

Paper 4A

A 1-year participating product, assume use BBA, only 1 policy in that group.

Premium 100. At day 1, expect to pay claim 102.5 (investment component) at year 1, discount rate=expected investment rate, sharing ratio 70% (i.e. par dividend = $(5\%-2.5\%)*70\%$, payable at year 1)

	Initial Date	Year 1	
Premium	-100		
Claim-IC		102.5	
Par Divident		1.75	
BEL	-0.71	0	0.9

Method 1 below treats par dividends as "investment component", Method 2 treats as "IFIE":

Method 1, Scenario A (actual investment return is 5.5%, actual par dividend=100*(5.5%-2.5%)*70%=2.1)

Method1 assuming dividend experience adjustments impact the CSM

	Year 1	TOTAL	
Revenue	0.40	0.40	Expected Company par dividend=100*(5%-2.5%)*0.3=0.75
Claim	-	-	Actual Company par dividend=100*(5.5%-2.5%)*0.3=0.9
Insurance result	0.40	0.40	Return=Premium+Expected Investment Return-actual investment component=100*1.05-102.5-2.1=0.4
Investment Return	5.50	5.50	
IFIE-interest from BEL and C	(5.00)	(5.00)	
Finance result	0.50	0.50	
Net profit	0.90	0.90	

Method 2, Scenario A (actual investment return is 5.5%, actual par dividend=100*(5.5%-2.5%)*70%=2.1)

Method2 assuming dividend experience adjustments are recorded in IFIE.

	Year 1	TOTAL	
Revenue	0.75	0.75	Expected Company par dividend=100*(5%-2.5%)*0.3=0.75
Claim	-	-	Actual Company par dividend=100*(5.5%-2.5%)*0.3=0.9
Insurance result	0.75	0.75	Return=Premium+Expected Investment Return-actual investment component-expected IFIE=100*1.05-102.5-1.75=0.75
Investment Return	5.50	5.50	
IFIE-interest from BEL and C	(5.00)	(5.00)	
IFIE-Expected PH Dividend	1.75	1.75	
IFIE-Actual PH Dividend	(2.10)	(2.10)	
Finance result	0.15	0.15	
Net profit	0.90	0.90	