

**Institute of Actuaries of India**

**Subject SA3 – General Insurance**

**March 2018 Examination**

**INDICATIVE SOLUTION**

**Solution 1:**

- i) Aspects to be covered in the product performance report:
- i. Overall consideration
    - a. The motor TP premium rates have been prescribed by IRDA from time to time which guide the loss ratios by UW year. However, the TP experience across various segments affects the loss ratio and combined ratio for the package policy
    - b. As the company is 10 years old, it will have to comply with the expense of management limits. Hence the expense ratio (including distribution cost and operating expenses) for the product should be within the limits.
    - c. What proportion of business for the company comes from this product to indicate as to how much the profitability or unprofitability of the product will impact the overall company's results.
    - d. The report must include the
      - Areas of concern, if any
      - Corrective measures which the company plans to take to address the concern areas
  - ii. Data used for analysis
    - a. Source of data and its period
    - b. A note on data errors found and the way they were handled
    - c. Any adjustments to data such as IBNR, inflation, deletion of some erroneous data etc
  - iii. Method for analysis
    - a. How have been various types of claims treated for example small vs large claims, multiple claim claims from same event
    - b. Measure of exposure used
    - c. Perils, coverages which have been captured in the data and used for analysis
    - d. Frequency-severity vs burning cost
    - e. Accident year vs underwriting year
    - f. Whether all actual metrics have been compared with pricing assumptions or a benchmark or trend over time
  - iv. Business mix
    - a. Mix of business coming from various sources such as
      - geography,
      - product variant,
      - channel,
      - age,
      - types of risk,
      - sum insured,
      - new vs renewal,
      - all the rating factors
    - b. The mix helps in understanding the more significant sources of business so that focus can be given to them for risk and opportunity analysis.
  - v. Claim experience
    - a. Frequency, severity, large claims
    - b. Any catastrophes and their impact
    - c. Any inflation study done on the data to substantiate the inflation assumption used for on-leveling the data
    - d. Claim experience by a number of factors

- All rating factors
  - Any other risk factors captured
  - Other factors such as
    - o Branch
    - o Channel
    - o Year (UW or accident year)
  - Any possible correlation effect in this study should be captured by way of multi-way reports or GLM techniques
  - The actual claim experience should be compared with the pricing assumption or a benchmark
- e. Comments on the trends visible in the reports / graphs
- vi. Distribution cost
- a. Actual cost of distribution by different channels compared to pricing assumptions
  - b. This should be done for both new and renewal distribution cost
- vii. Operating expenses
- a. This may be split into fixed / variable and new / renewal, Direct / Indirect
  - b. Actual expenses should be compared with pricing assumption
  - c. As the company is in 10<sup>th</sup> year, the company is expected to achieve its steady state. Hence even the fixed overhead expense ratio should be comparable to the pricing assumption (compared to a new company for which the fixed overhead expense ratio is higher due to low premium volume.)
- viii. Investment income
- a. Actual investment income over the period of the product should be compared with pricing assumption
- ix. Combined ratio for the product
- a. How has been the underwriting profit and insurance profit at the product level
  - b. If unprofitable, what corrective measures are recommended to be taken by the company
- x. Reserves
- a. For the motor TP portion of the product, reserves will be a significant part of the claim experience. With 10 years of claim experience, the company may have its own credible claim delay pattern which may be used for developing the claims
- xi. Past growth rate and future business growth plans
- a. How has the growth rate for the line of business been compared to the plans
- xii. Renewal rates
- xiii. Claim rejection rates and reasons
- xiv. Customer complaints related to product
- xv. Fraud analysis
- xvi. Analysis related to add-on uptake rates and their experience

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**ii) Opportunities:**

- If the company is the only one with these factors and the factors turn out to be significantly correlated with claim experience, it may help the company in capturing a profitable customer segment
- In case the rate reduction for the lower risk customers is more than 20% (or significant high), other companies may not be able to match the rates using their underwriting discretionary discounts.

- Both factors seem to be significant risk factors and may have high correlation with the claim cost
- People with low usage of the car such as people with multiple cars, people who use alternate transport, people who live very close to office etc.
- People who drive well such as no lane cutting, no sudden brakes, no over-speeding etc.
- However, this will impact only the OD premium and the TP premium will need to be as per tariff
- In case other companies don't copy the rating factors, the renewal rate for these customers is likely to be higher than other segments as these will become niche segment for GILarge.
- Such customers may turn out to be better risks for other lines of business as well for example health and personal accident.

Risks:

- It is very likely that other companies will copy the factors soon.
- In fact, in case the rate reduction for lower risk levels within the factors is not high then due to underwriting discretion in the premium rates, some companies may be able to match the rates offered by GILarge without filing the new factors.
- There are multiple operational challenges in determining the rating factors
  - To a large extent the annual usage and driver's skill is highly correlated with the past claim experience of the vehicle. The correlation is very hard to measure and its effect will need to be removed for pricing.
  - Not a static factor. They will change during the year. The actual usage and way of driving may be different than the past.
  - These factors may require customers to install some devices or app on mobile which customers may not agree to.

***Annual usage of the car***

- Whether usage to be taken as the average of the historical usage or even current period usage to be considered
- Usage is not fixed at the beginning of the year and the final actual usage can be known only at the end of the period

***Drivers skill***

- How will the skill be determined? Even if the company has rules, it may be hard to explain to customers which may give rise to disputes.
- Is the rating based on the skill determined at the time of insurance purchase or skill demonstrated during the insured period?
- Skill is subjective and hard to measure
- There may be multiple drivers for the same vehicle

- Data may not be available for pricing which may lead to pricing errors
- Company may not be able to capture the segment and it may lead to loss of business
- There may be instances of fraud for example by tampering with the odometer
- Actual risk may not be highly correlated with the usage and skills
- Regulator may not approve the new rating factors due to lack of data and operation challenges
- IT systems may not be able to upgrade to capture all the data required for the new rating factors
- Sales process may become more complex leading to less conversions

- Reinsurers may not agree to these rating factors. However, this may be a risk only in case of original premium proportional reinsurance

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iii) Aspect to be covered in the pricing report:

- i. Objective or reasons for the pricing and what is expected to be achieved by the re-pricing exercise. This should be the background of the pricing report.
  - a. It should be mentioned that pricing is being done for only the motor OD part of the base product as the premium for TP is prescribed by IRDAI
  - b. Pricing for each of the add-on should be done separately.
- ii. Current experience of the product as detailed out in the product performance report
  - a. Especially the level of rate change required by various rating factors as per the claim experience analysis
- iii. Risk factors considered
  - a. Study to check the significance of the existing rating factors and if some of them could be dropped or some grouping could be changed
  - b. Additional risk factors considered and pros-cons of using or not using them as rating factors
  - c. Final rating factors proposed with their groupings
- iv. Risk rates
  - a. Method of arriving at risk rates – frequency-severity or burn cost.
  - b. Any loading for cat claims
  - c. Any loading for cost of reinsurance
  - d. Final risk rates for all rating factors and their levels
  - e. Where risk rates are not derived using own data (especially for new rating factors), the method used for arriving at the risk rate
- v. More focus needs to be given to the two new rating factors being introduced.
  - a. Other companies which have those rating factors / other markets
  - b. Potential impact of introducing the rating factors
  - c. Data availability and potential risks due to possible lack of data and mitigations
- vi. Margins built into the premium rates
  - a. What are the margins required in the premium rates to achieve the required rate of return
  - b. What are the final assumptions for expense ratio, investment income, renewal rate etc.
  - c. Combined ratio may be looked at model point level considering the long-term value of the new business written. New business acquisition cost, renewal acquisition cost and renewal rates will be key assumptions for that
  - d. What is the proposed business mix and at that mix what is the expected combined ratio for the product
- vii. Final premium rates and relativities across all rating factors.
  - a. The level of cross subsidy built in the rates
  - b. How much is the premium rate change from the current level
  - c. How do the rates compare with competitors?
- viii. Flexibility allowed in the premium rates based on the underwriter's discretion and levels of authority
  - a. Criteria for applying flexibility
  - b. The frequency of review and approval levels
- ix. Proposed reinsurance structure

- a. The proposed reinsurance structure and
- b. the corresponding cost of reinsurance should be built into the premium rates
- x. Sensitivities of premium rates to various pricing assumptions
- xi. Overall risks and mitigation related to the new product design and pricing done
  - a. Risks related to introduction of new rating factors
  - b. If there is an increase in premium rates, possible impact on the market
  - c. Any other risks identified during the pricing exercise

[8]

- iv)** The product design and filing requirements for a Motor product as per the current regulations:
- i. Motor product specific regulations:
    - Motor 'base' product has to follow the Indian Motor Tariff (IMT) product design and policy terms and conditions
    - Various product variants allowed as per IMT – TP only, TP+ Fire, TP+Fire+Theft, TP+OD.
    - A company can file 'add-on' covers to be sold together with a base policy
    - A Liability only policy is mandatory to be purchased for every vehicle as per Motor Act. All policies must have TP component as minimum benefit.
    - Premium rates for OD components have been de-tariffed. Premium rates as approved by IRDAI can be charged to customers
  - ii. Product type for filing
    - Retail product filing to be done as per file and use guidelines
    - A group based product may be filed as use and file
    - A new product may be filed as a Pilot product
    - If a company wants to design only a commercial product to be sold to commercial customers, it can do so.
  - iii. Following documents need to be submitted:
    - Prospectus
    - Customer information sheet
    - Proposal form
    - Rate charts with discounts and loadings
    - Policy wording
    - Underwriting manual
    - Forms – approval from PMC, AA, Legal, CEO
    - Technical Note
    - Claim Manual
    - Claim form
    - Any other supporting document relevant for the product
  - iv. Product design should follow these rules (applicable to add-on as base product design is guided by IMT):
    - Terms should be fair to customers.
    - Follow basic principles of insurance – insurable interest, Indemnity, utmost good faith,
    - Sustainable for the insurer and not overcharged to customers
    - All necessary details should be disclosed
    - Product wording should be simple and transparent and should take care of policyholder's reasonable expectations
    - Pricing should be on should actuarial and underwriting principles
    - Appropriate preventive mechanism should be built to prevent fraud by policyholders
  - v. Underwriting manual should have following details:
    - Underwriting method and process to be used

- Details of loading, discount to be applied. If specific exclusions can be done
  - List of declined risks if any
  - Underwriting authority matrix
- vi. Technical note should have details of (based on guidelines for details to be captured in an actuarial report):
- Data used for pricing. In case of lack of data, how alternate sources of information have been used
    - Whether pricing done based on own data or
    - Followed the market premium rate or
    - Based on data from reinsurers or
    - Based on data from some other source
  - Method of pricing used and how is it justified in all scenarios of data available
  - Details of the experience of the product so far in terms of loss ratio, distribution cost, expense ratio etc
  - Method of reserving to be followed
  - Details of existing reinsurance details and its cost
  - Margins assumed in pricing
  - Description of the product coverage in brief
  - Sensitivity analysis
- vii. Existing or proposed reinsurance arrangement details to be provided
- viii. Claim authority matrix
- ix. Policy wording should mention the cancellation clauses clearly
- x. Policy wording should mention grievance redressal mechanism clearly
- xi. Sign off from the key persons
- CEO
    - Insurance Act has been followed
    - Policy terms are fair and pricing is on sound basis
    - As per underwriting policy approved by the Board
    - All file and use guidelines have been followed
  - AA
    - Pricing is on technically sound basis and rates are fair
    - Systems are in place to capture rating factor details which will enable review of rates
    - All file and use guidelines have been followed
  - PMC
    - The committee reviewed the policy wording, objective of the product, solvency impact, reinsurance, capital, financial projections etc related to product
    - The committee recommends the product for filing and marketing
  - Legal
    - All policy documents are fair, clear and unambiguous
    - Policy wordings are as per Policyholders protection act and other applicable acts

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v) Suitable reinsurance program:

- i. Motor product is a combination of OD and TP.
- ii. OD claims are limited to IDV of the vehicle while TP claims depends on the losses claimed by the third party
- iii. OD is also exposed to catastrophic events such as floods, earthquake

- iv. In TP claims can be very high if the third party's earning is very high and there is a long-term disability or death due to accident. There could also be multiple lives impacted from one accident.
- v. For the add-on covers for Motor OD part of the product currently prevailing in the market, additional reinsurance may not be required due to small claim exposure. The reinsurance treaties generally cover the claims including add-on related claims as well. For example, claims due to zero-dep add-ons are also covered under the Motor OD treaty.
- vi. As the portfolio is 10 years old, reinsurers help for pricing or data may not be required
- vii. With approximately 900 Cr premium last year, with solvency ratio of 1.6, the solvency capital required is approximately Rs 290 Crore.
- viii. Due to the above nature of the business following reinsurance structure may be proposed:
  - Per event XoL for Motor TP
    - o To protect the company from very large claims from any one accident, it should have an event XoL
    - o The retention should be depending on the risk appetite of the company
    - o For example, if the company decides that it is OK with +/- 1% variability in loss ratio due to a large claim, it may keep Rs 10 Crore as the retention. It should buy a large limit to protect itself from very high claim from anyone accident for example in case of passenger carrying vehicles.
    - o The limit could also be decided based on the past trends of the maximum claim pay-out in the industry. The maximum pay-out in the Indian market so far is ~Rs 20 Crore
    - o The rate on line offered by the reinsurers should be compared with that offered to other companies in the market or outside India.
    - o The reinsurance terms should be sufficient number of reinstatements to protect the company from multiple large claims in the same year.
  - Catastrophe XoL for Motor OD
    - o This cover is highly recommended as one catastrophe event may result into a high claim from any one region.
    - o The retention and limits will depend on the risk appetite of the company and its exposure to catastrophe prone areas. This should be decided on the catastrophe claim scenario simulations run on the exposure data in terms of number of vehicles and IDV distribution by geography for various perils. The limit should be such that the company does not need to pay more than a certain amount with high degree of confidence.
    - o More than one catastrophe in a year is also likely. Hence, some reinstatements should be allowed in the cover.
    - o The Company may keep a retention of Rs 10 Crore for any one catastrophe and high limits. This will keep the loss ratio variation due to catastrophe within +/- 1% and help the company buy a large limit at a suitable reinsurance premium.
  - Risk XoL for Motor OD
    - o This cover is recommended if the risk appetite of the company is lower than the maximum IDV the company is planning to sell.
    - o The proportion of cars with very high sum insured (say 50 lakhs) is very less and the company may have some existing exposure in such vehicles which can be used as a guide for future exposure.



- Quota Share
    - This may be explored by the company in case it requires to reduce capital requirement
    - However, due to 10 years claim history of the book, the claim ratio can be determined with high degree of accuracy. The reinsurers will tend to charge a margin for its expenses and profits. For a large company, it may not make sense to pass on such margins to reinsurers unless really required for capital support.
    - Another reason for having QS arrangement could be the possible uncertainty related to claim ratio due to the introduction of new rating factors. In such a case, the company may get into a QS arrangement with sliding scale commission to limit its exposure to variations in claim ratio
- ix. Decision on the retention of the company: The company may decide on the retention amount depending on its risk appetite with respect to the maximum net retained claim from any event compared to:
- Free reserve
  - Net written premium
  - Net earned premium
- x. Other considerations: The premium rate quotes received by the reinsurers will also need to be evaluated for 'value for money'

[8]

**[50 Marks]****Solution 2:****i) Distribution cost:****Traditional company:**

- Commission or brokerage needs to be paid for all policies sold.
- The expenses for in-house direct sales team will be mostly by way of salary and variable pay rather than commission.
- Advertisement costs may be lower as the sales happen through personal contact / existing customers of agents, brokers and MISPs.
- The company may need to open branches in multiple cities for handling sales and operations mainly for Agency channel or direct sales teams.
- For broker or MISP channel (which may not need infrastructure support), the acquisition cost is likely to be fully variable. For Agency channel, the acquisition cost (including the cost of branches, salary of sales and sales-operations staff etc) as percent of premium will depend on the premium volume produced by the channel.

**Online model:**

- Advertisement cost may be high to build the brand in case policies are to be sold only through the own website.
- Company may need to pay for each 'click' to other websites or search engines through which the customers will come to company's website.
- But above expenses are only one time and nothing needs to be paid to any third party or agency for renewals on the own website. Therefore, acquisition cost for renewal will be low.

- The acquisition cost (including branding cost, purchase of clicks, percent, IT infrastructure for website etc) may vary significantly depending on the conversion rate of the online (on internet) and offline (other than internet such as TV, Newspaper, Hoardings etc) advertisements of the company.

[4]

ii) Rate of renewal

- Motor product is completely portable as the coverage of the base product is exactly same as per Indian Motor Tariff, even though the premium rates vary from company to company.
- For the motor Liability only cover, both the coverage and the rate is guided by the Indian Motor Tariff and the IRDAI issued rates respectively.
- Due to this fact, the customers try to shop around at the time of renewal and brokers also try to provide the best rate to customers.
- Traditional company:  
In many cases, the insurance company may not have the contact details of the customer. This limits the insurance company's ability to directly contact customers to follow up on renewal and offer attractive rates. Due to less contactability, the renewal rate for traditional-channel product may be lower.
- Exclusive-online product:  
In online scenario, the company will be able to contact all of its customers. However, the renewal will depend on whether the company is able to offer good terms or not. As the company will not pay any commission or brokerage to intermediaries, company may be able to offer lower rates than a traditional-channel product within the premium rate flexibility allowed in the file and use.

[3]

iii) Expected business mix across various parameters:

Metrics	Traditional-channel	Exclusive-online
Vehicle-Age	Higher proportion of new vehicles. Insurance sold through MISP motor dealers	Lower proportion of new vehicles due to low access to MISPs.
Customer-age	Likely to reflect the age-mix of car owners' population	Higher proportion of younger age customers who are more likely to shop online
Geography	Likely to reflect the geography mix of car owner locations	Higher proportion of urban customers who are more likely to shop online
Make-model	Likely to reflect the make-model mix of the cars in the market	Less proportion of car manufacturers who have strong tie-up with MISPs
NCB-level	Higher proportion of 0% NCB due to higher proportion of new cars	Lower proportion of 0% NCB due to more older cars in the portfolio
Type of vehicle	Likely to reflect the mix of types of cars in the market.	Higher proportion of private vehicles as commercial

(private car, commercial, two wheelers)	Will also depend on the strategic tie-up the company has for commercial vehicles.	vehicles are insured through strategic tie-up
Vehicle IDV		
Sales Channel		

[3]  
[10 Marks]

**Solution 3:**

- i) Non-consumptive cost of capital = capital required x opportunity cost for capital  
= 40% x 1,00,000 x 6% = **2,400**

Premium = 1,00,000

less

Expenses at the outset = 10,000

Balance available for claim payments and investment = 90,000

Scenario 1 with probability 90%

Ultimate loss = 85,000

Year	Opening Balance	Paid Loss	Investment Income @6%	Closing Balance	Capital Call
1	90,000	42,500	2,850	50,350	
2		25,500	1,491	26,341	
3		12,750	815	14,406	
4		4,250	609	10,766	
<b>Total</b>		<b>85,000</b>			<b>0</b>

Scenario 2 with probability 10%

Ultimate loss = 1,15,000

Year	Opening Balance	Paid Loss	Investment Income @6%	Closing Balance	Capital Call
1	90,000	57,500	1,950	34,450	
2		34,500		(50)	50
3		17,250		(17,250)	17,250
4		5,750		(5,750)	5,750
<b>Total</b>		<b>1,15,000</b>			<b>23,050</b>

Capital call charge is 2.5 times the total call amount (as it exceeds 15,000)

Consumptive cost of capital =  $(90\% \times 0) + (10\% \times 23,050 \times 2.5) = 5,762.50$

Total capital cost to load in premium rates =  $2,400 + 5,762.50 = 8,162.50$

Equivalently, a capital load of  $2.4\% + 5.8\% = 8.1\%$

[10]

- ii) We have assumed all claim payments are made at the end of the year. Investment income has been assumed to be earned on end of the year funds after claim payments for that year have been made.

All expenses assumed to be 10% of premium entirely paid at the outset. There may be variable expenses that are paid during the contract term or later at time of claim payments.

The company was launched only two years back so the expected payment pattern is not derived from its own claims experience. Actual payment pattern may differ from that assumed, in turn accelerating claim payments or having a longer tail than that assumed.

We assume the contract loss outcomes can be reasonably contained within the two scenarios listed. In practice a detailed stochastic analysis will be required to model several scenarios to adequately represent the loss distribution, generating contract outcomes with associated probabilities that have to be analysed for the possibility and quantum of capital calls.

The minimum risk-adjusted hurdle rate of 6% is the minimum return that the company should aim to achieve on its investments i.e. the opportunity cost rate. We assume the same rate be used for investment income when calculating the capital call cost as when calculating the capacity occupation cost.

The capital charge can be set at a flat percentage of the call amount reflecting risk-neutrality or further calibrated to reflect the desired degree of risk aversion. This will impact the capital call cost.

[3]

- iii) Expected underwriting result of the contract = Premium - Expenses - Losses  
 =  $1,00,000 - 10,000 - (90\% \times 85,000 + 10\% \times 1,15,000) = 2,000$  profit

Expected result including capital call costs =  $2,000 - 5,762.50 = 3,762.50$  loss

Expected Losses<sub>NPV</sub> =  $(90\% \times 76,861 + 10\% \times 1,03,988) = 79,574$

Under scenario 1:  $\frac{42,500}{1.06} + \frac{25,500}{(1.06)^2} + \frac{12,750}{(1.06)^3} + \frac{4,250}{(1.06)^4} = 76,861$

Under scenario 2:  $\frac{57,500}{1.06} + \frac{34,500}{(1.06)^2} + \frac{17,250}{(1.06)^3} + \frac{5,750}{(1.06)^4} = 1,03,988$

Expected Capital Call Cost<sub>NPV</sub> =  $(90\% \times 0 + 10\% \times 19,082 \times 2.5) = 4,771$

Under scenario 1: 0

$$\text{Under scenario 2: } \frac{50}{(1.06)^2} + \frac{17,250}{(1.06)^3} + \frac{5,750}{(1.06)^4} = 19,082$$

Net present value of the result including capital call costs for this contract:  
 = Premium<sub>NPV</sub> - Expenses<sub>NPV</sub> - Expected Losses<sub>NPV</sub> - Expected Capital Call Cost<sub>NPV</sub>  
 = 1,00,000 - 10,000 - 79,574 - 4,771 = **5,656**

Although the expected underwriting result for the contract after allowing for the possibility (and magnitude) of a capital call is negative, the risk-adjusted NPV of the same is not. Note the underwriting result on an insurance contract is before investment income on insurance funds. An overall positive NPV is more than break-even, indicative of the economic viability of the contract.

Furthermore, the expected risk-adjusted NPV of 5,656 is close to the target return of 6% on 1,00,000 of premium funds (and above target accounting for funds available after expenses).

[5]

- iv) It may hold additional capital to meet any unexpected claim payments and/or expenses that may not be met by premium and investment income. Company 'WarySteps' was launched two years ago and is writing a class of business that is expected to have claim payments extended until 4 years. Additional capital may be looked upon as a buffer to manage uncertainty in future cashflows.

It is a relatively new player in the market and may be looking to expand its business in the near future. Extra capital could finance new business strain and support business development through...

- ...organic growth into new markets, geographies,
- ...writing more lines of business,
- ...launching new products,
- ...encouraging product innovation,
- ...or inorganic growth by acquiring other companies.

Additional capital may also support an aggressive investment strategy in pursuit of higher returns from riskier asset classes...

...which in turn could reduce the strain on pricing and support competitive pricing to gain market share. This could particularly important for a newly launched company like 'WarySteps'.

Holding additional capital could be a strategic decision to...

- ...give policyholders greater confidence of being able to meet its obligations towards them
- ...contain volatility and generate smooth dividend payments to shareholders
- ...invite lesser scrutiny from the regulator
- ...appease rating agencies in order to maintain or enhance its credit rating
- ...get favourable financing terms
- ...improve standing in the market in the eyes of investment analysts which could help boost share price of the company.

Additional capital may be held in the absence of adequate reinsurance for the portfolio which may be unavailable, inappropriately structured or available at very costly terms.

It may be held as a cushion for an anticipated decrease in creditworthiness of counterparties on our book such as debtors and reinsurers, during a volatile economic environment.

Extra capital could also be held as a buffer against the risk of not being able to meet the regulatory requirement in future due to...

...anticipated changes in the regulatory regime strengthening the current requirements

...fall in asset values lowering the available capital.

[8]

- v) Investments portfolio for an insurance company should be designed to hold assets supporting its liabilities. The main objective of the CIO might be to maximise return but this should be subject to meeting all contractual obligations and recognising the inherent uncertainty.

Therefore the choice of assets must be such that they closely match the nature - fixed or real, term, amount and currency of the liabilities.

The amount of capital held by the company is much higher than the minimum required regulatory amount, as observed previously. After exploring the reasons behind this, we could agree on a certain amount of free reserves to support an aggressive investment strategy in pursuit of higher returns from riskier asset classes.

Overseas investments can enhance expected returns by investing in...

...undervalued markets,

...strengthening currencies and

...rapidly growing emerging economies.

Another benefit of overseas investments is creation of a diversified portfolio that can help reduce risk by...

...investing in different countries or economies with a low degree of correlation

...investing in different stock markets

...investing in different currencies

...choosing from a large range of companies

...making use of opportunities unavailable in the domestic market.

Investing overseas is appropriate to meet offshore liabilities. However, we currently write business only within the country and have no overseas exposure. Also, any future expansion of the portfolio is more likely to happen in the domestic markets than overseas. Thus, overseas investments would lead to mismatched liabilities for the company.

They would also expose the company to the risk of losses from adverse currency movements if the domestic currency rises or foreign currencies purchased fall in value.

Other potential challenges with overseas investments are...

...lack of liquidity and poor marketability especially in emerging markets

...different accounting procedures and/or variation in taxation rules

...additional administration, dealing and management expenses

...additional costs of hiring expertise

...getting adequate and good quality information on overseas assets

...restriction on ownership of certain assets by foreign investors

- ...little or no market regulation
- ...political instability in less developed countries
- ...problems repatriating funds
- ...language problems and time differences making dealing and management difficult from an external base.

Exposure to overseas investments may be obtained indirectly to counter some of the enlisted drawbacks.

This can be done by investing in...

- ...multinational companies based in the home market
- ...domestic companies with a substantial export trade
- ...investment trusts specialising in foreign markets
- ...derivatives based on overseas assets.

The prevailing low interest rate environment in the home market can be dealt with by investing in riskier asset classes within the country.

To maximise return on available free reserves, we may consider investing long term in the domestic equity market. Alternatively, we may invest in property either directly or indirectly via a property fund.

For all of these investment options – domestic or overseas, we must also consider the impact of taking on any future volatility in investment income and capital values on our book.

Overseas investments are surely an option for us to maximise return given the excess capital held over and above the regulatory requirement. However, they come with challenges and potential drawbacks. It may be more reasonable to invest in the domestic equity or property markets in pursuit of higher returns than explore overseas markets. Any particularly lucrative overseas opportunity could be taken advantage of via indirect investment.

[14]

**[40 Marks]**

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