EXAMINER’S REPORT

8 June 2012 (am)

Subject F104 — *Pensions and Other Benefits*
Fellowship Principles

INTRODUCTION

The attached report has been prepared by the subject’s Principle 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.
QUESTION 1

A large defined benefit pension scheme offers a pension related to final salary, service in the scheme and an accrual rate. The accrual rate is somewhat larger than the industry norm and this is to compensate for the fact that there is no death-in-retirement benefit specified in the rules of the scheme. Instead, members are offered an option which can be exercised at any time whereby part of the member’s pension can be surrendered to provide a pension for a dependant (or dependants) contingent on the death of the member after retirement. These pensions would be paid from the scheme. The trustees feel that this gives the members greater flexibility.

i. Discuss the factors one needs to consider in deciding on the terms for this option and the processes for administering it

ii. Recommend any restrictions you might apply to the exercise of the option with a brief reason for each.

Solution 1:

a) Factors to consider:
   a. The nature of the dependant(s):
      i. Usually intended for a spouse, but even this is open to interpretation
      ii. E.g. cohabitants, common-law spouse, same sex partners
      iii. This allows for greater flexibility, e.g. member may have a disabled child
      iv. What if member exercises the option for a spouse but then divorces and wishes to retract?
      v. What if member exercises choice for a spouse who predeceases the member who then remarries and wishes to exercise the option into the new spouse (assuming this is affordable)?
   b. Are there any constraints in the Rules or in Legislation?
   c. Set up equation of value, equating benefit surrendered with benefit opted for.
      i. May ideally want actuarial neutrality i.e. no profit/loss to scheme on exercising the option, bearing in mind that:
         1. Degree to which assumptions differ from valn basis will lead to an immediate valuation profit/loss
         2. Degree to which experience differs from valuation basis will lead to an eventual actual profit/loss
   d. Various assumptions are needed:
      i. Discount rate:
         1. Use of valuation basis may lead to selection against scheme depending on market rates
         2. So may have reference to medium/long term gilt rates
         3. These will differ from time-to-time
         4. So may use an average for more stability in calculation factors
         5. But would need to review this from time-to-time
      ii. Mortality of member:
         1. Asymmetry of knowledge between member and scheme
         2. Member may have knowledge of higher mortality
            a. Due to state of health
b. Due to pursuit of hazardous pursuits/conditions  
c. Hence possibility of anti-selection  

iii. Mortality of dependants:  
1. Again an asymmetry of knowledge/possibility of selection  
2. Age of dependant could be a major factor  

iv. Expenses:  
1. General admin expenses  
2. Or those incurred as a result of exercising the option  
3. E.g. possible actuarial cost of individual calculations  
4. Investment costs – if needing to match liabilities  

v. Level of discretionary pension increases:  
1. Can one assume increases would apply equally to members and dependants  
2. If not, calcs will be more complicated  

vi. Selection:  
1. For prudence, could assume scheme will be selected against  
2. i.e. members in poor health and dependants in good health  
3. in practice, members may overwhelmingly exercise the option for reasons other than selection  
   a. i.e. protection of loved ones  
4. so may not need to adjust mortality for selection.  

e. To what extent do the sponsors/trustees want the members to have this considerable (though generally commendable) flexibility?  
   i. To what extent do they want to encourage/discourage take-up of this option?  
   ii. E.g. competitiveness of benefit with other schemes.  

f. There needs to be a balance between:  
   i. On the one hand, lower admin costs of a simple set of relatively robust surrender factors that may change infrequently, leading to profits/losses arising from actual experience with some cross-subsidies  
   ii. On the other hand, the higher admin cost of more accurate individual calculations (e.g. using actual ages) with less variation in profits/losses and less scope for cross-subsidies  
   iii. Given the potential variation in possible ‘dependants’, the balance may tend toward the latter option.  

b) Possible restrictions:  

a. Limit on proportion of pension that can be surrendered  
   i. Limits selection risk  
   ii. Limits possibility of opting out of pension benefit with possible reputational risk for sponsor.  

b. Make option subject to evidence of good health (of pensioner) and an underwriting questionnaire.  
   i. Limits risk of selection.  

c. Option exercised once only and decision becomes irrevocable  
   i. Essential to prevent selection in some cases (e.g. spouse pre-deceases member)  
   ii. But may be too restrictive in other cases (e.g. exercised iro spouse but later a child is disabled)  

d. Restrict ‘dependant’ definition by nature of relationship
i. If no restriction, the option can be considered a tradable commodity
ii. Could be a moral hazard
e. A child benefit perhaps to be restricted to a maximum age
   i. To keep costs down
f. Restrict ‘window period’ for exercising the option
   i. e.g. for several months around NRA
      1. Would limit selection risk
      2. But may be too restrictive.
   ii. Or contingent on particular event
      1. Marriage or disability accident

General Comments: The question was generally fairly well done by candidates. There was a tendency to discuss the suitability of the benefit which was rather off the point. No marks given for discussing commutation at retirement, suggesting benefit ceasing on remarriage or for requiring trustee approval (unless the latter was linked to a valid reason).

QUESTION 2

An asset management company is investigating the possibility of using asset/liability modelling to advise their pension scheme clients on investment strategy. Outline the use to which asset/liability modelling can be put in this context and also set out the limitations in its use.

Solution 2:

• If one wants to plan ahead over some period (say 10-20 years) or ‘planning horizon’, the model can project possible future outcomes for the scheme for a given investment strategy.
• These outcomes could be expressed in statistical terms: probability, means, percentiles, standard deviations etc
• Could use this to determine benchmarks for Asset Managers
• Aids trustee understanding of schemes assets & liabilities
  o Will help to set an investment strategy appropriate for scheme liabilities.
• One could investigate matters such as:
  o Ongoing funding levels
  o Discontinuance solvency
  o Required contribution rates
  o Defined benefit underpins
  o Rebalancing requirements, etc
• The client should decide with what level of risk they are comfortable. The model can be used via an optimisation process to produce a set of asset-mixes which give a ‘best’ range of results for that level of risk.
• The client would decide on the criteria for determining what results are ‘best’, e.g.
  o Future contribution rates keep below a maximum
  o Funding level keeps above a minimum, etc
• The model can also project likely cashflow requirements:
  o How much liquidity to keep in the fund
  o When it may be necessary to realize assets.
• Limitations:
  o Assumptions are used in the model and these are derived from historical data, which may not remain appropriate for future periods.
  o Small changes in assumptions may produce large changes in results. This sensitivity should be tested and explained to the client.
  o There are many different asset classes. This can complicate the model enormously (e.g. may become prohibitively expensive or time-consuming to run).
  o Such complexity can also increase sensitivity to small changes
  o So model may be simplified, e.g. use smaller range of broad asset classes.
    ▪ Asset selection within a broad asset class may then be determined by other criteria (i.e. not using the model).
    ▪ May not be able to deal with some practical difficulties, e.g. delays in disposing of large property holdings, allowing for future changes in regulations.
  o May not be able to find solutions simultaneously to both ‘on-going’ and ‘discontinuance’ scenarios. Compromise may be necessary
  o Model outputs should be used to provide insight rather than true optimisation
    ▪ Will indicate trade-off between risk and return
    ▪ Must be subjected to common sense

General comments: Performance on this question was mediocre. Candidates tended to focus on how to use the ALM rather than what to use it for and did not usually generate enough uses. Limitations were poorly covered, particularly with respect to the number of asset classes. Some candidates clearly did not know how the ALM actually worked.

QUESTION 3

For a typical defined benefit pension scheme with a wide range of benefits, list the possible sources of surplus/deficit arising between one valuation and the next.

Solution 3:

• Surplus carried over from previous valn plus interest
• Investment returns different than assumed
• Salary increases higher/lower than assumed
• Contributions higher/lower than assumed
  o Could be voluntarily by Eer, or
  o Higher contributions than necessary on an AAM basis
• More/fewer withdrawals than expected (where the withdrawal benefit < actl reserve)
• Asset valuation changes relative to the MV
• More/fewer members than expected die before retirement
• Pensioners die earlier/later than expected
• More/fewer IHR than expected (where IHR benefit worth more than actl res.)
• Any reserves such as contingency or solvency reserves are increased or reduced.
• Commutation option exercised at retirement on other than actuarially neutral terms.
• Early retirement option exercised on other than actuarially neutral terms.
• Pensions in payment purchased on terms differing from the valuation basis
• Pension increases lower/higher than assumed
• Expenses lower/higher than assumed
• Change of valuation basis
• Inflation higher/lower than assumed (may be indirect effect, e.g. pension increases indexed to inflation)

*General comments: An easy question well-answered. No mark for just ‘(price) inflation’ unless some reason given.*

**QUESTION 4**

You are actuary to a defined benefit pension scheme which has both active members and pensioners. There are no deferred pensioners. You have just completed an actuarial valuation and have ascertained the following:

<table>
<thead>
<tr>
<th>Valuation item</th>
<th>R1 000’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present value of benefits for pensioners</td>
<td>2 250</td>
</tr>
<tr>
<td>Present value of accrued benefits for active members, allowing for future salary increases</td>
<td>5 700</td>
</tr>
<tr>
<td>Present value of future service benefits for active members allowing for future salary increases</td>
<td>12 000</td>
</tr>
<tr>
<td>Present value of benefits accruing for active members in the year after the valuation date, allowing for future salary increases</td>
<td>750</td>
</tr>
<tr>
<td>Present value of future contributions by active members allowing for future salary increases</td>
<td>5 200</td>
</tr>
<tr>
<td>Present value of salaries of active members in the year after the valuation date, allowing for salary increases</td>
<td>6 000</td>
</tr>
<tr>
<td>Rate of active members contributions as a % of salaries</td>
<td>6.25%</td>
</tr>
<tr>
<td>The theoretical level contribution rate, as a % of salaries, required to fund all benefits for a member entering at age 30</td>
<td>10%</td>
</tr>
</tbody>
</table>

i. Define and calculate (where necessary) the standard contribution rate and actuarial liability for each of the following funding methods:
   a. Entry Age (assuming new entrants at age 30)
   b. Projected Unit Credit
   c. Attained Age
ii. Discuss the characteristics of the standard contribution rate and the actuarial liability for each of the three funding methods, comparing them in relation to different scheme profiles (e.g. closed to new entrants, expanding membership, stable membership).

**Solution 4:**

i. Definitions:
   a. Entry Age:
      i. SCR: (PV of all future benefits based on projected earnings for a member entering at ‘normal age’, 30 in this case) divided by (PV all future projected earnings for such a member)
      ii. SCR = 10% (given)
      iii. AL: (PV all future benefits based on projected earnings for all members) less (PV all future projected earnings for all active members)xSCR
      iv. AL = 2250 + 5700 + 12000 – (5200 x 16) x 10% = 11630
   b. Projected Unit Credit:
      i. SCR: (PV all benefits for all active members accruing in year following the valuation date by reference to service in that year and projected future earnings) divided by (PV all active members’ projected earnings in that year).
      ii. SCR = 750/6000 = 12.5%
      iii. AL: PV all members benefits accrued at valuation date by reference to projected final earnings
      iv. AL = 2250 + 5700 = 7950
   c. Attained Age:
      i. SCR: (PV all benefits for active members expected to accrue in future, allowing for projected final earnings) divided by (PV total projected earnings for all active members in the future)
      ii. SCR = 12000/(5200 x 16) = 14.42%
      iii. AL: as for Projected Unit Credit
      iv. AL = 7950 as above

ii. Discussion:
   a. ‘Normal age’ for EAM estimated from actual membership or calculated from service table used in valuation.
   b. EAM SCR increases with entry age assumed (and AL reduces)
      i. Provided discount rate > salary increase rate assumed (which is usually the case)
   c. EAM SCR usually not sufficient for cost of future benefit accrual (since av age of membership usually more than entry age assumed.
   d. So usually EAM AL > PV accrued benefits on projected earnings and so gives greater security than AL for PUM or AAM
      i. But this would not hold if assumed EA is > salary-weighted average age of membership
   e. EAM remains stable if new entrants some in at the assumed age, otherwise surpluses/deficits accrue.
      i. If this holds then could remain stable even with expanding/reducing membership, e.g. closed to new entrants.
f. The PUM SCR remains stable if the age/salary/sex profile of the scheme remains stable
   i. This is possible, though unlikely if membership is expanding/reducing
   ii. Would increase in a scheme closed to new entrants.
   iii. So there is an implicit assumption of a continuing flow of new entrants

g. Usually the PUM SCR might be calculated, not necessarily over one year, but over the period until the next valuation, commonly 3 years
   i. Then assumptions being met, the financial soundness of the scheme would be maintained

h. The AAM SCR would generally exceed the PUM SCR
   i. If the average term to retirement is <1 year or whatever period is used in calculating the PUM SCR
   ii. And the PUM SCR is generally > EAM SCR provided assumed entry age is < actual average age.
   iii. AAM SCR takes no account of new entrants
      i. So remains stable if scheme is closed to new entrants.
      ii. Other assumptions being met, AAM will firstly build up a surplus since AAM SCR > PUM SCR which is designed to keep the AL stable (i.e. A/L = 100%)
      iii. But will later run down the surplus when the (original AAM SCR) is < the (increased age) PUM SCR. I.e. AAM SCR should theoretically not be recalculated with increasing av age.

**General comments:** Mostly good attempts on this question. Some marks were lost when candidates made statements without some substantiation.

**QUESTION 5**

An employer in a developed country offers a defined benefit pension scheme with, amongst others, the following benefits:

i. Retirement: a pension of 2% of final average salary for each year of service.

ii. Death in Retirement: a spouse’s pension of 50% of the member’s pre-commutation pension with discretionary increases.

iii. Death in Service: (on a reinsured current cost basis)
   a. Members with no dependants: 3 x Annual Salary
   b. Members with dependants: 1.2 x Annual Salary, plus
      2. Spouse’s pension of 50% member’s salary

iv. Members contribute at 7% of salaries and the employer pays the balance of the cost, currently 10%.

There is a new HR Director who wishes to put all employees’ benefits, which may include company cars and mortgage loans, on a fully flexible basis. Members can choose how much of each benefit they wish to have up to a maximum cost of 23% of salary. The employer is committed to maintaining the defined benefit scheme. You are the actuary to the pension scheme and have been asked to give the HR Director advice on how the scheme benefits could fit into the flexible benefits package. Set
out the points you would cover, outlining any clarification you would request from the HR Director, both in general terms and specifically in relation to the benefits listed above. Mention difficulties that may arise and, where possible, give solutions to these.

**Solution 5:**

Would need to get clarity from the HR Director on several issues:

- Will there be a continuous range of choice as to the quantum of any given benefit?
  - In some cases this could lead to an extraordinary administration burden
  - Consider limiting choices to a discrete range of quanta for some benefits (e.g. retirement accrual)

- Would one allow a quantum of zero for each benefit (effectively opting out of a given benefit)?
  - This might not matter for a company car, but for other benefits may carry a reputational risk for the employer (e.g. retirement or death in service benefits)

- How frequently will the employees be able to exercise choice?
  - If only once will rather defeat the idea of flexibility as employees needs will change from time-to-time.
  - Perhaps annually, though this would increase administration load considerably.
  - Also, members may wish to exercise choice contingent on certain events (birth of child, marriage, divorce) which do not adhere to a convenient calendar program.

- Presumably a strong motivation for the flexible package would be to eliminate benefit cross-subsidies and to establish equity between employees?
  - Otherwise employees would choose benefits so as to maximize their interests
  - This presents a problem as many of the defined benefit scheme benefits carry inherent cross-subsidies (particularly by age and gender).
  - Removing the cross-subsidies (i.e. charging the theoretically correct price for the members’ choices) may result in some members getting reduced/increased benefits depending on whether they were older/younger or female/male.
  - The different benefit ‘prices’ may also be viewed as discriminatory
  - One could try to maintain some level of cross-subsidy (e.g. have a proviso that no member’s benefits would reduce) but then the overall cost to the employer may increase (i.e. above the 23%)
    - The degree of increase would depend from time-to-time on the choices made by the individuals. This would be unpredictable, making planning difficult for the employer.
    - There may have to be more frequent valuations of the scheme (with ensuing cost increases) to determine the employer’s balance of cost from time-to-time.

- Will members continue to contribute at 7% and how would this be included in the maximum of 23%?
- Could members make additional contributions for additional benefits?
- As the scheme benefits would likely have tax incentives attached and other benefits (e.g. company car) may be taxable in the hands of the employees, it is important that the true
cost of the benefits be made clear to the members, especially if there is a danger of their losing tax benefits linked to the scheme.

With regard to the specific benefits:

- **Accrual rate:**
  - While 0% overall would result in zero retirement benefit, one may want to allow 0% in some years (e.g. members undergoing financial hardship with high mortgage rates).
  - At ages near NRA the 2% accrual may already exceed the 23%.
  - One would need to keep a record of all accrual rate choices over the member’s career – an admin burden.
  - Selection risk – a choice of high accrual rates by
    - The healthy members
    - Members with potential for high salary increases
  - Perhaps limit choices to ½ % intervals to max of 2 ½ %
  - Perhaps limit choice to every 3 years (calendar year corresponding to valuation year)
  - There may be legislative limits on the accrual rate allowed.
  - There will be a serious need for advice to members:
    - E.g. age/gender-related cost of accrual
    - Implication of choices especially in light of entire history of previous choices

- **Death in Retirement:**
  - Married members: Would one allow changes in choice of spouse %?
    - A complicated calculation, also dependent on history of accrual rate choices
    - Would also depend on age/gender of spouse which may be viewed as discriminatory
    - Impact of changes would increase almost exponentially as the member neared NRA
    - What if, after accruing a contingent benefit for many years, the member’s spouse died/divorced shortly before the member retiring?
      - Could convert to an equivalent increase in the member’s pension, but this may be quite different to what the member was planning for
      - Or the member might subsequently remarry before retiring and one might have to ‘undo’ the previous calculation
  - Unmarried members: Would probably not be happy to be accruing a contingent benefit
    - But, after years of service, such a member may marry shortly before retiring
    - The cost of the contingent spouse’s benefit would then be very high, perhaps unaffordable.

- **Death in Service:** These are on a reinsured, current-cost basis so changes may be more easily accommodated.
  - Knowledge disparity between members and insurer. Members have knowledge about:
- State of health and possible higher mortality
- Exposure to hazardous pursuits
  - Hence the greater possibility of anti-selection
    - Insurer may tighten up on underwriting
    - May reduce free-cover limits
  - To avoid too much admin, limit choices to integral multiples of annual salary
    - With a maximum (e.g. 5 x AS for underwriting reasons – moral hazard)
  - Annual choice at a fixed date may be most appropriate administratively
    - But also allow for life events (births, marriages/divorces)
    - Possibility of benefit/insurance mismatch and scheme exposure to risk
      - Actually have this problem already but it would be complicated by the element of choice
      - Can be handled by a suitable agreement with the insurer (e.g. new benefit only valid if written application received before the death, else reverts to a default benefit).
  - As with the other benefits, the true costs would be age/gender-related which would complicate choices.
    - One may simplify this by using average rates (i.e. allowing cross-subsidies)
    - The dangers of this may be mitigated by the fact that older members in general may have less need for cover.

**General comments:** This was a difficult question that was very poorly answered. Some candidates misunderstood the question. Reference to a ‘package’ did not imply that other benefits (e.g. company car) were somehow to be incorporated in the DB pension fund. Forgetting that they ‘were the actuary’ many candidates asked for ‘clarification’ on many issues where the actuary was much more likely to know the answer than the HR director! Simply listing a ‘barrage’ of questions without some element of reasoning or argument did not gain marks.

**QUESTION 6**

You are a consulting pensions actuary working in a developed country for a company that supplies valuation services to a variety of pension schemes ranging from 20 members to 20 000 members. Detail the different considerations you would take into account when setting the valuation bases to determine the contribution rates for schemes at these two extremes.

**Solution 6**

- The demographic data from the large scheme (LS) will be more credible than that from the small Scheme (SS)
  - So the actual experience from a LS would be given more weight in informing the choice of assumptions
  - Whereas for a SS one may use a more ‘standard’ approach (e.g. based on population statistics)
  - Also the volatility of the SS experience from one’s assumptions would be proportionately greater
    - So one may be inclined to be more conservative in general with SS assumptions.
• Individual characteristics will affect the scheme experience to some degree
  o E.g. marital status, age of spouse, number of children
  o The individual effect would be insignificant for a LS but could be significant for a SS
  o Individual data may also be more readily available for a SS
  o So one would tend to use assumptions of averages for a LS but actual data for a SS

• Withdrawal rates:
  o Significance would depend on level of withdrawal benefit
    ▪ E.g. AR would be actuarially neutral, so could ignore wdl rates
  o For LS could use rates derived from experience
  o For SS use some standard table
    ▪ Or ignore as a means of introducing more prudence

• Pre-ret mortality:
  o Even for LS data insufficient to derive rates so could start with population or industry tables
  o Would use data to modify standard tables
  o For SS probably just use std tables.

• Post-ret mortality:
  o For LS same considerations as for pre-ret mortality
  o For SS, because of volatility in pensioner mortality, would probably insure by purchasing annuities from a LO
  o So need to estimate what LO assumptions will be (for mortality and discount rate)
  o Essentially, need to assume annuity rates.

• Death in ret:
  o Similar considerations as for post-ret mort
  o And similar for spouses’ mortality in case of contingent pensions

• Early ret:
  o Need for assumptions depends on availability of benefits (is it in the Rules) and level of benefits
  o For LS can use table derived from experience
  o For SS, likely to use a standard table

• Ill-health ret:
  o Similar to ER
  o Because of size of benefit and volatility, more likely to be insured for a SS
    ▪ In which case consider prevailing risk rates for disability income benefits
  o More likely to be funded for a LS
    ▪ In which case morbidity and mortality considerations similar to those for pre-ret mortality
    ▪ Though one may increase the mortality for IH retirees

• Death in service:
  o Will be insured for SS – use prevailing LO risk rates
  o LS may be self-insured:
    ▪ Could be on a fully funded basis (though less common)
      ▪ Then similar considerations to above for LS mortality, marital status, spouses’ age and spouses’ mortality.
    ▪ Could be on a current cost basis:
      ▪ Then results would also be compared with prevailing LO risk rates
      ▪ Bearing in mind LO need for profit and caution
Salary Scale:
- LS perhaps more likely to use age-related table derived from experience (for merit increase component)
- LS more likely to involve discussion with management on increase and promotion policies
- SS perhaps more likely to use overall non-age-related assumption

Expenses:
- Greater ‘economies of scale’ in LS (larger absolute value but smaller %)
- LS could command lower asset management fees
- Perhaps base on actual expenses for large LS

Discount rate:
- Would have reference to asset-mix and likely returns
- SS likely in pooled funds or so-called ‘guaranteed funds’ for greater stability
  - The latter charge a premium resulting in lower long term returns
- LS may have segregated funds, direct property, some self-investment, a greater range of asset managers.
  - On the whole, possible scope for higher returns.

Asset valuation: SS have greater need to value insured assets such as purchased annuities
- Need to be consistent with liability valuation.

General comments: While reasonably well-answered on the whole, one might have expected better for a fairly standard question. Comments on valuation method, funding level and risk appetite with regard to investment strategy did not gain marks unless explicitly liked to the difference between the two funds (i.e. number of members).

QUESTION 7

The government in a developing country with an emerging retirement fund industry feels that there is a need to begin regulating the industry. Give examples of the sort of regulations it might seek to put in place.

Solution 7:

- Proper governance of retirement schemes:
  - Putting scheme assets into a trust fund separate from the sponsor’s assets
  - Election/removal of trustees
  - Trustee representation of different stakeholders
    - E.g. members, pensioners, sponsoring employer
  - Fit & proper persons as trustees
  - Proper record-keeping:
    - Length of time for records to be kept
    - Safety/back-up of records
  - Reporting/disclosure requirements:
    - To members
    - To authorities
    - Auditing of financial statements
    - Set up ‘whistle-blowing’ channels
  - Setting up of:
    - Administration agreements
• Investment mandates
• Investment policies
• Pension increase policies
  o Credit control of contributions
    ▪ From sponsors
    ▪ From members
    ▪ No ‘turnover’ of member contributions
  o Regular risk assessment
    ▪ Establishing and monitoring risk-control measures
• Regulation of assets:
  o Permissible classes of assets
    ▪ Minimum credit ratings for each source
  o Max/min proportions of assets in each class
  o Max proportion in any one asset
  o Limit on self-investment
  o Proper custodianship of scrip, assets.
• Registration of Scheme Administrators, Asset Managers, Financial Advisors, Marketers
  o Proper qualifications/experience
  o Fit & proper persons
  o Reporting/disclosure requirements
  o Fidelity cover or insurance against fraud, negligence, insolvency
• Appointment of Ombudsman/Adjudicator
  o Easy access for members
• Financial Soundness of Schemes:
  o Require regular actuarial valuations
  o Sign-off by an actuary
  o Set limits on A/L ratio for acceptability
  o Steps required to restore financial soundness
    ▪ Reporting and monitoring the implementation of these steps
  o Certification of bulk transfers between schemes
    ▪ For fairness and financial soundness
  o Certification of matching of assets and liabilities
  o In case of sponsor insolvency:
    ▪ Set high priority for pension scheme obligations
    ▪ Require possible guarantees from parent companies/shareholders
• Support/encourage professional bodies (e.g. actuaries, auditors) in:
  o Setting appropriate standards
  o Setting qualifications
  o Self-regulation/disciplinary procedures
  o Continuous professional development
  o Issuing of suitable guidance notes
  o Legislative recognition

General comments: This question was fairly well-answered. Discussions about incentives to encourage provision were off the point.

END OF EXAMINERS’ REPORT