

Subject F201 — *Health and Care*

Specialist Applications

May 2014

EXAMINERS REPORT

The paper consisted of two questions. The examiners considered this to be a challenging paper. The candidates who performed well exhibited the ability to apply the principles they had learned, supported by knowledge of the bookwork. Candidates who employed good exam technique and attempted the longer questions using a structured approach tended to receive higher marks.

The examiners are concerned that a large proportion of candidates demonstrated an inability to apply the principles underlying the syllabus to situations other than the current South African regulatory environment, leaving them struggling with questions that deal with potential regulatory changes and different health and care environments or markets.

QUESTION 1

Question 1 considered the healthcare system of a fictional country of Myst where the state is the sole provider of healthcare and the government is moving from the provision of free healthcare for all citizens to a Social Health Insurance model with multiple payers but a single provider.

(i)

This part was based on bookwork and was well answered with several candidates receiving full marks.

Some candidates answered “rationing by income” instead of “rationing by fees”. The examiners accepted this provided that candidates also stated that fees are payable depending on the individual’s income.

By budget:

a fixed budget provided to each province for public sector care.

By “hassle”:

the care is available but difficult to obtain or difficult to reach the facility.

By queue:

In South Africa, primary care clinic queues are notoriously long and patients may wait all day without seeing a nurse. Britain and Australia make extensive use of hospital waiting times before surgery. In New South Wales in Australia, the public can visit a web site dedicated to providing information on waiting times for different operations.

By fees:

the means test in South Africa is a way of rationing care in the public sector to provide greater subsidy to those with the lowest or no income. Implementing fees manages the demand for healthcare.

By protocols:

for example, for the aggressive treatment of comatose patients, for dialysis, for transplants. In the Soobramoney case, a 41-year old diabetic with ischaemic heart disease, cerebrovascular disease and irreversible chronic renal failure was denied dialysis at a public hospital as he did not meet guidelines for treatment. He took the case to the Constitutional Court under Section 27 of the Constitution. The Court ruled that the right of access to State health services was only "within available resources". The Constitutional Court reaffirmed the right to ration care.

By law:

the Prescribed Minimum Benefits in South Africa are a legislated package of benefits to be provided by all medical schemes. They are based on the rationing of the Oregon Health Services Commission in the USA. In Oregon, "basic" services were identified in terms of diagnosis-treatment pairs which needed to be prioritised for coverage by all public and private programs.

(Max 6)

(ii)

Part (ii) asked candidates how they would go about the creation a five year estimate of what it would cost to provide healthcare for free to all citizens whilst maintaining service levels.

The question required candidates to apply the core actuarial skill of projecting a population, divided into districts, forward five years and then apply their knowledge of the factors influencing the cost of healthcare as well as the costs associated with the provision of healthcare. In addition some thinking had to go into ways to measure service levels.

Some candidates did not answer the question as it was asked and either treated the problem as a healthcare rationing exercise based on limited resources or digressed into a discussion of the sources of funding of healthcare in Myst. Time was lost in cases where candidates disregarded the note indicating that their response need not consider the changes discussed in the rest of Question 1 such as the introduction of the user fees.

Several candidates discussed alternative private healthcare providers and their remuneration at length in spite of the question clearly stating that the state is the only provider of healthcare and all healthcare professionals are employed by the state where they earn a fixed salary.

The fact that current service levels are to be maintained implies that current levels of resource use will be a good starting point to this exercise.

Therefore we may start by consulting each district's:

- Current budgets and
- Resource levels (e.g. number and type of staff, number of hospital beds).

In order to determine the resource requirements for each district in the next year our calculation will need to determine how the demand for those resources is **expected to change**.

Healthcare demand

Therefore we need to consider all the factors that may lead to a change in the demand for healthcare on a district level.

- The **size of the population** which may be affected by:
 - Birth rates;
 - Mortality rates; and
 - Migration (immigration, emigration and migration between districts)

Birth rates and mortality rates may themselves be changing due to the economic and societal changes the country is going through.

In addition mortality rates may be changing due to diseases and conditions such as HIV/AIDS.

Migration is a particularly important consideration. Given that the country's economy is becoming industrialised we would expect significant migration from rural to urban districts. Changes in the age and gender pyramid of the population in each district may need to be factored in.

Information on the current demographic profile of the population and migration trends may be gained from census data.

We also need to allow for changes in the burden of disease.

As well as the socio-economic determinants of health.

There is good reason to suspect that burdens of disease may be changing. As per capita income increases nutrition may improve and the hard manual labour in agriculture will be substituted by office and factory jobs. Thus we would expect fewer diseases of poverty.

On the other hand rapid urbanisation may be resulting in informal housing with inadequate water and sanitation infrastructure growing around urban centres. This could result in outbreaks of diseases such as cholera.

The increase in the number of people working in industry would lead to an increase in industrial accidents and occupational diseases caused by exposure to harmful chemicals, to use one example.

Higher levels of income and consequently education in the industrialising economy may lead to increased awareness of health issues which would increase demand.

Other changes would include an increase in the number of motor vehicle accidents as more and more citizens become able to purchase cars and motorcycles.

There may be other changes such as a developing HIV/AIDS epidemic.

We may be able to consult with the WHO for much of this information.

The services of demographers and epidemiologists may also be sought.

Incorporate any information about planned changes to state health care plans. For example is the state going to introduce a screening programme or target a specific disease (such as TB)?

Resources required

These expected changes can then be incorporated in our calculation to determine the change in the demand for healthcare services.

For example, changing population structures and birth rates will determine the level of demand for maternity and infant care.

Similarly we could estimate the number of hospital beds that will be required based on the current ratios of hospital beds to patients or the number of GPs to maintain current ratios.

If some of these cannot be met by the current infrastructure we may have to plan for expansion by building new hospitals and clinics or expanding existing ones.

For human resources we need to determine how these compare to the requirements established above. So we would need to see the number of staff of different disciplines that are currently working and also take into account attrition through retirement, resignation and migration.

Filling vacant posts will require training of new individuals. How many of each discipline do we need to train?...

...In doing so we need to consider the current number of qualified nurses and doctors being produced by universities and colleges.

Also consider the potential migration of nurses and doctors between districts.

Alternatively skills could be brought in from overseas. In such a case exchange rates and remuneration levels in other countries would be a consideration.

Cost structure

In order to determine the total funding that will be required we will need to estimate the cost of the required resources.

What are the fixed costs? For example, the administrative service in each district should be fixed.

Similarly the maintenance (planned and unplanned) of existing facilities may be considered a fixed cost.

Another component would be capital expenditure such as building new facilities or acquiring expensive equipment such as MRI scanners.

Also consider new technologies and their impact on cost in terms of making surgical and diagnostic procedures more/less expensive.

The largest part of the calculation will involve the variable costs. These would include items such as:

- Staff salaries;
- Drugs;
- Surgical items;
- Linens and food.

We would also need to determine what the costs of training and recruitment are.

These data points should be relatively easy to source using the State healthcare system's own accounting and purchasing information and salary structures.

Changes in input costs

Since this is a five-year projection we also need to take into account how unit costs may change.

What is the expected level of inflation over the next five years?

Will inflation be different for different types of input costs? For example, wage inflation or regulated prices on items such as medicine.

How will the State adjust the salaries paid to healthcare workers?

Certain resources may have to be imported. How is the exchange rate projected to change over the period?

(Max 17)

(iii)

Candidates were asked to describe the considerations that would be important for the development of a usage fee schedule for public healthcare, similar to the Uniform Patient Fee Schedule (UPFS) used for billing by the South African public sector. The question was poorly answered with many candidates struggling to generate relevant points.

The usage fees are only intended to supplement the funding of the healthcare system from national tax income and donor grants, as opposed to funding the entire healthcare system...

...in order to be able to make resources available for providing healthcare to the needy.

The state does not have a profit requirement – it only wants to match income with the expected expenditure.

The fees should be affordable.

The user fees are therefore likely to be subsidised, as opposed to being based on the true costs of services.

In order to promote social solidarity fees may vary by income.

Furthermore the State will not want to charge patients suffering from conditions requiring expensive treatment (such as cancer, kidney dialysis and haemophilia) a fee that is directly proportional to the cost, as this would cause these patients extreme financial hardship and would be considered unfair (it is not the patient's fault that he/she has cancer)

The cost of high-cost treatments may be subsidised by small increases in high-volume, low-cost claims such as clinic visit usage fees.

In contrast, the usage fees on elective procedures may be closer to the true cost or even higher if the State wishes to discourage unnecessary procedures. This would be a form of rationing by use of fees.

Since the Mystian government owns all the facilities and employs all the staff there is not a number of invoices that need to be paid, as is the case in the South African private healthcare system. A highly detailed fee-for-service remuneration structure is arguably not required, as it will add an unnecessary administrative burden.

A simpler remuneration system such as fixed clinic and consultation fees as well as global fees for surgical procedures and per diem rates for medical admissions would be much easier to administer (and for patients to understand).

Some types of service may remain free to all citizens or only require a small fee if the government wants to promote their use; for example, vaccinations or the treatment of dangerous communicable diseases such as TB.

Bonus point: The introduction of user fees may give rise to private healthcare insurance.

(Max 4)

(iv)

Part (iv) required candidates to recognise that the system being described is a single provider, multi-payer Social Health Insurance system and then describe it and its potential shortcomings. As such most of the marks available were based on bookwork and the examiners were therefore surprised to see that candidates performed poorly on this question. Some candidates seemed confused by the use of the “health insurance” terminology even though it is implicit in Social Health Insurance.

The system being described is a form of Social Health Insurance (‘SHI’).

Social health insurance systems are intended to:

- Relieve the financial burden of health risks
- Help to improve the health status of poorer people in particular
- Generate social benefits in the form of greater equality, justice and stability.

Social health insurance systems usually have the following characteristics:

- Membership is compulsory, either by law or by conditions of employment.
- There is free access to services, available from a combination of public and private providers.
- Contributions are not health-risk based, but rather income based.
- The amount payable may depend on earnings, type of employment (e.g. self-employed), and the type of work undertaken. Alternatively, contributions to insurance may occur indirectly through income tax.
- Direct employee and employer contributions may be required through salary deductions.

Insurance is traditionally focused on acute and preventive care, but has been extended to long-term care in certain regions.

Countries may differentiate benefits according to age or disability. For example, the country may provide “free” health care to pensioners or individuals with Downs-syndrome. In order to mitigate over-utilisation, gatekeeping systems may be used. This requires that an individual consults a general practitioner in order to obtain a referral to a specialist or hospital. This reduces over-utilisation of the more expensive health care services.

A central beneficiary registry may exist in order to enforce mandatory cover.

Shortcomings of SHI

Beneficiaries of social health insurance benefits are often not directly aware of their contributions to the system. This is particularly the case if contributions are made through income tax, or employer contributions.

In addition, contributions are rarely dependent on health care cost utilisation. These characteristics may discourage individuals from monitoring their health care expenditure, thereby over-utilising services.

A system based on multiple payers will be less efficient from an administrative point of view compared to a single payer system.

All insurers are likely to pay claims based on the same usage fee schedule, leaving no scope for price-based competition between insurers.

In Myst the state has a monopoly in healthcare delivery. Although competition exists amongst insurers the public system is not subject to the requirements of a competitive environment and there is little incentive for the state to provide efficient healthcare. In particular competition encourages efficiency, quality of service and responsiveness to patients.

A number of countries are faced with the problem of an ageing population. In particular, the number of retired individuals is increasing relative to the number of employed individuals.

If the social health insurance system is funded through employee or income tax contributions, the number of individuals “funding” the cover is reducing relative to the number of individuals benefiting from the system. This has resulted in funding pressures, which are forcing countries to review their systems.

As a result of the above, a number of social health insurance systems are providing members with the opportunity to opt out of social health insurance and to purchase substitutive health insurance products. This may be based on a specific level of salary, or type of employment.

Alternatively, all members may have a minimum level of benefits available, with the option to seek supplementary health insurance products in the private market.

(Max 10)

(v)

Part (v) was a long question with a large number of potential marks available. Candidates were placed in the role of a product development actuary tasked with developing a Social Health Insurance product(s) for a completely new and unfamiliar market. Candidates were therefore expected to “ask all the right questions” that will define the product design parameters, including benefit design, pricing, regulation, competition, risk management and business considerations.

Because very little information was provided about the environment stronger candidates were able to distinguish themselves by generate a wide variety of relevant points and considering the implications of various answers to the considerations where no information was provided. Some candidates did not use the information that was provided in the preamble (such as the fact that the purchase of health insurance will be mandatory for all individuals in a household earning more than a specified threshold or that the state will remain the sole provider of healthcare.)

Some candidates postulated that healthcare user fees may be income rated. Since contributions/premiums under an SHI system are likely to be income rated (see (iii) above) income rated user fees are considered to be unlikely.

Certain candidates resorted to reproducing generic algorithms for pricing a South African medical scheme option including, on occasion, the ill-considered suggestion that allowance must be made for IBNR claims on a product that has not yet been launched.

The most important aspects of the product design will relate to the benefits provided and price.

Benefits are going to be closely related to how the user fees are implemented. We will therefore require a good understanding of the user fees.

What we can do with benefit design will depend on any regulatory restrictions on benefit design.

If benefits are prescribed, e.g legislation and/or regulation mandate that all insurers provide a specified set of benefits there is little we can do with benefits.

In any case we will need to do an in-depth study of the relevant legislation and regulations that apply to benefits.

If insurers have some freedom regarding benefit design we want to know what the parameters are:

- Is there a set of mandatory minimum benefits?
- Are there benefits that we are prohibited from providing?
- Is it possible to develop a range of products with distinct benefits to target specific parts of the market?
- What do the regulations say about benefit design aspects such as co-payments, limits, exclusions and waiting periods?

Is there scope to provide other benefits such as funeral benefits or loss of income cover?

Benefits that allow policyholders to jump the queues on waiting lists are unlikely. There are no alternatives to the State as provider and the State would not want to have discrimination based on ability to pay.

Benefit and contribution design should be as simple as possible.

The market

What do we know about the market for health insurance?

- What is the total size of the market? We should be able to get an idea from the income tax report.
- The size of the market will be important as it will have an impact on claims variability as well as administration efficiencies through economies of scale.

- Are our competitors targeting specific sections of the market, for example certain income levels, geographic areas or industries?
- Within the context of benefit regulations, how can we best meet the needs of consumers?
- How can the market be segmented? Are there any sections of the market that are desirable in terms of volumes or potential for profit?
- Do these market segments have different needs?

Enrolment

What are the rules regarding new business?

Given that cover is mandatory for a large proportion of the market, it is very likely that open enrolment provisions are in place.

Are there other factors that may limit a consumer's choice of insurer, such as an employer choosing an insurer for its employees?

Are consumers free to choose any insurer or are there restrictions (i.e. with the licensing conditions described below).

What are the limits on underwriting?

Is there any anti-discrimination legislation that we need to comply with?

How often and under what conditions may consumers change insurers?

How often are policies renewable? (Annually, quarterly or monthly?)

Pricing

Can contributions be risk rated or is community rating in place?

In an SHI environment community rating with some form of income cross-subsidy is the most common form. However it is not stated in the question.

If premiums must be community rated then demographic profile becomes an important consideration.

Is there going to be some form of risk equalisation to address the problems this would create?

If there is income cross subsidy there must be some form of equalisation as well. Otherwise insurers would only target the wealthier individuals to get the higher premiums.

If premiums can be risk rated we need to determine what risk factors may be used. For example, age or pre-existing conditions may be used but gender may not.

What rating structures are the competitors using in their pre-announced products?

What is the potential for anti-selection if we use fewer or different rating factors?

Are premiums regulated in some other way, such as minimum or maximum premiums?

Will we be allowed to apply experience rating?

Will we be able to offer discounts (e.g. volume discounts)?

When and how will the insurers be able to adjust premiums?

Premiums will be related to the expected cost of benefits. We will have to estimate this from the data the State has made available to us.

Some adjustments may need to be made for factors such as changes in health seeking behaviour when patients have insurance.

How price sensitive are consumers?

In terms of regulatory approval of products, how often are we allowed to revise contribution rates or policy conditions for new business? For what period does the regulator require contribution rates to be guaranteed, if any (i.e. after how long can we revise the rates for existing clients)?

How will premiums be collected, by paper or through electronic means? Will premiums be payable monthly or annually?

Are there any trends in the available data that should be allowed for in the pricing?

Do the operational statistics show any differences between the claims patterns of those earning less than the set threshold for mandatory membership and those earning more?

Distribution

What forms of distribution are allowable? For example, brokers, tied agency forces, telemarketing and direct sales.

In each of these cases we will want to know what the costs are. For example, what is the typical level of broker commission?

Are there restrictions such as maximum commission levels?

There is likely to be a big push to sign up as many uncovered members as possible (and hence capture market share) up to 1 January 2015. How will our marketing efforts change thereafter when we may be more focused on taking market share from our competitors?

Competition

Another important consideration will be what benefits our competitors are saying they will offer.

- How likely is it that their final products will differ significantly from what they have pre-announced?
- What are the potential implications of offering a product that is very different from those of competitors, for example anti-selection?

All the insurers have access to the same basic data. We should be able to calculate our competitor's risk premiums based on their benefit design. If our own risk premiums are very different we need to understand why.

What conclusions can we draw from competitors' products? For example, are they deliberately under-pricing to gain market share?

On what basis will insurers compete? Will it simply be on price? Quality?

Costs

What are the costs involved in setting up and/or modifying systems and operations? In terms of the IT and administration systems - Which product features is it able to handle. Will development be needed?

What will the service model be, and how much will it cost to be maintained?

What are the variable costs we will need to recoup? This would be related to the cost of administration.

Myst has only one monopoly healthcare provider: the State. Presumably all insurers will be charged based on the usage fee schedule or some other fee structure. Will the same rates apply to all insurers equally?

If not, then what factors will influence the rates that insurers will be charged? Can we use these to our advantage?

Licence conditions

Does the license to write health insurance come with any specific restrictions such as only being able to sell cover in a defined geographic area?

Regulation of insurers

What are the solvency requirements for insurers? This could limit our ability to expand based on how much capital is available, for example if the solvency requirement is proportional to premium income or the number of lives covered.

There should be no need to include a reserve-building component into premiums since the company can raise capital from other sources.

Do products need to be approved by a regulator before they can be sold?

How will insurers be taxed?

Risk management

What is the availability and cost of reinsurance?

Would any insurance cover be allowed for in the solvency calculations?

We should not have to worry about risks such as over-servicing since doctors earn fixed salaries and have no incentive to increase their workload.

Instead there may be a risk of under-servicing or low quality service.

Will we be able to apply controls such as managed care and pre-authorisation?

Who will be responsible for disease management (such as management of chronic conditions)? Will it be the state or the insurers?

How can we manage other risks such as fraud or benefit abuse?

For example, is there a central beneficiary registry to prevent people from double dipping by taking out two insurance policies at once?

The above point could be a risk depending on how claims are paid. If the state is always paid directly then it should not be a problem. On the other hand, if policyholder can claim cash reimbursements when they paid the usage fee directly, this creates an opportunity for fraud.

Are there restrictions on risk transfer arrangements? Is reinsurance available on acceptable terms at acceptable rates?

If not, what safety margin should be included in the pricing?

How much uncertainty is there regarding the true risk premiums? This will influence the size of any margin included in the pricing.

Other considerations

Given that the company has no past experience with such a healthcare product would it consider sourcing outside expertise and at what cost?

Further tax considerations:

- How will health insurance be treated by the income tax schedule? For example, will the premiums be tax deductible? Will benefits be taxable?
- Is there a tax on premiums such as VAT or stamp duty?

What are the company's profit requirements (internal rate of return, net present value, payback period, etc.)?

Is there any cost associated with the license to provide health insurance? If so we need to allow for it in our pricing.

Are there any company policy objectives we need to target (for example, business volumes)?

What amount of investment capital is available for this endeavour? Is any extra economic capital available on acceptable terms?

Are there other company requirements (for example, a policy that forbids deliberate underpricing?)

Check the existence of other pieces of legislation that we need to comply with such as consumer protection legislation.

Why did the previous license holder exit the market? The reasons could range from not having sufficient capital to enter the market or being unable to comply with the licence conditions to a belief that this is not a viable business to pursue. Understanding the reasons may provide valuable insight.

(Max 30)

QUESTION 2

Question 2 involved the evaluation of a possible amalgamation between a restricted employer-based medical scheme and a large open medical scheme in the South African environment.

The examiners expected candidates to perform better in this question as it is familiar territory, set in the current regulatory environment. In reality the average performance of candidates in Question 2 was poor. Candidates who applied their minds to the question performed better than those who limited their submissions to superficial lists.

(i)

This part required candidates to integrate their knowledge from several areas to produce a simple list of stakeholders in the two medical schemes. All candidates mentioned the most obvious stakeholders, but only the strongest ones got more than 75% of the available marks.

MegaCorp employees (whether covered on either MoonMAS or Fulmed, or not), including pensioners previously employed by Moonsure and Fulcrum who receive medical scheme contribution subsidies, as well as their dependants;

The members and dependants on Fulmed who are not MegaCorp employees.

MoonMAS's board of trustees;

Fulmed's board of trustees;

In the case of MoonMAS the board of trustees will contain both employer and member elected trustees.

MoonMAS's employees, including principal officer;

Fulmed's employees, including principal officer;

MegaCorp operations (including Human Resources and Payroll departments);

MegaCorp management and shareholders;

Regulators, including the Council for Medical Schemes, the Competition Commission and the Department of Labour;

MoonMAS's administrator, whether it is self-administered, or makes use of a third party.

Fulmed's administrator, which is Fulcrum's medical scheme administration company (now owned by MegaCorp);

MoonMAS's partners in risk transfer arrangements, including providers of primary care, emergency transport services and managed care programmes;

Fulmed's partners in risk transfer arrangements, including providers of primary care, emergency transport services and managed care programmes;

MoonMAS's managed care organisation service providers that provide services without risk transfer;

Fulmed's managed care organisation service providers that provide services without risk transfer;

MoonMAS's reinsurer(s) if applicable

Fulmed's reinsurer(s) if applicable

MoonMAS's healthcare providers, including

- designated service providers for prescribed minimum benefits and
- any contracted or listed networks of primary care providers, GPs, specialists, optometrists, dentists, hospitals and pharmacies;

Fulmed's healthcare providers, including

- designated service providers for prescribed minimum benefits and
- any contracted or listed networks of primary care providers, GPs, specialists, optometrists, dentists, hospitals and pharmacies;

MoonMAS's sales, marketing, distribution and advice channels, if applicable;

Fulmed's sales, marketing, distribution and advice channels;

MoonMAS's providers of other non-healthcare services, including actuarial services, auditing services, legal services, banking services, debt collection services, investment and asset managers, investment consultants, etc.;

Fulmed's providers of other non-healthcare services, including actuarial services, auditing services, legal services, banking services, debt collection services, investment and asset managers, investment consultants, etc.;

If the amalgamation discussions reach a stage where the two schemes start a Section 63 process then both schemes may appoint a suitably qualified person to write a report on the proposed transaction to be drawn up by an independent valuator or other competent person nominated by the Registrar at the expense of the medical schemes concerned:

MoonMAS's suitably qualified appointed person;

Fulmed's suitably qualified appointed person;

State healthcare providers if any employees are not (or will not be) covered on a private medical scheme or at private healthcare providers for all services;

MoonMAS's creditors;

Fulmed's creditors.

(Max 8)

(ii)

For part (ii) candidates had to show their understanding of the different factors affecting open and restricted schemes including their primary concerns, specifically with regards to income-rated contributions. Candidates performed relatively poorly, with many focusing on the easier verification of income in an employer-based restricted scheme instead of focusing on the core issue of anti-selection in an open-enrolment community-rated environment without a ring-fenced (or compulsory) membership base.

Income band contribution rating facilitates cross-subsidisation from higher income earners to lower income earners. This may be considered a more equitable distribution of the sharing of healthcare expense risk, and therefore desirable property in healthcare funding. Companies that have set up restricted medical schemes often have this view.

Companies with restricted schemes for employees may also have an interest in having a medical funding solution for all its employees, including the lower-paid ones, for reasons of industrial relations, paternalism, egalitarianism, etc.

Restricted schemes have a much more narrowly defined population of potential members who are eligible to join the scheme than open schemes.

Most often membership of restricted schemes is also compulsory for the majority of the eligible population.

Restricted schemes are therefore more protected from the open enrolment regulation's anti-selective effects to which medical schemes are subject.

They can afford to have income band contribution rating without the risk of attracting more members on income bands whose members are net receivers of cross-subsidies than for which they provided in their contribution rating as well as retaining high income members who may be able to get similar cover for lower contributions in the open medical schemes market if they had a choice.

Open schemes are more exposed to the anti-selective effects of open enrolment and community rating. Their risk of having to accommodate more net receivers of cross-

subsidisation than for which pricing allowed, is not mitigated by the limitation on eligible membership as is the case in restricted schemes.

The open scheme industry therefore mainly has income band contribution rating only for the most affordable options.

This may help to attract reserve-building employee groups that need a medical scheme solution for the whole staff complement, including lower-paid employees.

If an open scheme introduces income band contribution rating in the benefit ranges where competitors charge income-independent contributions, it will expose itself to anti-selection.

Consider the case where income bands are introduced to a competitively priced option, with the average contribution per member the same as before introducing income-related contributions. Higher-paid potential members, who would be the net contributors of cross-subsidisation, will now be able find more affordable contribution rates elsewhere in the market. Conversely, lower-paid potential members, who would be the net receivers of cross-subsidisation, will find the most affordable contribution rates at the scheme in question.

This will lead to depletion of reserves as a result of lower average contribution income than the pricing allowed for and an eventual threat to the sustainability of the option if contribution rates are not adjusted to the structure used by the open market, i.e. income-independent contribution rates.

This situation is particularly pronounced with retirees. They are far higher claimers on average than actively employed members due to their age, but often fall into lower income bands after retirement.

(Max 5)

(iii)

Candidates were asked to assess the likely views of influential stakeholders with regards to a potential amalgamation scenario. Most candidates addressed the first-to-mind views of members, but only the stronger candidates considered other key parties such as regulators.

MegaCorp employees, pensioners and their dependants:

- Employees and pensioners may be able to raise their views through labour unions or through other forums.
- Their view of the proposal will mainly depend on the changes to the benefits available to them following the amalgamation, and at which price.
- Previous MoonMAS members will benefit from having more options to choose from than before. They may also gain access to loyalty or rewards programmes or additional products on Fulmed.
- Previous MoonSure employees not on MoonMAS (i.e. dependants on other schemes) may find options in the amalgamated scheme that are more appropriate for their needs than their current cover. The same may be true for previous Fulcrum employees if the amalgamated scheme introduces a new option to accommodate the MoonMAS members..
- There may be resistance from previous MoonSure employees purely as a result of opposition to change or general discontent that often follows corporate mergers. The same may be true for previous Fulcrum employees if any unpopular changes are made to Fulmed in order to accommodate MoonMAS members.
- Pensioners and/or their dependants may be affected by changes in subsidy policy.

MoonMAS beneficiaries:

MoonMAS members will influence the decision during the voting process.

- MoonMAS beneficiaries may have a view with regards to their entitlement to the scheme's reserves. If MoonMAS has higher reserves per beneficiary than Fulmed they may consider it unfair to have it diluted by Fulmed membership.
- They may see the benefit of being part of a younger, healthier risk pool (if applicable) in the form of lower contributions, depending on the options they would join.
- Some benefits covered from the risk pool on the restricted scheme may now not be available on any of the options on the amalgamated open scheme in order to avoid anti-selection, e.g. if all day-to-day cover on all options is from members' savings, or if anti-selective type benefits such as hearing aids are not covered from the risk pool. Beneficiaries who benefited from these aspects of the MoonMAS design will view an amalgamation in a negative light.
- Since MoonMAS members are used to income band contribution rating, some of them may have to pay more for the similar or worse benefits, and will view this negatively. Others may pay less for similar or better benefits and will view this positively.

Fulmed beneficiaries:

- The Fulmed members will be able to vote on whether the amalgamation is approved or not. Since this is an open scheme they are likely to be less active than the MoonMAS members.
- Fulmed beneficiaries may be joined by a group of on-average older members who may be expected to contribute less to reserves on average (or deplete more) than current Fulmed membership, depending on their options choices. If that is the case then contribution rates on some options may have to be inflated by more than if MoonMAS had not joined.
- Fulmed beneficiaries may find an amalgamation not to be in their interest if the size of MoonMAS membership is significant enough for this effect to be noticeable and/or if they will not obtain enough reserves from MoonMAS to offset the effect of the worse membership profile on MoonMAS.

- The effect could be mitigated or extenuated when also taking into account MoonSure employees previously not covered on MoonMAS that would join Fulmed.
- The same reasoning with regards to scheme reserves apply as mentioned under MoonMAS members, again depending on whether MoonMAS membership size is significant.
- If a new option or options are added to Fulmed design in order to accommodate MoonMAS membership more effectively, Fulmed members who consider these more appropriate for their own needs, will consider it beneficial.

Both schemes' boards of trustees:

- The trustees' first priority must be the interests of their scheme's members, hence the previous points will apply.
- Since MoonMAS trustees were MoonSure employees before the corporate merger, they would now be MegaCorp employees, and would therefore not be able to serve on the amalgamated scheme's board, and lose that source of income. (Regulation prohibits employees of the third party administrator from being trustees.)
- However, until the amalgamation occurs the employer will be represented by employer elected trustees on MoonMAS's board of trustees. They are likely to be active employees of MegaCorp who may be put in a conflict-of-interest situation.

Both schemes' employees, including principal officers:

- The amalgamated scheme will only have one principal officer and may not need all the employees of the two separate schemes, which means that their future employment and/or remuneration may be uncertain.

MegaCorp management :

- MegaCorp is arguably the party promoting the idea of an amalgamation.
- Assuming the amalgamated scheme is in a sustainable position, MegaCorp will benefit from more administration income and possibly cross-selling opportunities.

This will lead to a bigger market share and economies of scale, hence higher profitability, which will be seen as positive.

- On the other hand if the analyses show that an amalgamation is not in MegaCorp's best interests then they may abandon the idea, in which case it is unlikely that it will be taken further.
- The CEO of the medical scheme administration company will have his own view of the transaction and its desirability which may put him in conflict with the other stakeholders since he seems to be chasing volumes above all other considerations.

Regulators, including the Council for Medical Schemes, the Competition Commission and Department of Labour:

- CMS should view the proposed amalgamation fit for approval if it deems all relevant regulatory requirements to have been met.
- The Competition Commission should view the proposed amalgamation fit for approval if it deems it not to be detrimental to the competitive environment of the medical scheme and/or related industries.
- The Department of Labour should see the amalgamation in a favourable light if, on the whole, employees' rights, as detailed in labour legislation, are not at risk of being violated.

(Max 12)

(iv)

Part (iv) required candidates to describe the factors to be considered when assessing the potential amalgamation scenario from the point of view of the holding company's shareholders.

Most candidates failed to approach the question specifically from this vantage point. This resulted in many failing to obtain marks for factors that would influence the employer/administrator's profitability, such as increased administration fee income and potential cross-selling opportunities.

An adviser to the MegaCorp board will recommend the proposed course of action if it promotes the interests of the MegaCorp shareholders. Factors to consider will therefore include:

- Compliance of the proposal with all regulatory requirements regarding amalgamations, which include (amongst others) that:
 - it may not be detrimental to the interests of the majority of members on either scheme
 - it may not result in a solvency level of below 25% (or a reduction in solvency if it had already been below 25%)
- The profitability position of MegaCorp following an increase in the size of membership under administration
- Cross-selling opportunities, especially with regards to loyalty and/or reward programmes and/or products designed to complement Fulmed benefits
- Any potential reduction in the employer's cost of providing medical scheme benefits if these are subsidised. This will not be relevant if employee remuneration is on a cost-to-company basis.
- Any potential impact on the employer's post-retirement healthcare liabilities.
- The satisfaction of both sets of MegaCorp employees – as well as future appointments – with regards to their medical scheme cover, their view on whether they are being treated fairly and consistently with each other, and the resulting effect on staff morale and industrial relations

- This will include:
 - Benefit comparisons mapping MoonMAS members to the most appropriate Fulmed option for their healthcare needs. These are the options that they will most likely be defaulted to in the event of an amalgamation.
 - Contribution analyses based on the most appropriate option for the members as well as the option that may be most desirable to them from a contribution point of view.
 - In the case of the subsidised pensioners the contribution analysis will need to take into account the quantum of the subsidy as the pensioners will focus on their proportion of the contributions.
 - A range of option mapping scenarios may need to be considered.
- It is important for the administrator business that Fulmed is sustainable in the long term.
- The effect of an amalgamation on the sustainability position of the current Fulmed membership, and the resulting effect on future contribution rates, benefit changes, financial results, membership growth, terminations and membership distribution across options therefore need to be quantified.
- Any advantages that Fulmed may gain by increasing its membership base and market share.
- Whether any proposed timelines for an amalgamation are appropriate for concluding it before conditions can turn unfavourable while still leaving enough time to perform the amalgamation efficaciously and with the prescribed periods of notice and inspection.
- The reputational risk to MegaCorp if the amalgamation is not achieved successfully, including the perceptions of current and potential future clients, business partners and shareholders, as well as market analysts, regulators, the press and the media.
- As an actuary you should also consider the public interest.

- **(Max 8)**

- **(Total Question 2: 33)**

- **(Grand Total 100)**