Gross Premiums, Gross Claims, Net Premiums and Net Claims from the financials, Usage of right RSM 1 and 2 factors and solvency margin percentages.

[7]

iii) The value would comprise of 3 elements –

- Existing Net Worth as at valuation date attributable to the Health Book
- Profitability from the sold health book till date
- Profitability from expected future sales of the health book

The values are to be determined using the “best estimate” of future experience and on a “going concern” basis.

To estimate the cash flows available to shareholders, projected income statement and balance sheet of the entity are to be prepared for certain future years (explicit forecast period) until the time when company’s business stabilize. These estimates shall be based on financial assumptions that are derived by the management of the Company from the integrated results of the economic outlook, industry outlook, corporate analysis, historical financial analysis and management’s expectations.

A very important element will be the selection of discount rate that reflects the expected rate of return (adjusted for risks associated with the investment) to prospective investors

in similar investment opportunities. The Weighted Average Cost of Capital (WACC), which reflects the opportunity cost to providers of capital, weighted by their relative contribution to the total capital of the company, can be as the indicator of the relevant discount rate.

It may be assumed that the PAT earned during the year shall be used to fund the desired solvency ratio. Any excess shall be released to shareholders by way of dividend payout.

The opportunity cost for this capital is calculated using the post- tax return which the company expects to earn on its investments.

Free cash Flow for Equity shareholders is calculated as follows:

Free Cash Flows for Equity shareholders (FCFE)

$$= \text{Distributable earnings} - \text{Net capital Expenditure} - \text{Capital Infusion}$$

This is calculated for all the projected years until one reaches the year after which the growth of the FCF become stable.

The discounted value of future profits belonging to shareholders is computed by discounting all future profits belonging to shareholder after tax and after cost of solvency margin.

The profits as defined above = Net Premium + Investment Income – Net Commission Paid - Acquisition Expenses – Operational Expenses – Net Claims Paid – Increase in Reserve for Policy holder Benefit – Cost of Solvency Margin

Where, Net Premium, Net Commission and Net Claims are all net of reinsurance.

The above cash flows are projected using the long term expected probability of claims. The investment return depends on the assets being invested in the policy holder and shareholder funds.

Post the projection period, it is expected that the business would stabilize. Hence, a terminal value shall be applied beyond this period which shall be dependent on the growth rate assumed thereon and the risk discount rate considered.

The sum of the above components calculated shall give the total value for the health insurance book of the Company.

Transfer of Health distribution, health underwriting and health claims systems:

Valued as the historical cost of setting up the distribution, underwriting or claims systems (excluding annual cost) rolled over to the valuation date with an appropriate interest rate.

Alternatively, the setup may have acquired a matured state where the acquiring Company may benefit much more than the original cost plus interest. In this case, capitalized value for the future benefits to the acquiring Company over a reasonable time period discounted to current valuation date may be added to the DCF value to derive the transaction value.

Where market values are available, the same could be considered.

[8]

iv)

The following are the factors to be considered in drawing up the joint business plan post the takeover:

Revenue & P/L account items

- Gross Written premiums
It projecting the premium income for the future years, the overall economic environment, the insurance penetration levels, the joint product mix, joint distribution mix and reach, expected distribution productivity, average ticket size etc needs to be considered.
- Reinsurance arrangements
Reinsurance premiums and claims recoveries affect the financials and hence, the company may need to decide on the reinsurance structure and correspondingly, derive the reinsurance cash-flows. The existing reinsurance arrangement for both the Companies may be considered allowing for possible savings due to consolidation.
- Expense Model
A detailed projection of various expenses needs to be undertaken taking into account the expense inflation, capex requirements, salary and headcount increases, rental and leasing requirements etc. This should commensurate with the increase in gross premiums projected allowing for any current excess capacity. As the operations from both the companies are going to be integrated going forward, synergies and cost savings must be allowed for.
- Commission levels
Based on the distribution and product mix, the commission payouts needs are to be calculated. This may be reduced by the amount of reinsurance commissions to be received by the Company.
- Projected Loss Ratios and delay in claim reporting and settlement
For this, the existing paid and delay patterns for various lines of business (retail health, corporate health, travel, PA etc) should be considered. Any possible improvement in claim payment process should be allowed for.
- Investment returns

Should be derived based on underlying assets and expected returns on these assets in future.

- Tax Calculations

Tax cash-flow needs to be projected. In doing so, the past accumulated loss carried forward needs to be allowed for. Also, any known or expected change in tax rates should be allowed for in the projections.

- Dividend payouts to shareholders

Based on inputs from the Company, dividend payout cash-flows needs to be derived.

Balance Sheet Items

- Capital requirements

Based on the premium, expected loss ratio projections, the expense needs etc, the Capital requirements in the projection years needs to be calculated. Inputs may sort from the Company relating to how they will be raising the capital.

- Solvency Calculations

The required solvency margin needs to be calculated for the projection years based on the projected premiums and claims. Also, inputs around target solvency should by sort from the Company as companies may want to hold capital slightly above the minimum required level to avoid any regulatory intervention. Allowance needs to be made for inadmissible assets.

- Reserves Calculations

The outstanding claim reserves, unexpired risk reserve, IBNR, premium deficiency reserve etc. needs to be calculated using past experience and corresponding increases in these reserves need to be allowed for in the revenue account.

- Fixed Assets

Based on fixed assets requirements in the future, the figures may be calculated allowing for depreciation.

- Investments

Generally, the Company will decide on the amount they want to hold in cash. The remaining shall be invested in assets. Hence, the levels of investment holdings in the future years may be calculated based on the cash-flow statement.

- Cash-flow Statements

The cash-flow statement should be prepared based on various cash-flows derived in the revenue, P/L and Balance sheet.

[9]

v) Implications to the policyholders of the acquired company

- The policy would now belong to the new company. Hence, the renewal, customer support and claims process may be different as experienced earlier. This may cause some hassle to the policyholders.

- Due to change in the management, existing products may no longer be available for renewal and they may have to go through the whole process of product selection again.
- Change in the product may lead to underwriting requirements and different premiums etc.
- For policyholders who may have benefited from the staff rebate on premiums, the premiums may rise unless they move to the acquiring Company.

[3]

vi)

To calculate the internal rate of return on such a transaction, the following details will be required:

1. Value paid to acquire the business as calculated in C i.e. X
2. Capital injections required during the 5 year's of operation as calculated in D above
3. Shareholder transfers made during the 5 year's of operation
4. The value received at the time of selling i.e. 3X

While 1 and 2 are capital outflows, 3 and 4 are capital inflows.

To determine the internal rate of return, we need to calculate the interest rate at which capital outflows is equal to the capital inflows allowing for the timing of the inflows and outflows.

The interest rate so calculated will be the internal rate of return.

[3]

[38 Marks]

Solution 3:

i)

- **Synergy with current set of PMI products:**

It is very important to understand how this product will fit into current set of PMI products. Need to ensure that proposed product complements the current PMI products. It should not happen that customers opt for a base PMI product with low Sum insured (either from current insurer or other players in the market) and opt for the Proposed PMI product with aggregate deductible which is expected to have low premium. It will reduce revenue and profit margin both.

In addition, there should be a consistency between pricing of base product and proposed new product.

- **Main product characteristics: Deductible/sum insured combination structure:**
Deductible and sum insured combination should be chosen in such a manner that it compliments base PMI product. One possible approach can be offering higher sum insured coverage only with higher deductible. This will incentivise the applicant to opt for higher sum insured in base PMI product (which should translate into higher revenue and profit for Insurer) and aggregate deductible based product with higher deductible (equivalent to sum insured of base PMI product) and higher sum insured coverage. It should be a ‘value for money’ proposition to customer.
- **Competitor’s product:**
Need to consider product features of competitors. Pricing competitiveness is extremely important in deductible based product.
- **Underwriting & Claim philosophy:**
It is important to understand company’s underwriting and claim philosophy with respect to the proposed product. If we refer to published statistics in India (e.g. IIB Statistics) with regard to claim experience in PMI products, most of the claims are found to lie within INR 1 Lakh. Presuming PMI claim experience of insurer (in this context) reflects the same, company may decide to relax its underwriting criteria for higher deductible option. For example, it may decide to increase the age criteria for pre-acceptance medical check-up for higher deductible option.
- **Distribution/Selling strategy & target segment:**
It is important to understand how the product will be sold and whether there will be specific target market. It will help to understand the socio-economic status of the prospective customer and behavioural pattern towards making claim. Knowledge regarding the selling strategy will help to understand the extent of Push-Pull factor during the selling process.
These learnings will be helpful while making pricing related assumptions.
- **Capital consideration:**
If the potential volume is very large, it becomes important to assess the capital requirement, especially the economic capital requirement if actual experience turns out to be worse than expected. Need to consider the solvency position of the company in the worst case scenario.
- **IT system requirement:**
Need to understand whether there will be any potential challenge in the system implementation process.

- **Data:**

Need to consider whether company has adequate experience to price the products.
In absence of adequate data, help from Consultants /Re-insurer may be sought for.

[6]

ii)

Data:

As the insurer has been doing PMI business for quite some time, it is expected that it has sufficient claim records to carry out the pricing analysis. In that case, own claim experience should be the first starting point.

Some important data adjustments:

- Data should be medical inflation adjusted. Need to decide on the time period up to which data will be inflation adjusted. It will be driven by the estimated time when product will be launched.
- Need to make an appropriate assessment regarding medical inflation. It can be done by analysing past claim trend and discussing with experts. Reference to company's tariff rate with networking hospitals and how long they will remain same in future, will be an important factor as well.
- One very important point to note here is inflation will be applied on 'admissible claimed' amount (not on 'settled' amount which is affected by sum insured/co-pay/deductible).

Decision on rating factors:

Need to decide on the rating factors which will be used for pricing and rating purpose.
To make it a simple rating structure, Age, zone and sum insured/deductible can be considered as rating factors.

Claim severity modelling:

Data should be categorized by two rating factors: Age and Zone.

Depending on the data quantity level, sub-groups under the mentioned rating factors will be defined. It is an iterative process which may undergo further iteration, during analysis phase.

Ideally, inflated claim data should be spilt into two categories: a) Attritional & b) Large. Need to define the threshold amount (to decide the claim category) which may vary by sub-groups under rating factors. For example, threshold amount could be higher for higher age groups. It is to be defined based on claim distribution under respective rating factor.

Attritional and large claim data may be modelled using statistical distribution. A goodness of fit may be carried out to understand what form of distribution fits the data the best. For example, Attritional claim data may be modelled by log-normal/Gamma distribution and large claim data by Generalized Pareto distribution. Parameters of the distribution are to be determined from the data by methods like Maximum likelihood etc. Statistical software may be used to do the same.

Claim frequency modelling:

Claim frequency for rating factor Age band can be derived based on past experience. Results need to be adjusted for the following two factors:

- Any trend observed during the time period
- Any additional adjustment factor to be applied keeping in mind the target segment , selling strategy and the proposed product concept (e.g. enhancing the claim amount in a fraudulent manner to exceed the deductible amount)
- Any change in waiting period (PED/time bound defined exclusion) as compared to existing PMI product

Based on the threshold level (as defined under claim severity estimation), proportion of Attritional and large claims (out of total claim count for the respective age group) may be derived. Using the proportion and calculated overall claim frequency of the respective age group, claim frequency separately for attritional and large claims are to be ascertained for each age group.

It may be assumed that the derived claim frequencies follow poisson statistical distribution model. Parameter lamda will be same as calculated frequency.

Simulation model:

A simulation model is to be built which will accommodate both the claim frequency and claim severity model and simulate results, say for 10,000 times. Model will produce aggregate expected claim amount (gross level) against each simulation record.

Expected claim cost subject to Deductible/Sum insured level:

Net expected claim amount under each record will be calculated after applying different proposed deductible/sum insured grid on the gross aggregate claim amount.

Pure Risk premium determination:

An average of the simulated results at net level, can be considered as a representative of the pure risk premium. Considering the uncertainty of claim experience beyond very high deductible level (due to lack of claim data available), a small percentage of standard

deviation of the records may be added with the average as a matter of prudence in order to derive the final risk premium.

[10]

- iii) In India, premium of floater policy is determined by the eldest applicant's age/age group. Hence, one important assumption about the age/age group of spouse of the eldest applicant needs to be made. Age/Age group of child should be as per product definition.

The simulation model as explained in response to question 3(ii) needs to be run separately for each member. For each simulation record, final aggregate amount is calculated by summing over the corresponding ultimate amount for each individual for that record. Deductible/sum insured grid will be applied on the final aggregate amount to determine Insurer's liability.

Additional discount may be applied on the final risk premium to reflect that lower level of anti-selection is expected in case of floater policy over individual policy.

[5]

- iv)

Pure risk premium needs to be adjusted for to account for fixed and variable expenses.

To account for the expenses, following Information and adjustment will be required:

- Need to know the budget for the initial set up cost and promotional cost of the product. Based on the proposed business plan for the product, these fixed costs need to be spread over the estimated number of policies over the next few years. Accordingly, fixed cost per policy approach can be adopted.
- Issuance cost per policy will be required to be ascertained. Fixed cost per policy approach can be adopted.
- Claim related expenses needs to be added. It can be done either on fixed cost approach or as a percentage of premium.
- Depending on the proposed distribution strategy of the product, distribution related cost needs to be estimated which ideally should be added as percentage of premium.
- Need to decide on how much contribution this product is expected to make towards overhead indirect fixed expenses of the company. It can be added as percentage of premium.
- Pre-policy medical test cost needs to be added. This cost may vary by sum insured and age of the applicant. However, needs to decide whether the cost should be amortized over multiple years. Accordingly, the cost should be added as a fixed cost.

- Any other direct expenses, if applicable, should be added as fixed cost or percentage of premium.
- If there is any XOL reinsurance program required for the product, reinsurance cost should be added, ideally as a percentage of premium.

Contingency margin:

Depending on the confidence level associated with the pricing analysis (especially due to lack of data availability at higher deductible), contingency margin may be added as a percentage of premium.

Profit margin:

Need to ascertain the capital (e.g. statutory requirement) amount that will get blocked for every Rupee of premium written. Based on the shareholder's expected return on capital invested and average return it earns on the invested asset, the difference needs to be charged through premium. It can be added as a percentage of premium.

Floater pricing adjustment:

Some saving in administration cost (eg. policy issuance cost) can be passed on to customer by providing additional discount on premium (e.g. as a percentage of premium).

Competition/Insurer's own product:

Premium of competitor's product needs to be considered. Deductible based products are extremely sensitive to price.

Need to ensure that pricing of proposed product is consistent and in line with the pricing of the existing PMI product(s).

Hence, some additional manual adjustment may be required.

[6]

v)

New customer segment:

Corporate sector:

Generally employees working in corporate sector have some form of health insurance program sponsored by employer. However, on average the sum insured amount is INR 2 lakh to 3 Lakh. This segment can be a very attractive segment for the proposed product. Main communication channel could be tele-calling or worksite marketing.

Customers covered under group health insurance policies insured by the insurer, should be the first starting point as contact information should be readily available either through insurance data base or through HR department of the client company.

Retail sector:

Agency distribution channel should be guided and incentivised in such a manner that they propose the Base PMI product(existing) with high sum insured and proposed product (deductible is the sum insured of the base PMI Product) together to the prospective client.

Deductible & Sum insured category should be structured in such a manner that customer can opt for higher sum insured only with higher deductible. Pricing of the proposed product should be competitive enough to incentivise the customer to opt for the proposed product in addition to the base PMI product.

Existing retail customer segment of the base PMI product:

Customers at renewal (especially the ones with low sum insured) should be pitched with this product.

In addition, young aged people who are less likely to claim, generally don't want to opt for health insurance policy at the early stage. Proposed deductible based product with relatively low premium may attract them. Effort should be given here as well.

[5]**[32 Marks]**
