

INSTITUTE AND FACULTY OF ACTUARIES

EXAMINERS' REPORT

April 2015 examinations

Subject CA1 – Actuarial Risk Management

Paper One

Introduction

The Examiners' Report is written by the Principal Examiner with the aim of helping candidates, both those who are sitting the examination for the first time and using past papers as a revision aid and also those who have previously failed the subject.

The Examiners are charged by Council with examining the published syllabus. The Examiners have access to the Core Reading, which is designed to interpret the syllabus, and will generally base questions around it but are not required to examine the content of Core Reading specifically or exclusively.

For numerical questions the Examiners' preferred approach to the solution is reproduced in this report; other valid approaches are given appropriate credit. For essay-style questions, particularly the open-ended questions in the later subjects, the report may contain more points than the Examiners will expect from a solution that scores full marks.

The report is written based on the legislative and regulatory context at the date the examination was set. Candidates should take into account the possibility that circumstances may have changed if using these reports for revision.

F Layton
Chairman of the Board of Examiners

July 2015

General comments on Subject CA1

This subject examines applications in practical situations of the core actuarial techniques and concepts. To perform well in this subject requires good general business awareness and the ability to use common sense in the situations posed, as much as learning the content of the core reading. The candidates who perform best learn, understand and apply the principles rather than memorising the core reading.

The examiners set questions that look for candidates to apply the principles specific to the situation set out in the questions, having read the question carefully. Many candidates gain few marks by writing around the subject matter of the question in a more general fashion. Detailed specialist knowledge is not required and nor is very detailed development of particular points.

Good candidates demonstrate that they have used the planning time well to understand the breadth of the question and to structure their answer appropriately – this is a big advantage in making points clearly and without repetition. This also enables candidates to use the later parts of questions to generate ideas for answers to the earlier parts.

Time management is important so that candidates give answers to all questions that are roughly proportionate to the number of marks available.

The comments that follow the questions concentrate on areas where candidates could have improved their performance. Candidates approaching the subject for the first time are advised to use these points to aid their revision.

Comments on the April 2015 paper

The general performance was lower (as reflected in the lower pass rate) than in September 2014 but within the usual range.

It will be seen that some of the points below are shown in bold text. These are the key points and additional credit was granted where these were made clearly.

The comments that follow the questions concentrate on areas where candidates could have improved their performance. Candidates approaching the subject for the first time are advised to use these points to aid their revision.

- 1** The alternative to a standard model is the set of internal models used by individual schemes to calculate their funding requirements reflecting the specific risk profile of the scheme.

Advantages of standard model

The regulator would want to ensure that a scheme's internal model doesn't understate its risks/liabilities

So it would either have to prescribe parameters for or vet the internal models.

There will also be considerable time and effort involved on the part the regulator in reviewing and approving an internal model. There will also be costs involved.

The regulator needs to make sure that any model will be resilient over time, which will be easier with a standard model than with a large number of internal models.

A standard model may help address public concerns on pensions and promote confidence

If it is seen as an independent check on schemes

A standard model may also be useful for the regulator to assess the overall solvency of schemes in aggregate.

For the regulator a standard model provides a comparable basis for comparing a wide range of schemes and for comparing results from schemes with different valuation dates

So the use of a single standard model makes it easier for the regulator to filter schemes to decide which need more regulatory attention.

Disadvantages of standard model

However, the standard model is not necessarily appropriate to the risk profiles of the range of schemes being regulated; for example membership profile or sponsor covenant.

So it may not identify all of the problem schemes

The standard model may not provide enough information for the regulator to decide what actions to take in a particular case.

The regulator will need to define the standard model;

And will either require schemes to provide it with results on the appropriate basis, or require them to provide sufficient information for the regulator to calculate the inputs to the model.

Both of these entail costs the regulator and also to the schemes.

Another potential disadvantage is if schemes use the regulator's model as a reference point rather than thinking for themselves how to manage their own risks.

This was satisfactorily answered by most candidates with most mentioning advantages and disadvantages, better candidates focused on the regulator rather than general points.

- 2** Trustee/professional indemnity insurance – covers the legal costs and expenses of defending against disqualification as a trustee, investigations or extradition proceedings; protecting the trustee's personal wealth.

Fidelity guarantee insurance – covers against financial losses caused by dishonest actions by its employees or volunteers e.g. due to fraud or embezzlement.

Public liability insurance – covers the cost of defending the charity if someone is injured, or their property damaged, due to alleged negligence.

Employer's liability insurance – if the charity employs staff or volunteers. It covers against allegations of injury or illness suffered by staff during their employment.

Property damage insurance – covers the charity's buildings, general contents (including stock), computer equipment, etc. against damage; and against theft.

Event cancellation insurance (or business interruption) – provides insurance against the costs incurred where an event has to be cancelled.

Keyman cover – to provide cash in case of death/incapacity of key individuals so the charity can recruit alternative.

Most candidates did well on this question, the better candidates came up with a range of insurance products rather than focusing on 1 or 2.

- 3** General points for all the investments being considered:

Given the scheme's maturity profile will it be looking to move towards a low-risk strategy in the medium term?

Will it be looking for marketable and/or high running yield assets?

This will depend on the size/importance of the scheme's funding deficit and its risk preferences

All 4 assets are relatively high risk so need to be sure that the scheme has a suitably long timeframe for this investment?

All might give diversification from existing assets

Investing in a high risk asset may result in more volatile returns, and therefore a more volatile funding position.

Need to consider the currency, nature, term and certainty of each investment including how the investment would impact on the overall strategy

Attractiveness will depend on the terms of the deal: what is the expected return?

- (i) A unit trust provides structures for the management of investments on a grouped basis, providing the opportunity for the scheme to achieve a wide spread of investments and therefore to lower portfolio risk. Managers of such schemes are likely to have management expertise, particularly in specialist areas such as overseas investment, which is otherwise available only to the largest institutional investors.

The unit trust will make charges; the scheme will not have any control over the investments made.

Emerging markets tend to offer high expected returns due to rapid industrialisation. They also tend to be in very risky markets.

Returns are likely to comprise mostly capital gains with limited dividend income; they will be linked to global economic growth so indirectly to real liabilities

This may be a suitable match for benefits for non-retired members

Some of the trust's underlying holdings may not be very marketable; but the units should be reasonably marketable.

This is an overseas linked investment and hence the scheme will be exposing themselves to currency risk

Exposure to emerging markets is likely to be a suitable way of achieving diversification in risk-seeking portfolio

- (ii) Investment in direct property will be real in nature and therefore would be expected to provide a broad, if imperfect, hedge against unanticipated inflation.

The cashflow will be dependent on the rental income achieved from the flats and will also need to consider occupancy rate. Will also need to net off management/agency expenses which can be relatively high.

The security of the income will depend very much on the quality of the tenant; and the capital values of buildings can be volatile over the longer term.

There might be a large enough number of flats in the portfolio to give reasonable diversification from the risk of voids

On the other hand, all the properties are in the capital city which might be a lack of diversification and could see falls in property prices if demand for the capital is reduced significantly

There might be an issue in trying to sell the properties quickly (i.e. might be a liquidity risk) and might mean a loss on force sale which would not help the deficit position.

Therefore this is only suitable if it is intended to hold the portfolio for many years if there is expected to be an increase in the property prices over the investment period; and the income could be used to cover some of the pension payments

- (iii) The returns to the scheme will be dependent on the amount generated from the income off the solar panels; and the scheme will not actually hold any physical asset so no capital value at the end when the panels cease to operate.

The income generated is likely to be real in nature and could match the pension liabilities well; **and lack of maturity value means that there will be a relatively high running yield and that there is no reinvestment risk;** and could be good diversification for the scheme in terms of income generating assets.

It is expected to be highly unmarketable and hence difficult to sell on should the scheme need some liquid assets; and it will be also difficult to put a value (if that was important to the scheme for regulatory/compliance purposes).

The scheme will also be taking on additional risks from this investment including a varying level of income which would be dependent on the level of sun. They would also be reliant on the owners of the house ensuring the panels are maintained, otherwise the income that the scheme get would reduce over time.

They would also be open to changes on how much income this would generate (i.e. governments could change the tariffs, or reduce financial support in favour of other forms of green energy – introducing political risk).

This investment may help to meet any socially responsible investment objectives.

- (iv) This asset is effectively a large exposure to an individual ordinary share (equity) and so there will be a lack of diversification. Also, a significant investment in a single company may be subject to regulatory restriction.

Income will only be generated by distribution of profits via dividends. Both income and capital returns will be dependent on the performance of the company.

The company's performance will depend on the specialised skill of its traders (which may be variable); and on the strength of the stamps market (less profit if fewer customers want to trade); and on capital appreciation of its stock.

The last two factors may give some correlation to general economic conditions (and so to real liabilities), but not in a direct way.

This is an equity investment, its value might move with the overall investment market.

Given the unique nature of the company there will be reinvestment risk when the time comes to sell – it may be hard finding a buyer for the 25% share, and it may be hard to sell the holding in several small chunks.

In the interim the stake might not be marketable and therefore getting a tradable price might be difficult which might give a liquidity risk for the scheme.

Therefore less likely to be a suitable investment for the scheme.

Generally well answered, better candidates structured their answers and considered the particular asset in the context of the investor's needs. Unit Trust and Property assets were well covered, but non-standard assets less well.

- 4** (i) It will want to stabilise costs and hence ticket prices.

It can do this by locking into the rocket fuel prices that are currently priced in the futures contracts.

This protects them against the further increase of fuel prices above this level over the next few years.

If the expected fuel consumption is correct, the futures may also manage the volatility.

- (ii) Space Tourism will need to forecast how much fuel it is likely to need and so what futures to buy

A recession would result in lower sales and fewer space trips. **Hence the company will be holding futures for fuel that is no longer needed and so mismatched.**

The opposite situation, underestimation of fuel consumption, would leave the company still exposed.

If fuel prices fall, customers may expect that ticket prices will fall (especially if there are competitors who have not bought futures); but Space Tourism will be locked into paying higher prices via the futures contracts.

Futures are only a short term solution. After maturity Space Tourism plc will again be exposed to high, volatile prices.

It is unlikely that the fuel that Space Tourism will need will be the standard type of fuel for which futures are available so there will be a potential mismatch with its costs.

Expertise is needed in buying and managing futures and associated products. There is risk that the counterparty to the futures cannot meet its obligations.

Currency risk if futures/fuel are priced in different currency to what Space Tourism will be pricing its tickets.

- (iii) The exchange should have a suitable risk management program, which identifies the main risks, and mitigation strategies for them, to protect them against possible adverse exposures.

The exchange will be exposed to counterparty risks

In particular, it will be exposed to the risk that a counterparty fails to meet its obligations if fuel prices fall

It can manage this by due diligence on all counterparties. It may wish to vet the counterparties.

It may impose fines or exclusions on counterparties not meeting their obligations.

It will require counterparties to post collateral. This is likely to be in the form of initial and variation margins.

It can limit its exposure to any one counterparty.

It can also limit its exposure to each type of future.

It will need to monitor its positions and take appropriate action when necessary.

Part (i) was generally well answered; better candidates expanded their answer to the specific issues. Part (ii) was answered less well, with few candidates picking up the issue of too much/little fuel and potential timing issues. Part (iii) was difficult but was generally disappointing with many candidates repeating their answers to (i) and (ii), the better candidates focused on the exchange and how it could manage its exposure.

- 5 (i) Short term interest rates are typically those up to a year

Short-term interest rates are largely controlled by the government through the central bank's intervention in the money markets

The central bank controls the shortest rate, typically the overnight rate, through setting the rate it is prepared to lend to the money market at when demanded.

Typically this is done by reference to the central bank rate

With differences (an increase) to the central bank rate reflecting the relative credit worthiness of the other market participants

Other short-term interest rates are agreed through supply and demand between money market participants

Short term rates up to one year reflect expectations for the money market over that period; i.e. compounding the expected overnight rates for the whole period.

The expectation of the future short-term interest rates will be influenced by:

- expectations of economic growth; for example interest rates being reduced to stimulate economic growth.
- expectations of inflation; for example interest rates being increased to reduce inflationary pressures.
- expectations for the exchange rate; for example rates being increased to increase demand for the currency, which will strengthen the exchange rate.

Where there is poor liquidity in the market, there may be greater demand for the money market and interest rates may be bid up.

The central bank may choose to intervene if liquidity is poor, making more money available to maintain lower, or more stable, interest rates.

The level of short term interest rates will also be impacted on by the return on alternate asset classes.

Although these are likely to have less liquidity and hence unlikely to provide a perfect alternative to money market assets

- (ii) A meaningful comparison is of yields on bonds of similar durations.

Although many governments issue bonds of much longer duration than typical corporates, which would affect the comparison between average yields on government/corporate bonds.

Corporate bond yields are typically higher than those on government bonds; as compensation for less favourable attributes of the investments

Greater liquidity in government bonds results in lower yields.

Default

Difference in yields may arise as compensation for expected loss due to default.

This compensation may vary due to:

- The probability of default and loss caused by default
- The duration of the bond, as payments further into the future may have greater uncertainty and hence risk of default.
- Any security (asset charge) directly linked to the bond which may reduce the impact of a default.
- The ranking of the debt on wind-up and financial resources of the issuer. Higher ranking debt from a financially secure issuer may have a lower yield.

Expectation of default is influenced by an assessment of credit worthiness of the bond issuer

Bonds associated with a lower credit rating will have a higher yield as compensation for greater risk

Liquidity/Marketability

Difference in yields may arise as compensation for differences in liquidity or marketability.

In most countries government debt issues, both the size of individual issues and total debt outstanding is larger than for any individual company.

The liquidity of the overall bond market is linked to its overall size. The larger the market the higher the liquidity.

Central banks will often intervene in the government bond market, both through new issues and buying existing bonds and this improves the overall market liquidity.

The size of individual bond issues affects liquidity.

Smaller issues have lower trading volumes so individual trades have a greater impact on the market.

Yields are determined by supply and demand, so the restricted ability to sell (or only sell at a discount) will result in greater compensation being demanded in terms of higher yields.

Uncertainty

Difference in yields may arise as compensation for uncertainty over future default or liquidity risk from changing conditions.

Uncertainty over future default may arise due to general economic conditions impacting on the overall economy and risk for all corporate bonds.

Uncertainty may arise due to particular characteristics of the bond or issuer

For example if the issuer is in a cyclical industry where the depth of the market is less certain.

Or if the issuer is in a particularly high risk or undiversified market which may not have stable long term expectations.

Uncertainty over future liquidity may arise if there is an expectation of future issues of bonds; for example to increase future finances

This could relate to changing corporate or government financial needs.

Uncertainty may also relate to the impact of alternative asset classes; or the relative attractiveness of bonds for overseas investors.

Options

Difference in yields may arise as compensation for options applying to the bonds.

These options may include, for example, a spread of redemption dates or the ability to defer redemption.

Even where these option are significantly out of the money, or currently unlikely to be exercised they have a potential value and hence lead to a higher yield.

Tax

Difference in yields may arise as compensation for different tax treatment of bonds

Which could relate to tax treatment of coupon payments

Or of capital gains

And may vary for different types of investor,

This may “distort” the market due to supply and demand effects from investors with different tax treatments changing the price of different bonds.

Regulation

Regulation may require certain investors to hold government bonds. This will increase the demand for government bonds relative to corporate bonds and so increase the yield difference.

Part (i) was generally well answered with the better candidates ensuring answers were focused and balanced across the main points. Part (ii) was answered less well with few candidates focusing on relative yields.

- 6** (i) Throughout the life of the contracts:
- There is a general operational risk: that expenses are higher than expected; that procedures are not followed or are not effective resulting in lower profits than expected
 - Also inflation risk that affects expenses whereas premiums are fixed
 - Exposure to epidemic risk exists;
 - There is investment risk that returns are lower than assumed
 - And regulation risk that additional requirements are imposed (e.g. reserving)
 - And risk of change in the tax position

Pre-inception/inception the risks are:

- Higher than expected business volumes leading to new business strain
- **The cost of selling business is higher than anticipated**, for example:
- Lower absolute volume of business than planned so higher sales cost per policy.
- Lower quote to underwriting to commencement ratio than planned so higher underwriting costs

- Higher commission costs due to mix of business by sales channel being different from expected.
- The expected profit of the business sold is lower than anticipated; for example due to the mix of business by sex, age, sum assured and underwriting class being different from expected

Early in contract life (first 15 years) the insurance company is exposed to:

- Ineffective claims underwriting; for example, paying claims despite non-disclosure or counter to suicide conditions
- Policy lapsing/surrendering before the initial expenses and commission are recouped.
- Adverse mortality experience either random poor experience; or as a result of ineffective underwriting

Later in the contract:

- Selective lapse of healthy lives, leaving continuing less healthy lives
- Fewer lapses than expected so lower surrender profits

(ii) (a) *Why?*

The fund has identified that they can make a profit; when buying the contract for more than the surrender value; **but less than the “actuarial” value.**

There will be demand from policyholders wishing to stop paying premiums

The fund by buying multiple policies has the opportunity to pool risks reducing the risk of one significant loss; a choice an individual policyholder does not have

The investment return may be higher given the risk than what is available on other investments

These are long term assets and may be suitable for matching liabilities

The credit of the insurance company may be very strong making this a secure investment

The investor may wish to take on mortality risk

And these policies may offer diversification from the fund's other investments

(b) *How?*

To minimise initial expenses the fund may have qualifying criteria before offering to quote, e.g. minimum age or state of health

The fund will determine the offer by carrying out underwriting. There will be two parts to the underwriting.

The first part is to review the contract terms and check that the policyholder has adhered to the terms of the contract; so that the fund can legally take over ownership of the contract; and the sum assured will be payable if future premiums are paid.

The second part is to carry out some medical underwriting to determine the expected mortality rate.

The extent of underwriting will need to be cost effective

The fund will need to allow for the cost of future premiums; and its expenses (initial and ongoing)

The fund will need to take account of the taxation of the return; to compare with net of tax returns from other assets

The fund will discount the future net cash flows; **at a discount rate allowing for both the expected return and margin for risk and uncertainty**

The allowance for risk and uncertainty will depend on age of the policyholder, state of health; and number of policies, i.e. the extent volatility is reduced by pooling risk from many policies

The theoretical price may be adjusted to take account of its offer process or approach; for example a lower initial offer is made leaving scope to increase offer and still achieve required return

The offer price will also be compared to the surrender value available

The offer may be adjusted to take account of competition from other funds

(iii) The insurance company will incur additional cost of notifying policyholders of the options available.

Policies meeting the funds' quotation qualifying conditions (higher ages and those in poor health) to get an offer higher than the surrender value will not surrender policies now or in the future; **so the insurance company will lose out on future expected surrender profits.**

If, however, policies are sold early in the contract more premiums will be paid and so initial expenses will be covered. This will mean that losses due to early surrenders/lapses will be reduced.

The lapse rates may also reduce for policyholders close to meeting the qualifying conditions for a quote.

Policyholders in ill-health will get a higher offer than those in better health. Policies with ill-health will be sold and so continue in force; with policyholders in better health being more likely to surrender. The average mortality experience is likely to deteriorate creating mortality losses

The insurance company may not know which policies have been sold, so may be unaware of the anti-selection effect.

Theoretically there remains a remote risk of a surrender profits being made if a fund is unable to afford the future premiums. However, the policies will have a value greater than surrender values so the fund could sell on to another fund rather than surrendering the contracts

Will need to adjust provisions and pricing of future policies to allow for this change.

Part (i) was generally well answered with the better candidates focusing on the specifics of the questions asked. Part (ii) (a) was again answered well, with most scoring well, but (b) needed more focus to the question being asked rather than giving bookwork. Part (iii) was generally answered poorly with few thinking through the consequences for the insurance company.

7 (i) The model will need to satisfy the following requirements:

The model being used must be valid, rigorous enough for its purpose; and be adequately documented

The model chosen should be capable of reflecting the risk profile of the annuity business

The parameters used must allow for all those features of the annuity business

The workings of the model should be easy to appreciate and communicate and the results should be displayed clearly. The model should also exhibit sensible joint behaviour of model variables

The outputs of the model (the solvency position at each point in time) should be capable of independent verification for reasonableness; and should be communicable to those who are interested in the solvency position.

The model should not be overly complex so that either the results become difficult to interpret and communicate; or the model becomes too long or expensive to run

The model should be capable of development and refinement; especially if assumptions should need to be changed

An actuarial model needs to allow for all the cashflows that may arise.

The cashflows need to allow for any interactions; particularly where the assets and the liabilities are modelled together which will need to be done in this case to project the solvency position of the fund.

Will also need to allow for effect of bonus distribution policy

In some cases there will be a need to use stochastic models and simulation – e.g. allowing for any mismatching risks that might be.

Will need to consider at what points the solvency of the fund will want to be considered; e.g. half yearly/yearly and if required over 20 years how much tolerance will be required

Sensitivity positions will probably be needed; to show the possible outcomes if assumptions such as longevity were to worsen or asset default positions will be higher

- (ii) Annuity contracts are long-term; and the final profit from a tranche of policies cannot be determined until all contract terms have ended.

Waiting until this happens before determining the terms under which the next tranche of policies are written is clearly impractical.

To monitor the progress of the business it is necessary to value the outstanding liabilities from time to time, often annually.

An insurance company will want to analyse the change in any surplus arising over a year or a longer period of time in order to:

- **Show the financial effect of divergences between the valuation/pricing assumptions and the actual experience.**
- Determine the assumptions that are the most financially significant.
- Show the financial effect of writing new business.
- Validate the calculations and assumptions used for pricing.
- Provide a check on the valuation data and process, if carried out independently.

- Identify non-recurring components of surplus
- **Enable appropriate decisions to be made about the distribution of surplus.**
- To ensure the investment strategy is appropriate
- Reconcile the values for successive years.
- To demonstrate that the variance in the financial effect of the individual levers is a complete description of the variance in the total financial effect.
- To provide management information including data for use in executive remuneration schemes.
- Provide detailed information for publication in the provider’s accounts
- To provide information for regulatory returns.
- To give information on trends in the experience of the provider; to feed back into the actuarial control cycle.
- Including the impact of expenses, and the rate of expense inflation

As no shareholders to distribute surplus to, all surplus will go to policyholders. This means analysing the surplus from different groups of policies is particularly important to ensure that customers are treated fairly.

In addition analysis of surplus is required to determine finite amount of financial strength, as further capital cannot be raised by issuing shares.

- (iii) The following capital management tools may be suitable for a mutual insurance company:

Financial Reinsurance

This can be used to provide a capital benefit to a mutual insurance company; although there will be some risk transfer involved.

It aims to exploit some form of regulatory arbitrage in order to manage the capital, solvency or tax position of the company more efficiently.

This frequently relies on the regulatory, solvency or tax position of a reinsurance company, which may be based in an overseas state, and therefore be different from that of the company.

Traditional reinsurance can be used to reduce risk and smooth profits and so may also be useful.

Securitisation

Securitisation involves converting an illiquid asset into tradable instruments e.g. future profit streams

The primary motivations are often to achieve regulatory or accounting of balance sheet treatment.

Typical transactions will be structured with an element of transfer of the risk associated with the value of the asset. This will result in any potential loss in value of the asset being capped.

The securities will be backed by assets and their cash flows

Subordinated debt

The company can raise capital through issuing subordinated debt in the capital markets. The main aim will be to generate additional capital that improves the free capital position of a company.

The debt will be guaranteed on a subordinated basis by the company, i.e. the repayment of the debt is guaranteed only after the policyholders' reasonable expectations have been met.

The debt can be dated or undated, though this will impact the amount available as an admissible asset and may impact the tax implications.

The liability for repayment will not need to be included in the assessment of solvency as the debt repayment comes after all reasonable expectations of policyholders have been met.

Banking products

The banking sector can provide direct capital management solutions for an insurance company.

Liquidity facilities can be used to provide short term financing.

Contingent capital can be a cost-effective method of protecting the capital base of an insurance company.

Capital could be provided as it was required following a deterioration of experience (i.e. it is provided when it is needed). Although these arrangements clearly improve the financial strength of an insurance company and can be given credit for by a rating agency, they lack visibility.

Senior unsecured financing directly for an insurance company may not have capital benefits as the loan would be treated as a liability on the company's balance sheet. It may, however, be suitable if short term.

Derivatives

For annuity business, these may be used to manage risk relating to long-term interest/inflation rates; **and/or to manage risk relating to long-term mortality experience.**

Prudent management requires that any provider entering into derivative contracts must exercise caution. The insurance company needs to ensure that its derivative strategy assists in the efficient management of its business and serves to reduce risk.

The insurance company would need to ensure that the complexity and nature of any derivative contract is understood by decision makers.

Internal

There may be ways to reorganise the existing financial structure of the mutual insurance company in a more efficient way:

- Funds could be merged
- Assets could be changed e.g. to make them match more closely with liabilities
- The valuation basis could be weakened if not imprudent to do so
- The distribution of surplus could be deferred
- Premium rates for products could be adjusted (if permitted)

Part (i) was well answered with the better candidates being specific to the company rather than just discussing the model. Part (ii) again answered well, with better candidates focusing on the annuity business. Part (iii) had mixed answers; those who identified the right part of the course did well, with others focusing on to a narrow topic area.

END OF EXAMINERS' REPORT