# EXAMINATION

April 2008

## Subject SA4RSA — Pensions and other Benefits Specialist Applications

EXAMINERS' REPORT

**Introduction**

The attached subject report has been written by the Principal Examiner with the aim of helping candidates. The questions and comments are based around Core Reading as the interpretation of the syllabus to which the examiners are working. They have however given credit for any alternative approach or interpretation which they consider to be reasonable

**Comments**

The solutions contained in this document are more detailed than what would typically be required for a clear pass. Any relevant points made by candidates were given full marks, even if they are not contained in the solutions presented below.
Further comments are given in the solutions presented below.

**1** (i) (a) This question was relatively easy and relatively well answered by the candidates.
(b) should be dealt with by candidates more thoroughly.

***Main issues Company DC may have taken into consideration***

*(a) to oblige new employees to join the DC Fund*

- risks associated with sponsoring a defined benefit fund
  - investment;
  - salary;
  - demographic; and
  - and possibly more onerous legislative risk than applies to DC arrangements.
- the perceived difficulties of managing those risks
- and hence a desire to eliminate those risks
- a paradigm shift in the approach to pension fund benefits
- with regard to "subsidisation"
- and benefits for early-leavers
- a paradigm shift in the approach to remuneration
- the possible diversity of benefits when employees in several different funds
- the financial condition for past service in Fund A at last statutory valuation;
- the increase in the required rate of contribution at that time;
- the possibility that it is subsidising the other employers
- its declining profit history in recent years
- and a desire to limit or reduce its cost of benefits
- as well as limit the additional costs of operating more than one fund
- and limit associated resources (employees tied up as trustees)
- depending on the rules of Fund A, its multi-employer arrangement might seem to be more onerous for Company DC
- if there is a collective responsibility for financial soundness
- and Company DC may want to break the link this gives it to the covenant (the ability and willingness to meet obligations) of the two other employers
- the implications for financial statements as a consequence of international financial reporting requirements
- that draw attention to the risks an employer bears in respect of defined benefit funds

- and because these requirements are based on market values
- they expose financial reporting to market volatility
- which can have negative impact on declared profits
- or stability thereof
- and on share price in local and international markets
- and hence on the remuneration of executives

*(b) to transfer members of defined benefit funds to the DC Fund*

- the cost of maintaining defined benefits for a closed group will be higher than for a fund open to new entrants
- and will rise steadily as the residual closed body ages
- the defined benefit risks for closed group will remain
- also disparity of benefit costs between these employees and others would continue

(ii) *(a) Candidates should ensure they seek relevant points on this question especially the question requiring them to look at the concerns the DB funds might have had.*
*(b)Consideration should be given to the obstacles to overcome*

***Special arrangements that Company DC might have come to implement and obstacles that might have had to be overcome***

*(a) special arrangements*
*(1) in regard to benefits*

- permit continuing membership of defined benefit fund for those not wishing to transfer to Fund DC
- possibly with continuing accrual of benefits for future service
- oblige transfer to Fund DC but grant a guarantee that no member will be worse off
- offer an enhancement of the transfer value
- make DC option more attractive to members in other respects
  - such as flexible contribution rates within a cost to company remuneration structure (for example, possible to go up to 20% employer rate)
  - introduce appropriate investment choices
  - permit flexible risk benefits to meet individual needs

*(2) in regard to financial concerns of defined benefit funds*

- any of the DB funds could have sought assurances from Company DC for commitment to financial assistance

- given that DC's actions could impact on ability of the DB fund to remain solvent
- DB fund could have looked for support in maintaining solvency of DB fund
- for example, if actual salary increases in excess of expected cause strains
- in respect of residual active members
- and for support with pension increase costs in event of difficulties
- especially given that DC's plans will leave pensioners in DB fund

*(b) obstacles to be overcome in regard to any special arrangements*

- special administrative arrangements would be required for any special arrangements offered to members
- and possible rule changes
- changes to remuneration structures and benefits require appropriate consultation with affected staff in terms of labour law
- difficulties in obtaining all necessary approvals timeously
- and added complexity of different benefit and remuneration arrangements
- special funding would be required to meet cost of any special arrangements
- especially as regards arrangements for any necessary financial support
- and arrangements for meeting cost of any transfer enhancements would have to be made
- whether or not there was a shortfall in Fund A at last statutory valuation
- Fund DC would have to submit to periodical valuation in terms of section 16 of Act if it offers a guarantee
- because it would no longer be able to claim that it has divested itself of all risks

(iii) *(a) Candidates should remain within the topic.*
*(b) The idea of comparison of benefits should be fully explored, in particular the various costs, direct and indirect, that must be allowed for in accumulating contributions. Candidates did not consider the heterogeneity of membership or the matter of financial condition, the powers of the trustees and obligations of employer or surplus accounts.*
*(c) Candidates did not properly consider the implications in regard to the special classes of assets, in particular the annuities as an asset class, the direct property, the home loans and all aspects of the guaranteed fund investment. Candidates assumed and "outsourcing" of pensioners had taken place, whereas all that had taken place was the purchase of annuities in the name of the fund. Candidates did not consider all aspects of the lack of suitability of the annuities nor the role of advisors and the possibilities in regard to commission and surrender of annuities.*

***Report to investigate possible financial prejudice***

*(a) legal issues relating to Company DC's termination notice*

- Company DC stated in its announcement 2 years ago that it was no longer prepared to contribute to Fund A;
  - was this decision implemented;
  - what is position in terms of rules of Fund A;
  - and what is position in rules regarding the withdrawal of an employer;
  - what action has been taken against Company DC if it is indeed in arrear with its contributions;
  - and if it is indeed in violation of rules of Fund A;
  - and requirements of Pension Funds Act;
  - was this reported to the prosecuting authorities and the FSB;

*(b) how the trustees of Fund A can gain an appreciation of the likely impact on transferring members' anticipated benefits*

- a comparison of the benefits between Fund A and Fund DC is required
- this will require the benefits in each fund to be projected to exit
- by various causes
- at various points in the future

- while ideally a dynamic model should be developed
- enabling every member's values to be compared
- an initial study could be done showing
- projections for a range of attained ages from younger to older
- for members with and without dependants
- for a selection of original entry and attained ages
- using a suitable set of assumptions,
- with possible alternatives (sensitivity)
- following discussion with trustees of Fund A for:
  - salary increases
  - pension increases
  - investment return
  - pensioner mortality
  - and improvements in longevity of pensioners
  - both before and after retirement
  - annuity purchase prices or suitable basis for annuities when a member exits Fund DC at any time in future
  - and estimates of possible transfer values on transfer from Fund A to Fund DC
  - regard would have to be had to the direct expenses of administering Fund DC
  - to the direct expenses of investment management of Fund DC
  - to the indirect imbedded expenses of purchasing annuities
  - and to the cost of reassurance of the lump sum death and disability benefits
  - and likelihood that these costs will increase due to HIV/AIDS
  - (Fund DC is exempt from valuation and hence reassures death and disability risks and has no pensioner risks)
  - because these costs either directly reduce the amount that can be invested in members' accounts
  - or otherwise reduce the ultimate amount that secures the end benefits
- what are the provisions in Fund A regarding shortfalls
- what are the provisions in Fund A regarding employer's rate of contribution
- who has the power in these matters – do trustees decide after consultation with actuary
- or must a contribution increase be subject to employer's approval
- is there a shortfall or surplus in Fund A;
- what was position as at surplus apportionment date;
- and at last statutory valuation;

- what was amount in the surplus account for the members who are employees of Company DC;
- and in the employer's account for Company DC;
- and how have those positions progressed to current time.

*(c) ongoing funding issues for Fund A arising from Company DC's termination notice*

- Fund A has had no new entrants from Company DC for 2 years;
  - as a result, the average age of the active members may have increased;
  - placing pressure on the required rate of contribution by the employers;
  - which is likely now higher than at last valuation;
  - how might employers respond to this;
- if Company DC withdraws as a participating employer from Fund A there could be an unfavourable impact on Fund A, as regards:
  - relative proportion of active members to pensioners;
  - with possible investment issues;
  - and operational expenses as proportion of contributions;
- any transfer to Fund DC is complicated by the investments in direct property
  - due to liquidity issues
  - and hence likelihood that residual fund will have a property imbalance
- also, how any transfer to Fund DC is managed in terms of potential problem of unvested account of guaranteed fund could be important;
  - for example, can any transfer be arranged so that a proportional part of guaranteed fund is transferred;
  - so that Fund A does not find that guaranteed fund and its capital account become an increased part of its residual assets;
- any transfer would need to transfer those housing loans of Company DC's members;
- also, how any transfer to Fund DC is managed in terms of potential problem of the annuities which are assets of Fund A as a whole;
  - probably not matched to profile, needs and pension increase expectations of pensioners;
    - given 8% return required on annuity portfolio before an increase can accrue;
    - and speed with which purchase was arranged;
  - and likelihood that Fund DC would not want the transfer to include any part of the annuities;
- but because Fund A would not wish to find that annuities become an increased part of its residual assets;

- can annuities be surrendered on terms suitable to Fund A;
- without incurring surrender penalties;
- or if with penalties, to what extent;
- the role of administrator in motivating the purchase of annuities;
  - in particular, with such haste, is a cause for concern;
  - and raises question if this was motivated opportunistically to get a commission;
  - if so, can any commission that might have been paid to advisers/administrators be reclaimed;
- if Company DC withdraws as participating employer, could that lead to withdrawal of Companies B or C with DC as precedent;
- with potential amplification of various problems discussed above;
- with possibility that Fund A is left with only pensioner members;
- who could come to bear all of the risks in respect of;
  - annuities that are probably not matched to profile of pensioners;
  - and the potential implications of the capital account of the guaranteed fund investment;

(iv) Candidates answered this question reasonably well even though they appeared to ignore aspects of scenario for question – e.g. role of advisors. Some candidates missed some very basic ideas, such as data issues and rules. They were too brief on mortality issues, matter of an appropriate tender process.

Candidates assumed an "outsourcing" of pensions had taken place and missed the aspect that the annuities were clearly bought in the name of fund (speed of transaction alone indicated that) without transfer of other than possibly mortality risk. Whereas investment risk was not shed because annuities in the name of fund.

Examiners took a lenient marking approach and looked for ideas that had some relevance even though not in model solution.

*Issues that should have been considered or investigated when the annuities were purchased for Fund A*

*(a) Data*

- is database accurate;
- does it contain accurate dates of birth of each pensioner and any possible reversionary spouse;
- does the administrator know if any spouse recorded at retirement date still survives

- are pension details accurate;
- does database reflect accurate reversionary pension or percentage;
- are children's details accurate;
- how often is database updated;
- and can accuracy be checked by obtaining fresh data from pensioners.

*(b) Rules*

- do rules permit purchase of annuities;
- either in name of Fund A;
- or in names of individual pensioners;
- with associated transfer of assets and liabilities to an insurer in terms of section 14;

*(c) Mortality*

- what is existing mortality basis for pensioners in Fund A;
- has mortality of pensioners of Fund A been investigated regularly;
- is there meaningful evidence of level of mortality in fund;
- what has been trend of pensioner mortality;
- has there been an improvement in longevity;
- what studies can now be undertaken if no regular studies in past.

*(d) Tender*

- was there an appropriate tender process;
- how was it managed;
- what information was given to the life offices;
- what parameters were stipulated;
- which life offices submitted quotes;
- was financial standing of each office considered;
- was service delivery assessed
- how did pricing compare;

*(e) Pricing*

- was pricing independently checked for reasonableness;
- ideally, was the pricing basis for each tender obtained;

- what are the margins;
- and hence what are the apparent costs of purchasing annuities relative to no purchase;
- was commission excluded or included;
- and if included, on what authority;
- and at what level;
- and was that level appropriate to work required by advisers.

*(f) Interaction with pensioners*

- a pensioners' representative on the board of trustees could have been important;
- was there appropriate communication with pensioners;
- was their acceptance obtained;
- were enquiries made into the needs of each pensioner
- and were these needs satisfied;
- was counselling given, where appropriate.

*(g) Impact on asset allocation*

- what assets to liquidate to meet cost of annuities;
- the assets are R14 billion;
- therefore current allocation implies R4.5 billion in annuities in name of fund;
- not in names of individuals;
- as result there will be implications for investment return;
- and optimal asset allocation of remaining assets;

(v) *Candidates missed some important issues – e.g. when in name of und then annuities are simply an asset and must compete with other asset classes.*
*Candidates seemed to think that annuities in name of fund also shed investment risk – although possibility of life office default was raised - and missed the need to ensure annuity matches closely the profile of pensioner when annuity in name of pensioner, whereas this is not important when annuities in name of fund. Annuity in name of pensioner must meet pensioner expectations and there is a need for counselling – also possible need to grant enhancements because of severing of link with fund or because of possibility that increase expectations would have been higher in fund than with a life office.*

***Two options a fund would have in normal course of events when buying annuities.***

*(a) In name of Fund*

- when annuities bought in name of fund, the annuities are simply assets of the fund;
- and cannot necessarily be assigned to individuals;
- the annuities might not, and possibly need not, match exactly to the liabilities of the pensioners;
- in particular in regard to pension increase policy
- the suitability of annuities in the name of a fund must be considered from the perspective of an asset of the fund;
- and they "compete" for inclusion in the portfolio of assets with the other asset classes;
- in particular with regard to the matching of assets and liabilities;
- there have to be compelling asset based criteria for investing in annuities;
- whether non-profit or with-profit annuities;
- these considerations may be mitigated to some extent if the pricing of the annuities is very attractive;
- which is unlikely from point of view of expenses, mortality or underlying interest rate;
- because an insurer would wish to ensure that it would make a profit, not the fund.

*(b) In names of individual pensioners*

- annuities would only be bought in the names of the individuals if the assets and liabilities of the pensioners were to be transferred to an insurer;
- in this case, each annuity would have to be an exact match;
- of the profile of the pensioner with regard to his personal characteristics;
- and pension increase expectations as inspired by existing fund;
- or as near a match as is acceptable to the pensioner;
- there may be need for an enhancement to the pensions;
    - because pensioners may be foregoing increases potentially higher than strict adherence to policy would have indicated;
    - and because trustees may have had a generous historical approach;
    - moreover, there could be need to ameliorate stress of break of employer/pensioner link
- there would need to be appropriate communication with each pensioner and counselling, if appropriate;
- and a pensioner should be given option to choose an annuity that meets his current circumstances better than his existing pension from the fund;

- for example, a pensioner who married or remarried after retirement might wish to forego a part of his pension in order to provide for his new spouse;
- but trustees should in most instances insist that pensioner opts for an annuity that will provide increases at no lower a rate than in existing fund;
- there could be pressure for living annuities;
- with associated risks;
- and hence dilemma for trustees

(vi) *Candidates did not mention difficulties in regard to assets other than annuities, or issue of precedent set by withdrawal of A, mention was made that B participates in other funds no mention was made that C does not – C has greater risk of becoming residual employer.*

***Matter of Company DC's withdrawal from Fund A from the perspective of Companies B and C.***

*(a) From perspective of Companies B and C – issues that affect both*

- will Company DC honour the obligations the trustees of Fund A believe DC has in the light of DC's:
  - recent profit history;
  - action to withdraw from Fund A;
  - action to terminate contributions;
  - share of any shortfall;
  - and the intention of trustees of Fund A to take matter to court;
- smaller active membership;
  - with consequent higher proportional operational costs;
  - reduced bargaining power for any reassurance of death benefits;
- pensioners of DC remain members of Fund A;
  - whereas responsibility for those pensioners is DC's not B's or C's;
- possible investment management issues to be resolved with smaller residual fund after any transfer to Fund DC;
- also investment management issues given change in proportion of active and pensioner liabilities;
- how any transfer of moneys to Fund DC will be constructed needs consideration if possible problems associated with:
  - a higher proportion of residual assets in respect of:
    - annuities in name of fund
      - with effective fixed return to Fund A;
      - and relatively low provision for pension increases;

        - guaranteed fund;
            - with potential cost in terms of long term rate of return;
            - because of cost of guarantees
        - guaranteed fund unvested account;
            - with potential for loss of part or all of account in falling markets;
            - or when market value of underlying assets falls below a value the insurer considers it needs for granting guarantees;
        - fixed property;
            - with liquidity risk heightened if property proportion increased;
    - are to be averted, or not aggravated, after any transfer to Fund DC.
- B and C could be concerned that if DC succeeds in withdrawing from Fund A, this could create an awkward precedent:
    - leading to withdrawal of C or B, respectively;
    - thereby heightening the possible problems for the residual employer;
    - and possibly complicating any restructuring either might also come to initiate.
- there might be implications for future working relationship in general between Companies DC, B and C given their respective significant shareholdings in company A

*(b) From perspective of Company B – further issues peculiar to B*

- B has other funds in which it participates as an employer;
- it may therefore be in a position to divert its Fund A employees, or potential future Fund A employees, to other arrangements;
- and DC's actions may in any event motivate B to consider rationalisation of its benefit arrangements;

*(c) From perspective of Company C – further issues peculiar to C*

- C participates as an employer in Fund A only;
- it cannot move as quickly as B if it feels need to move its employees to another fund;
- and it may therefore feel more vulnerable than B if DC succeeds in its bid to withdraw from Fund A;
- could find it becomes sole surviving employer in Fund A

(vii) *Candidates missed the issue of the risk-free nature of DB relative to DC – hence a basis related to real returns is appropriate, no mention was made of declining pattern of real return on index-linked bonds. Hence a deterministic approach suitable especially since DB fund benefits shown to be much better.*
*Candidates were weak on discussion relating to a situation of much greater returns.*

***Comment on the choice of the 'base rate' of return and the trustees' query in regard thereto.***

*(a) Use of a 'base rate'*

- a long-term real rate is required because a member's benefits in the defined benefit fund are provided on a risk-free basis to the member;
- albeit that the covenant (the ability and willingness to meet obligations) of an employer might not be perfect;
- our best estimate for a long-term real rate is the redemption yield on long-term index-linked bonds;
- our '*base rate*' of return is equal to that inflation-linked yield plus 1%;
- to make some allowance for either an imperfect employer covenant;
- or the possibility of risk adjusted improvements in returns due to equity investment;
- moreover, the history of index-linked bonds is very short in South Africa;
- and because the yields have steadily fallen since their introduction in 1999;
- we have at present no knowledge that points to variations that are likely to be higher rather than lower in the future;
- if we had, we might develop a standard deviation of the long-term real rate;
- and possibly design a probability based model for the projections;
- but, in our opinion, our deterministic model gives a very good guide;
- given that the projections suggest that the defined benefits are far greater in value than those that can be expected to emerge under Fund DC;
- after allowance for all outgo other than outgo on benefits (the operational expenses, death benefit costs, investment management fees and annuity charges) that must effectively be met from the employer's contributions

*(b) What if far higher 'base rate', say double, is earned*

- if indeed the '*base rate*' that comes to be earned is significantly higher than the rate we have adopted;
- then it is possible that the benefits under Fund DC will be seen as better;

- however, if the '*base rate*' is significantly greater than allowed for;
- then Fund A will earn significant surpluses;
- and in that case one could expect that such surpluses might lead to benefit improvements;
- even if all future surpluses will be apportioned to the employer surplus account in terms of Section 15C of the Act
- so that very good investment returns are not something that are good for defined contribution funds alone;
- whereas defined benefit members are protected from poor investment returns;
- while their defined contribution colleagues are not;
- moreover, if the query relates to the possibility of higher '*base rate*' returns due to performance on equity investment greater than we have allowed for;
- then, in the interests of balance, it would be necessary to do projections that also allowed for poorer equity returns;
- also, once we bring the possibility of superior equity returns into account;
- we need to balance this with the extra risk involved;
- so that on a risk adjusted basis we might not necessarily produce more competitive defined contribution results;
- bearing in mind once more that a superior risk adjusted return would also be good for the defined benefit fund in terms of surpluses earned;

(viii) *Candidates missed basic ideas relating to past and future service.*

*Candidates understood the concept of relative value and scored fully on that sub-section.*

*Candidates did not explore the pros and cons of inclusion or past service adequately*

***Comment on your decision to illustrate total service and the total amount available for investment and to separately illustrate future service alone.***

*(a) Explanation of approach*

- there are three relevant situations:
  - past service Fund A compared with accumulation of transfer value in Fund DC;
  - future service Fund A compared with accumulated Fund DC assets that arise from future contributions available for investment;
  - and total service Fund A with total investment in Fund DC;
- but for any one member future and total are of primary importance because;
- we need to show what a member's position would be on exit from Fund A at some future time relative to his position on exit from Fund DC – hence total service;

- and we need to show what a member loses in respect of future service defined benefits relative to future service defined contribution accumulations;
- the past service loss can be expected to be more moderate than the future service loss;
    - because cost of past service has been met;
    - and if financial assumptions met loss can only arise because a reserve value normally allows for survival to retirement age;
- the future service loss is proportionately greater;
    - because benefits for future service require a higher level of contributions;
    - and cost for future service often higher than rate of contribution that will be invested for retirement in DC Fund
    - therefore future service loss gives a better indication of what the member is giving up over the future relative to that future period alone
- thus we chose to illustrate future service and total service

*(b) Percentages not money*

- any comparison in money terms can show great variation as assumptions change
    - whereas the relative change might be more modest
    - therefore we expressed the comparison as a ratio (or percentage) of the end benefit in Fund DC to the end benefit in Fund A

*(c) Inclusion of future service*

- we have already mentioned that from a member's perspective it is his total service situation that matters most;
- and that within that his future loss is likely to be the proportionately greater loss;
- now while there is an argument that a member has no right to future service benefits
- because the employer always has right to change arrangements for the future
- there is a "subsidy" in a defined benefit fund from younger to older members
    - and existing members, especially those older than the average age, have been through that period of service when they were making the subsidy
    - and if forced out of Fund A would lose in respect of that period of service when they would have been the beneficiaries of the subsidy

- this is of particular concern for those members whose past service reserve reflects contributions (effectively) at a lower level than average rate
- or more particularly at lower rate than the rate that will apply in Fund DC

**END OF EXAMINERS' REPORT**