

EXAMINERS' REPORT

November 2014 examinations

Subject F102 — *Life Insurance* Fellowship Principles

INTRODUCTION

The attached report has been prepared by the subject's Principal Examiner. General comments are provided on the performance of candidates on each question. The solutions provided are an indication of the points sought by the examiners, and should not be taken as model solutions.

General Comments

A common weakness for candidates is writing an appropriate number of points for the marks allocated. There were a number of cases where candidates made too many points for the marks allocated, explaining issues that were not required by the question. On the other hand, there were cases where candidates made too few points for the marks allocated.

Another common weakness is failing to answer the question asked. An extremely large number of candidates do not answer the question set, but seemed to answer some prepared solution that seems close enough or to answer to another question they had previously seen. This is a recipe for disaster.

General points and vague and unsubstantiated answers is also a common weakness. Candidates are expected to relate their solutions to the scenario set out in the question and to justify their suggestions to get full credit for their answers.

QUESTION 1

(i)

The cost of an option is the value of the excess of the premium that should, in the light of full underwriting information, have been charged for the additional assurance over the normal premium rate that is charged.

The additional cost of an option depends on the health status of those who choose to exercise the option. There is a significant risk of anti-selection with mortality options, which is linked to the proportion of policyholders who choose to exercise the option.

For renewal of the contract it is expected that policyholders who take up the option will have higher mortality than the expected mortality experience for the original term assurance contract. The anti-selection effect is exacerbated if a low proportion of policyholders exercise the option.

The following factors will influence the cost of the option:

- Conditions attaching to exercising the option, such as limiting the sum assured to not more than the sum assured of the original contract.
- The encouragement given to policyholders to exercise the option increases the take-up of the option, but this could increase the take-up by high mortality risk lives.
- The default option, i.e. whether the default position is opt in or opt out, which could affect the take up rate.
- The extra cost of the option (charged to policyholders during the original policy term). Relatively high additional premiums could lead to selective withdrawals if healthy lives lapse to get cheaper cover without the option.
- The amount of underwriting underlying new business rates at the renewal date, as this affects the gap between the select and ultimate mortality experience.

The cost of the option could be offset to some extent by the loadings for initial expenses and underwriting that are contained in the new business premiums, but only to the extent that these are not required to cover administration costs of making the renewal.

The original product is provides credit cover for mortgages so after 20 years policyholders might have very little need for this product and any renewals might thus be for individuals that are in poor health.

Including the option increases the premium on the original product, so the product with the option will mostly be bought by individuals that expect to benefit from the option, which increases the cost of the option.

(ii)

There are two methods for valuing mortality guarantees:

The conventional method, which assumes:

- All policyholders take up the option.
- Policyholders taking up the option experience ultimate mortality rates.

The North American method, which assumes:

- A double decrement table is used to model the proportion of policyholders taking up the option.
- After the option date a separate mortality table is applied for policyholders that take up the option.

(iii)

Individual surplus reinsurance (or individual excess of loss) can be used to help reduce the variance of the insurer's expected mortality experience. This will manage the insurer's concerns over the wide variance and increase in sum assured for these products.

For individual surplus the amount reinsured is the excess of the sum assured over the insurer's retention limit on an individual life.

This can be done using either original terms or a risk premium method.

The reinsurance will usually be negotiated on a treaty basis because this enables immediate acceptance to be given without needing to refer the risk to the insurer first.

Examiner comments

This was a relatively easy question that was fairly well answered. However, based on the amount written by candidates it seems that candidates spent too much time on this question, writing down many points that did not score any marks. This was especially the case for part (ii) where many candidates detailed the advantages and disadvantages of the two methods, instead of just briefly describing the methods.

Many candidates did not take the details of this question into account for part (i). For example, many candidates mentioned that a longer policy term or multiple option take up dates will affect the option take up rate, while the question clearly fixed the policy term at 20 years and the specified that there is only a single option take up date.

A number of candidates included the cost of administering the option take up in the definition of the option, but this did not score any marks, as the notes explicitly define the cost of a mortality option as given above.

Some candidates went into a great amount of detail about the factors affecting the take up rate, while the answer should have covered both the option take up rate and the mortality rates of those taking up the option. Very few marks were available for the factors affecting the take up rate.

Part (ii) was a very easy bookwork question.

Part (iii) was generally well answered, although some candidates did not answer the question, as they stated that aggregate reinsurance agreements (stop loss or catastrophe cover) would reduce volatility in claim sizes. These arrangements would reduce volatility of total claims, not of individual claim sizes. Some candidates mentioned many different

approaches to reduce claim volatility. In such cases marks were awarded only for the first option, as candidates were asked to discuss a single reinsurance arrangement.

QUESTION 2

(i)

Key features of the liabilities:

- Nature of liabilities: both the out-of-payment and in-payment benefit levels increase by CPI. The nature of the benefit is thus real. Life office expenses are likely to be mainly staff-related, so are linked to wage inflation.
- Term of liabilities: this will depend on the average age of policyholders. As this product is aimed at pre-funding (rather than immediate needs) long-term care benefits, new business could come from pre-retirement individuals. However at retirement individuals are more likely to have the funds and perceive the need for such a benefit. Access to nursing and medical care is likely to contribute to survival to high ages, making the term of liabilities at least 10 years, but likely much longer than this.
- Currency: As this is a local insurer, benefits, expenses and premiums are all likely to be in local currency terms.
- Level of uncertainty: this is greater than for traditional life or annuity products. There will be greater uncertainty about the date of the benefit payment trigger, which will be based on the degree of impairment and need for long-term care. There will be uncertainty about the level of the initial benefit payment which is determined by the regulator, and there will be uncertainty about future increases in benefit which are based on both degree of impairment (which is likely to deteriorate over time) and regulator increases. Further uncertainty is created by medical advances, which could affect both the rate at which impaired lives deteriorate and the period for which impaired lives survive.
- Size of portfolio: this could influence the risk of any mismatch between assets and liabilities.

(ii)

The need to match the CPI-linked liability will lead to the need to hold assets that can achieve that return. Guaranteed CPI-linked bonds will be the asset class of choice. However, these assets might not be available, or in sufficient quantities, or at an acceptable price.

Equities and properties could also have been selected for this purpose. The return is not guaranteed to match CPI inflation, but historically it has exceeded CPI over long periods. However short term returns on these assets are volatile. The conventional without-profit nature of the benefit design is such that the investment risk is borne by the insurer. The extent to which the insurer can tolerate asset volatility depends primarily on its solvency/free asset position. The greater the solvency level relative to the minimum requirements, the greater the ability to absorb asset price volatility.

Property investments are made less attractive due to the presence of liquidity risk on this business.

Asset volatility (in particular of equities) and benefit uncertainty will require diversification within these asset classes and between asset classes. Conventional bonds might be selected for this purpose, but the expected return on the latter is not real.

Some cash will be needed to meet the actual benefit payments and possibly for diversification, however the expected returns will be lowest of all asset classes.

(iii)

The model will need to project the cashflows of the assets and liabilities over a defined period. Projected asset, liability and solvency level values can be derived from the projected cashflows.

Depending on the computer power available and size of the in-force book, model points may need to be selected to represent the in-force policyholders.

New business model points may also be required, depending on whether new business should be considered in deriving the investment strategy.

Assumptions need to be made for the economic and demographic variables based on best estimate future expectations.

A decision is needed on which variables need to be modelled stochastically, and which can be modelled deterministically. Assumptions need to have sensible joint behaviour.

A starting investment strategy will be tested by performing a large number of projections and deriving a distribution of the solvency level at the end of the projection period. This will be achieved through a combination of stochastic simulations and deterministic sensitivity tests.

Alternative investment strategies will also be tested.

The optimal investment strategy will be the one that meets the insurer's risk-return preference.

Examiners comments:

It is a big concern that candidates at this level do not understand that the combined portfolio of all policies should be considered when looking at the liability profile and setting an investment policy. The product in the question was not a living annuity type where each person's assets should be invested on an individual basis. It was a risk policy managed on a pooled basis.

In part (i) the better candidates discussed the liability profile and took into account that there was a deferred period before a claim and that the benefits increased during this deferred period as well.

In part (ii), the better candidates started with the assets selected by the insurer, as asked in the question. Weaker answers waffled about the issues to consider without actually suggesting appropriate asset classes for the insurer.

In part (iii), the better candidates applied the cashflow modelling theory to pre-funded long-term care products.

QUESTION 3

(i)

With-profit design:

- The product provides a combination of savings for retirement and risk protection (on death) and disability which makes it more marketable.
- The with-profit design with fairly stable surrender and maturity values, although this depends on the mix between reversionary and terminal bonus rates.
- Past investment performance and subsequent bonus rates.

- The company's historic practice on with-profits business bonuses, specifically how its bonuses compare to the rest of the market, as this affects the company's reputation.
- Some less risk-averse investors may prefer a "pure" unit link design rather than a with-profits design.

The definition of disability and benefit amounts:

- The product does not cover temporary disability which may make the product less marketable. But this will probably make the product relatively cheaper (fewer claims although paid for longer period once in payment).
- Payable to age 65 (or normal retirement age) and so can replace income during working life. But fairly restrictive e.g. only single maturity date => less marketable.
- Since the unit fund is used to purchase the annuity benefit there no link with actual income before disability, which does not meet policyholder needs. But there is a minimum income guarantee.
- The product provides an income while some policyholder's may prefer a lump sum.
- The impact of the surrender penalty depends on its size and how it compares to market, but generally negative view.

Premiums and charges:

- Annual premiums might be too expensive for clients who would prefer paying lower monthly premiums.
- The price will have to be compared to competitors, if possible.
- The minimum guarantee is likely to increase the cost.
- Charges are largely a percentage of assets and so will be cheap for small premium policies (marketable) but relatively expensive for larger premium policies (less marketable).

Distribution:

- Will need to pay reasonable/competitive commission rates.
- Channel would also need to be appropriate (the complexity makes it unsuitable for direct channels).

Underwriting requirements and eligibility restrictions:

- Only available for purchase up to age 50, which might restrict the marketability of the product.
- Strict underwriting will generally reduce marketability. But that is dependent on how it compares to the market practice.

Simplicity:

- The simple/transparent charging structure improves marketability.
- But the benefit design is fairly complicated (age restrictions, different events etc.) and the definition of permanent disability may not be easily understood by policyholders.

General:

- Reputation of insurer would impact marketability, but since insurer has got good range of products, it is at least possibly known in the market, so that could help/not depending on reputation.
- No guarantees on death or maturity, so less certainty for clients, but this makes product cheaper.

(ii)

Both product designs are unitised therefore:

- Premiums paid into a unit fund, net of bid-offer spread.

- Charges deducted (as specified) through cancellation of units.

For unit-linked product designs the unit price fluctuates daily in line with values of assets in fund and the investment risk is borne by policyholders for unit-linked.

For accumulating with-profit (AWP) the value of the units changes depending on the bonus declaration by the company. Hence risks shared between policyholders and shareholders for AWP.

- Bonus declarations will be split between reversionary (regular) and terminal bonus (dependent on product design).
- Declarations will be made periodically (e.g. monthly).
- The guaranteed minimum bonus rate is usually zero.
- Once-off bonus interest could be added (special reversionary bonus).
- This bonus could be additional units or a change in the price of the units.

Bonus rates would be smoothed over time for AWP and there may be a market value reduction for AWP (but not on the unit-linked) to reflect the realistic value of the asset share.

Charges for unit-linked design should be lower, because the AWP has a guaranteed minimum return of 0% that would need to be recouped from charges.

For both product designs there is a surrender penalty (as defined above).

In both cases premiums may be reviewable depending on the underlying performance of the assets (and therefore) unit funds.

Examiners comments:

For part (i) candidates who listed the general factors that affect a product's marketability were not given credit unless they related the factor to this specific product.

In part (ii) Candidates did not explain differences very well and very few candidates spoke about the details surrounding bonus declarations on the AWP contracts.

QUESTION 4

(i)

Consideration of how profits for the company will change on alterations going forward.

For the old basis:

Use of the current premium basis to determine the policy value before the alteration will extract the "accrued" profit for the period up to the date of alteration, for policies that were sold on this premium basis. Determining the policy value after the alteration on the current premium basis will give expected profit over the remaining life of the contract corresponding with that from current new policies. This combination results in an "appropriate" amount of profit for the company, assuming that new business terms were profitable.

For the new basis:

Profit depends on the basis used to calculate paid-up policy (PUP) values. If the company calculates PUP values so that expected profit is the same as that from an unconverted contract, an excessive profit will be made using this alteration method.

Other considerations for the new basis

The company will have to make adjustment to avoid double charging of initial expenses and initial commission, except to the extent of any additional expenses/commission payable at the alteration date.

The company should check that the policy after the alteration is supportable by the asset share at the alteration date in order to avoid making an expected loss.

The method used could be consistent with the basis used for new business, depending on basis used to calculate PUP value (e.g. if it also used current basis or even original premium basis to calculation PUP value)

This method could possibly be easier to explain and be easier to calculate if the PUP value is available.

The new method is not suitable for all alterations e.g. paid-up, whereas current method is. Boundary conditions probably better met by old basis although new basis has consistency with new premium basis for the balance of sum assured

The insurer needs to consider the following issues when changing the alteration basis:

- Whether policy conditions for existing business allow such a change to be made.
- PRE need to be managed to ensure that policyholders understand the change. For current policyholders there is a reputational risk if they feel they are getting a worse value on alteration. The insurer may experience lower sales if new policyholders do not appreciate the new basis
- New marketing literature would have to be printed.
- Admin systems would have to be changed .
- Staff would have to be trained on the changes.
- Whether there are any regulations relating to changing basis that need to be taken into account.
- Which method is competitors using (could affect sales and retention).
- Basis should not be changed too often (the pros and cons between methods should be carefully considered before making the change).
- Alteration terms should ensure fairness/be equitable between altering and non-altering customers.

(ii)

An expense analysis would normally be performed to determine what costs are incurred in alterations.

The company would generally split expenses into expenses relating to new business, existing business, terminations and investments. Alteration expenses are usually part of the existing business expenses. The insurer would consider whether cost/benefit requires/allows for alteration expenses to be split from existing business expenses. If so, subdivide the existing business expenses between alterations and other expenses. Could sub-divide expenses by type of alteration, but generally grouped together for simplicity.

If there is alterations department handling alterations, then staff costs, rent by floor space occupied and system and IT costs (pragmatically) of this department could be allocated to the alteration cost.

The company may track how long it actually takes to do an alteration and using salary levels of employees to calculate an estimate.

Alternatively, the analysis can be based on similar administration expenses e.g. the cost of issuing a policy.

Alteration expense is likely to be a per policy expense, not linked to sum assured or premium. So alteration expenses will be divided by the number of alterations to get the per policy expense.

Allowance should be made for future trends and expense inflation as well as the development cost of new alteration bases if it is going to be implemented.

Examiners' comments

*For part (i) many candidates listed the general factors to consider for alterations but this scored no or very few marks. To score well, candidates needed to make the factors relevant to the proposed or previous bases e.g. that lapse and re-entry will be prevented with proposed new basis because the PUP value is taken into account, but for new contract the whole sum assured would need to be funded from new premiums. Also, only factors that need to be considered upon **changing** the basis needed to be listed, not all factors that would also have been a consideration for old basis.*

Few candidates scored well in part (ii). Many candidates interpreted it as the renewal expense loadings to be used for altered products, instead of how to determine the cost of alteration that should be loaded at alteration stage (i.e. alteration cost). Any appropriate method to identify costs associated with alteration and dividing by number of alterations scored marks.

QUESTION 5

(i)

Expenses and charging structure

The change to level monthly charges increases the mismatch between the amount and timing of charges and the actual expenses of the insurer. Charges increase over time as the fund value increases and the expenses (including upfront commission) being incurred are largely at the start of the policy.

The appropriate level of the charges would need to be determined by modelling the charges and expected expenses of the insurer. The generated charges will depend on new business volumes, withdrawals, mortality, investment returns and premium size. There is a risk that an inappropriate model and/ or incorrect assumptions are chosen so that charges are insufficient for the actual expenses.

There is also a risk that the proposal to outsource expenses and predicted efficiency gains do not happen and actual expenses are higher than expected.

Exposure to higher than expected expense inflation may be reduced due to the possibility of higher investment returns (and thus higher fund management charges) in higher inflationary environments, as then charges will also be higher.

Investment risk

There is a shift to a greater reliance on the monthly fund management charge to recover initial expenses. These charges will be reduced if investment performance is lower than expected. This is largely outside of the insurers control since the policyholder has a choice of investment funds.

Mortality risk

Death strain at risk has increased to 50% of the value of the units.

Higher than expected mortality is particularly a risk at early stages since the charges for initial expenses will be recovered over the term of the policy.

Increasing the death benefit with no underwriting or change in the mortality rates exposes the insurer to anti-selection.

The company may also face a change in the mortality profile of the policyholders attracted to the revised product, which may mean that past mortality experience may become less relevant for predicting future experience (in which case the company is exposed to greater assumptions risk).

Withdrawals

The change in the charging structure will result in higher amounts in the unit fund and therefore higher surrender values at early durations, which may change the withdrawal experience of the insurer. The insurer's exposure to withdrawal risk at the early stages of the policy, where the asset share is negative, is therefore increased.

Volume of new business and competition

The impact of these changes on business volumes may be different to that projected. If business volumes are lower than expected charges may be insufficient to recover initial expenses and the unit-linked endowment portfolio may fail to support the share of the overheads of the insurer allocated to this business. If business volumes are higher than expected, the financing requirements to support the initial costs and reserving requirements for the business may result in pressure on the solvency position of the insurer and administration processes and systems may be strained, leading to delays or errors in processing and policyholder dissatisfaction.

There is a risk that a competitor may introduce an even more attractive product or undercharge the premiums to gain market share and hence volumes sold may be significantly less than predicted.

Action of distributors

Intermediaries may take advantage of no underwriting and lower initial premium allocation charges and advise clients to select against the insurer.

The company might have a mis-selling risk and subsequent reputational risk, if charges and benefits for the new product are not fully explained to policyholders.

Outsourcing and administration risk

There is a risk of poor service from the outsourced administration service provider resulting in policyholder dissatisfaction and lower business volumes.

It may be challenging to integrate the existing systems of the insurer with the administration service provider.

There is also counterparty default risk associated with the outsourced administration, if the administrator can no longer provide the required administration services then:

- the insurer would incur once off costs to either take administration in house again or to find another administration provider
- this might result in higher long-term administration costs if the administration cannot be performed at the same levels

Legislative, regulatory or tax changes

Future legislative, regulatory or tax changes (e.g. maximum charges) may undermine the profitability of the product.

(ii)

Expenses and charges

Change commission structure to 'as and when' or introduce commission claw-back on withdrawal to reduce initial costs and better match charges to expenses. But this may be unpopular with sales advisors if this is not market practice and there may be lower sales.

Introduce reviewable charges so that charges can be increased if experience is worse than expected. But, but the implementation of changes to charges is likely to be limited in practice.

Depending on the level of the revised charges it may be possible to consider introducing actuarial funding (if fund management charges are high enough), or negative non-unit

reserves to mitigate the mismatch of initial expenses and charges. But this will depend on the extent to which this is allowed by regulations.

Investment

Limit investor choice of funds to produce a more predictable level of charges. But this may be unpopular with policyholders who may value investment choice.

Mortality risk

The insurer could introduce underwriting or a waiting period during which benefits will only be paid for accidental deaths to reduce mortality risk.

The insurer could purchase reinsurance, but this may be costly given the lack of underwriting.

Withdrawal risk

Change surrender penalty to discourage early surrenders.

Change the sales process to reduce sale of the policies that are unaffordable or inappropriate (e.g. affordability assessment or clear explanation of the terms and conditions of the policy).

Outsourcing risk

Conduct a thorough due diligence of the service provider and set up a watertight service level agreement with penalties and a cancellation clause for non-performance of the service provider.

Volume of business

Carry out thorough research into the demand for the product and to similar products in the market.

Actions of distributors

Changing the mortality rates and changing surrender penalties will also contribute towards removing the risk of distributors taking advantage of the insurer.

Train financial advisors on the new product to avoid inaccuracies in disclosures on the product features.

(iii)

The equity principle for the internal unit fund states that the interests of unit-holders not involved in a unit transaction should be unaffected by that transaction.

Calculation of the appropriation price (creation of units):

Determine the net asset value of the fund on an “offer basis”:

- market “offer price” value of the assets held by the fund
- plus the expenses (including stamp duty on purchase) that would be incurred in the purchase of these assets
- plus the value of any current assets (e.g. cash on deposit)
- less the value of any current liabilities (e.g. investments purchased but not yet settled)
- plus any accrued income, (e.g. interest income from fixed-interest securities and deposits, net of any outgo, such as fund charges)
- less any allowance for accrued tax (if applicable)

Divide by the number of units existing at the valuation date (before any units are created/cancelled)

Examiners’ comments

This was a long question with quite a lot of detail about the issues facing the insurer in the question. Candidates were expected to use the information in the question to focus their ideas for the solution.

*For part (i) candidates who managed to identify a wide range of **new and increased** risks scored well. A number of candidates discussed existing risks to the insurer rather than focusing on new or increased risks. Many candidates failed to identify important risks to the insurer and to consider a wide range of risks. Candidates who discussed one or two risks in detail did not score well. The risks relating to charges and expenses were generally not discussed in sufficient detail. This issue is important for a unit-linked product.*

For part (ii) candidates who identified the key risks part (i) and then discussed mitigation techniques for each risk identified tended to score better. General discussion and vague points (e.g. pricing and checking assumptions) did not score marks. Few candidates considered the implications of their suggestions, making suggestions to mitigate risks that were unlikely to help the insurer achieve its goals (like increasing margins which is likely to make the product less competitive).

Part (iii) was bookwork and generally well answered. But some candidates wasted time by giving too many points on appropriation pricing for the number of marks allocated.

QUESTION 6

(i)

a) **Claims incurred but not settled before the valuation date**

Reported claims

For claims reported but not yet assessed, provide for the claim amounts and allow for the probability of paying for these claims based on past experience.

For reported claims that were assessed and are valid, provide for 100% of the claim.

Incurred but not reported claims (IBNRs)

For the death/ disability incurred but not reported setup IBNRs based on chain ladder techniques, for example Bornhuetter-Ferguson method.

Simple risk premium approach

Alternatively, a simple risk premium approach can be used, whereby the IBNR is set equal to a certain number of months of risk premiums, where the number of months is based on the average delay in claims reported.

b) **Policyholder liability for whole of life product**

According to the gross premium valuation method policyholder liabilities are determined as the present value of future benefit outgo plus the present value of expected future expenses less the present value of expected future premiums.

The policyholder liabilities will include an allowance for:

- Future death, disability and loyalty bonus benefits
- Future administration expenses
- Future premiums

The projection term must reflect the nature of the benefit i.e. project to the terminal age, say 100, for the whole-life death benefit.

- Taking into account expected mortality rates and lapse rates, based on the policyholder profile
- These assumptions are likely to be prudent, including an appropriate margin for adverse experience
- The discount rate should be based on the yields of assets matching the liabilities or the risk-free rate.
- The basis chosen should recognise profit in an appropriate way over the duration of each policy.

For the whole of life business the company also needs to allow for claims that have been reported by are not yet settled (benefits outstanding).

(ii)

Existing business

The move to a best-estimate basis for determining the policyholder liabilities for the whole of life product should result in the release of the margins for prudence required in the previous valuation basis.

All else equal, this would reduce the policyholder liabilities and result in a once-off profit emerging to the insurer at the first valuation date after the change in regulations.

For subsequent valuations, since all assumptions have to be on the expected future experience, no future profits are expected from the in-force business.

This is because all future cash flows are expected to be exactly matched by the release in the policyholder reserve and investment return.

New business

Since the policyholder liabilities are required to be calculated on a best-estimate of expected future experience, all expected profits associated with new business will be released up-front. No profits are then expected in the future.

(iii)

The regulator may introduce or increase the minimum level of solvency capital required to be held by insurers. This could be in the form of a minimum monetary amount and an amount based on the business written by the insurer. This amount should take the risk of different experience into account at a confidence level that will satisfy the regulator.

Examiners' comments

Question 6 was poorly attempted with only a few candidates realising part of the question is straight forward book work. In addition candidates made too few points for the mark allocation; it seems as if candidates assumed to get a full mark for one concept, where it was only half a mark.

In parts (i) and (ii) most candidates failed to score marks because they did not explicitly use the terms IBNRs and outstanding claims. Several answers were too vague, touching on the right concepts but giving too little detail to score marks.

Overall, most candidates realised that a best-estimate valuation will accelerate profits for part (iii). But, only the strong candidates realised that no profit is expected in future and that the source will be experience profit only.

QUESTION 7

(i)

Medical underwriting:

- Applicants will need to complete an application form.
- This will include answering medical questions.
- If necessary based on the sum insured or initial answers to the medical questions, further medical tests or an examination by the doctor may be required.
- For high sums insured an HIV test may be required.
- The medical underwriting decision could be to accept at standard rates, defer acceptance, load the premium, place an exclusion on the policy, or decline the policy.

Avocational/occupational underwriting:

- Applicants will provide details on their occupation, which could lead to a loading .

- They will also need to be asked about hazardous pursuits, which may lead to a loading or exclusion.
- They will also need to be asked about travel to dangerous countries, which may lead to a loading or exclusion.

Financial underwriting:

- The applicant will need to provide details on his/her income so that the underwriter can assess if the level of insurance is appropriate.
- This should include a requirement to demonstrate proof of income.
- The underwriter should check if there are any other policies, income or lump sum disability, to ensure there is no over insurance.

Claims management/ claims underwriting – at claims stage the claims assessor must ensure that:

- The claimant meets the definition of disability.
- There was no non-disclosure at policy application.
- The claim is not due to a condition or pursuit that was excluded.
- There is loss of earnings (to the extent that this is a requirement to make a valid claim).
- The income prior to disability is consistent with what was disclosed at the initial underwriting stage (to the extent that this is required to make a valid claim).

Claims underwriting/ claims management – for ongoing claims the claims assessor must ensure that:

- The claimant continues to meet the definition of disability.
- The frequency at which this is done will depend on the nature of the claim

Credit was given for giving points on product design features included to manage claims (e.g. maximum replacement ratios), but it was not possible to score full marks by only discussing these points.

(ii)

Under the old regime the policyholder gets tax relief on the insurance premium and the tax authority only receives tax when someone claims. Therefore the tax authority collects less tax as most people will not claim.

Since the new tax regime applies to existing policies the tax authorities will have granted tax relief on benefits that will not be taxed in the future, resulting in less tax collected for existing policies.

Under the new regime tax is collected earlier, so there will be a time value of money benefit for the tax authorities.

Under the new regime policyholders do not get tax relief. So, assuming that premiums paid are less than benefits paid, which in the long run they should be, the government will receive more tax under the new regime.

It is also possible that the change is to simplify the tax policy and make it consistent across all benefits.

(iii)

Possible negative consequences:

Current policyholders could now be over-insured as their benefit would no longer need to be taxed. This would lead to an increase in the replacement ratio for current policyholders, this in turn could lead to:

- Moral hazard leading to increases in claims (increased claim incidence and reduced claim terminations).

- An increase in current benefits in payment, significantly reducing the likelihood of termination.
- Requests to change benefit levels & premiums.
- Lapse & re-entry.

The removal of tax relief could result in current premiums becoming unaffordable.

Future sales may reduce owing to the loss of tax relief on premiums, this in turn could lead to:

- Brokers being less willing to try to sell the policies.
- The company having fewer policies from which to recoup fixed expenses.

But this is offset to some extent by the fact that benefit levels can be reduced for future products, as they are now based on post-tax policyholder needs and not pre-tax policyholder needs.

It will be more difficult to determine an appropriate benefit level as the benefit level will need to be set to approximate the policyholder's after-tax income. This is complicated by the fact that the policyholder's future tax position is uncertain and could change between policy inception and claim stage, either due to the changes in tax regulations or changes in the policyholder's circumstances. This in turn may lead to:

- Dissatisfied policyholders, and reputational damage, at claim stage.
- The lower benefit levels (which should in future target net income) may look lower than in the past, impacting sales.

Increased costs involved in communicating changes to existing policyholders as well as the sales force.

(iv)

Pricing / product design:

Change the product/contract to operate on net income.

- This seems obvious, but it isn't always clear what tax rate will apply at claim stage, and hence your calculation is only an estimate.
- For in-force policies you may not be able to change the contract terms.
- Also, this may be difficult to implement from a systems point of view.
- You will also have to make sure the brokers understand the impact of using net income (as the benefit may look less, but actually the policyholder is still expected to get the same benefit out).

Make the product more expensive to mitigate some of the risk factors.

- This will make it even harder to sell and you may just drive the good risks away.

Remove any premium guarantee on new products.

- This gives you more flexibility to manage profitability, but it makes the product less attractive and may impact sales negatively.

For in-force claims, it is unlikely that the insurer would be able to reduce the benefit to the equivalent net benefit.

- Contract wording is unlikely to accommodate a reduction in benefits for in-force claims.
- If it were possible the claimant should receive a refund of premiums for the difference between the gross and net benefits.
- Even if your contract allows you to do this, it is likely to violate treating customers fairly principles and it is a very bad marketing message. "We are going to reduce the benefits of the poor disabled people".

For in-force claims, ensure that over-insured individuals return to work if they can.

- For existing claimants (who now have 'higher' benefits) could offer a 'bonus' if they terminate (i.e. recover) in the next 12 months.

- This could be achieved by more intensive active claims monitoring and strict applications of the conditions for claimants to return to work.
- Which would increase claim stage expenses.

Existing policyholders (not claiming):

- You could write to existing ‘healthy’ policyholder and offer them a reduction in premiums and benefits, to bring benefits in line with the net of tax benefit level.

New claims from existing policyholders:

- The insurer could apply more thorough assessment of claims at the claims inception stage.
- But this is likely to increase the cost and time for claims assessment.
- Repudiation of claims may have a negative impact on the insurer’s reputation.

Reinsurance

Reinsure a larger portion of this product. . But reinsurers may charge “appropriately” for the change in legislation, i.e. allow for the impact which the change in legislation will have, in which case you will be no better off.

Examiners’ comments

Candidates generally scored poorly in this question.

For part (i) many candidates gave general information of the features of an income protection product rather than focusing on underwriting and claims management. The majority of candidates did not provide sufficient information on the types of underwriting and claims assessment that may be used for an income protection product. Few candidates considered ongoing claims management in the context of an income protection product.

Many candidates failed to identify the ‘time value of money’ advantage of the tax authorities receiving tax earlier in part (ii). Many candidates gave points from the policyholders’ perspective, when the question asked for the tax authority’s perspective.

Many candidates did not score well in part (iii) because they failed to relate their points to the type of product in the question (income protection) and gave general answers that would apply to any type of product. Most candidates failed to identify overinsurance as the main issue in the change in the tax regime and did not consider how seemingly lower benefits would affect sales. Discussion around the consequences of this change was generally vague with candidates failing to justify their points (e.g. why sales would drop. A number of candidates discussed issues around investments, when reserves for income protection products would generally be relatively small.

For part (iv) candidates who structured their answers around product design issues and actions for different types of policyholders (i.e. claimants, existing policyholders and new policyholders) were able to score more marks.

END OF EXAMINERS’ REPORT