INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

12th March 2022

Subject CP3 – Communication Practice

Time allowed: 3 Hours 30 Minutes (09.30 – 13.00 Hours)

Total Marks: 100

You are an Actuary working in a life insurance company and are responsible for capital management and product profitability.

The Company has been in business for about fifteen years and has had a very good growth. Products have been priced very competitively due to which the Company has managed to attain good market share. The Company follows primarily the Value of New Business (VNB) method for pricing and for assessing the profitability of the business which has been sold.

However, net worth of the Company from profits of business sold in the past has not grown significantly and therefore the current level of capital will not be able to sustain the growth the Company has been witnessing. It is unlikely that shareholders will be willing to infuse fresh capital. Therefore, the Company has been working on having a more robust pricing framework which ensures maximizing VNB by product strategy for the capital deployed. As a Company you have anticipated some risks to volume due to the current strategy, however, considering the capital position, this strategy is the most optimal.

You have recently looked at some of the top selling products and their VNB and Capital requirement. You have repriced some of the products especially protection products after allowing for requirements of the new pricing philosophy.

You have a new distribution head who has come from the banking sector and is still getting used to the insurance industry. She has written to you as follows.

Ram,
I know we have been monitoring our product profitability quite closely and repriced some products, but we are not very competitive in some of the product categories especially our protection products. I anticipate this to be a challenge in meeting our sales targets. I see that the margin for these products is quite good and there is scope for revisiting some of our decisions. Perhaps you can draft a small note for my understanding explaining in simple terms, how we measure profitability, our product pricing philosophy, when do we trigger repricing and anything else you think is relevant.

Regards,
Lata

Q. 1) Draft an email response to the distribution head. **[90]**

Q. 2) Give two examples of jargon which you left out of your reply explaining why you considered them as jargon. **[4]**

Q. 3) One of the requirements for effective communication is filtering information. Give examples of any such filtering you have done in your response to the email. **[4]**

Q. 4) Explain how you structured the information in your email so that the distribution head can follow your explanation. **[2]**

The relevant information which will help you draft your response is provided in the following sections.

Excerpts from the pricing philosophy note

Product profitability is measured in a way to enable us utilize capital efficiently by selling products that add value and helping the Company achieve its profitability goals within acceptable levels of risk. The method of measuring profitability is the Value of New Business method. Other metrics like VNB margin, IRR, payback period and VNB at risk would be calculated and used for decision making. The goal is to maximise the VNB for capital deployed. If the VNB at risk is more than 25%, the pricing should be such that the IRR from the product is at least 2% higher than the RDR.

Notes

VNB • VNB = Present Value of Future Profits (PVFP) + New Business strain – Cost of Capital (CoC) • PVFP= Post tax profits discounted with Risk Discount rate (RDR) • New Business strain = Initial Premium – Acquisition Expenses – statutory reserves • Cost of capital = Initial capital- (Increase in capital+ Investment income net of tax on capital deployed) discounted at RDR
VNB Margin= VNB/ Annualised premium equivalent
Internal Rate of Return IRR is a single, annualised, rate at which the Present Value of the capital flows is zero
Payback period The payback period is the number of complete years after which the cumulative sum, without interest, of undiscounted capital flows become positive
VNB at risk VNB at risk represents the percentage loss of Value of New Business (VNB) when pricing assumptions subject to key risks considered are stressed.
Investment in new business Negative of new business strain+ initial capital

VNB at risk is calculated by stressing each of the individual factors and calculating new VNB. This is then aggregated for all the risks that are considered allowing for any correlation between different risks. However, judgement can be used in determining the stress scenarios. A deterministic approach can be followed in arriving at the VNB at risk.

Excerpts from the note on repricing of long-term protection products

Assumptions used for pricing

Investment returns based on returns that can be expected on new money based on the strategic asset allocation.

All demographic assumptions are on best estimate.

The current RDR is 11%.

Profit targets and other metrics

These are pure protection products which offer cover to the customer till the age of 75. Mortality experience has been good, but the volumes have increased quite significantly of late. One of the concerns is that the profile of the customer that is being onboarded is quite different from the initial ones onboarded on whose experience the best estimates have been set. In terms of lapse assumptions, while we have used the current best estimates in computing the base VNB, our view is that persistency can be better than expected due to the increased awareness on the part of policyholders for the need of protection. These are very long duration contracts and there being no assets of long duration, there is a mismatch between assets and liabilities.

Some of these risks have been captured in calculating the VNB at risk. It has been assumed that the correlation between demographic and market risks is 0.25.

Considering these risks, we have repriced the products so that profitability from the products meets the risk reward expectations from shareholders. A summary of the key metrics is provided below.

	Expected volume (INR crore)	VNB Margin	VNB (INR crore)	Capital deployed (INR crore)	VNB /Capital deployed	IRR	Stressed VNB (INR crore)	VNB at risk %	Payback period in years
Before repricing	1000	25%	250	800	31%	11%	150	40%	10
After repricing	800	35%	280	560	50%	13%	200	28%	6

Key observations and recommendations

The required increase in price is about 20%. There could be a drop in volumes and some of it has been reflected here in assessing the VNB.

The new prices meet the requirement of the IRR to shareholders being at least 2% higher than RDR considering the VNB at risk.

There is better utilisation of capital as the contribution of VNB for the capital used is higher.

Payback period is lower.

The recommendation is to increase prices.

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