INSTITUTE AND FACULTY OF ACTUARIES

EXAMINERS' REPORT

September 2010 examinations

Subject SA3 — General Insurance
Specialist Applications

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.

T J Birse
Chairman of the Board of Examiners

January 2010

1 (i) The key guidance is the Senior Management Arrangements, Systems & Controls (SYSC) standards.
High level standards under Principle 3.

These cover areas including:

- Business structure & contingency planning
- Training, competence & expertise
- Compliance, internal audit & financial crime
- Risk control
- Outsourcing
- Record keeping
- Conflicts of interest
- Other appropriate points

They encourage firms' directors and senior management to take appropriate practical responsibility for their firms' arrangements on matters likely to be of interest to the FSA.
This includes taking reasonable care to establish and maintain appropriate systems and controls.

The nature and extent of the systems and controls will depend on a variety of factors, including:

- Nature of business
- Scale of business
- Complexity of business
- Diversity of business types
- Geographical diversity
- Volume of transactions
- Size of transactions
- Nature of transactions
- Degree of risk of each area of operation
- Other appropriate points

Currently management takes no interest in risk management processes, which should be the practical responsibility of directors and senior management.
Perhaps reflecting the fact that the company is well capitalised
This lack of involvement leads to a significant operational risk for the company
Left unchecked this could ultimately lead to regulatory, legal and reputational risks

Even if no operational risk losses occur, the company should still be holding additional operational risk capital to reflect the low quality of their management processes, reducing the company's capital efficiency and return to shareholders.

The SYSC standards also recommend that companies should vest responsibility for effective and responsible organisation in specific directors and senior managers
As the directors take collective responsibility for these issues, they are not following best practice, and the lack of individual responsibility for any particular issue may lead to ineffective management.

The SYSC standards also recommend that a firm should segregate duties of individuals and departments in a way that reduces opportunities for financial crime or the contravention of regulatory requirements.
This management approach may also affect the costs of D&O cover for the management team

Management expertise is currently too heavily weighted towards underwriting.

The team should incorporate a wider range of skills and backgrounds.
Actuarial involvement in pricing for example would be of value.
Examples of other potential board members.

The over-representation of former underwriters on the management board may also lead to biased judgements and conflicts of interest.
This is especially the case for the longer tailed business, where directors may not objectively consider the emerging experience on business they themselves wrote
Where bonuses are dependent on underwriting experience, this may produce an even stronger vested interest.

The close links between executive and non-executive directors lead to little diversity of opinion, and lessen the likelihood of appropriate challenges to the executive directors from the board of non-executives.
As this is the key reason for the involvement of a board of non-executives, this does not constitute best practice.
The fact that the executive directors are retired may also be an issue as they may be out of touch with the market.
Need to review work of external consultants.
Choice to outsource means limited involvement.

Comments on Q1(i): *Very few candidates were aware of the relevant legislation. The majority of candidates did however manage to use the information in the question to form some sensible conclusions about the key weaknesses in the management structure proposed with better candidates addressing each of the issues in turn:*

- *no interest in risk management*
- *collective responsibility*
- *they are all underwriters*
- *non-executives are ex-underwriters*

A number of candidates focussed on other issues such as ensuring adequate capital is held or acting in the interests of shareholders, missing the focus of the question.

(ii) **Impacts from solvency II**

The supervisory review process covered by Pillar II will involve increased regulatory oversight of companies' internal processes
This includes having internal audit and actuarial functions with sufficiently skilled personnel in-house to oversee and challenge, as necessary, the work of the company

Where deficiencies are identified in these processes, regulators can require additional capital to be held under Pillar II

Under Pillar III requirements on Solvency II, firms will be required to publish details of their risk management processes

In order to publish explicit details of risk management processes, management will need to develop and be able to articulate a formal risk management approach
These should address the different risks faced, considering for each risk category the risk exposure, concentrations, mitigation potential and sensitivities.
Solvency II also sets higher standards for awareness of capital considerations among senior managers,
… which currently appear to be low as all capital work is outsourced with little interest in any feedback.
Appropriate mention of ORSA
Appropriate mention of Use Test or IMAP process
This is a particular issue if the company wishes to use an internal model as they are unlikely to pass the use test.

Comments on Q1(ii): *Candidates displayed a disappointing knowledge of Solvency II, a highly topical issue that we would have expected candidates to be largely prepared for, particularly as it has been part of the exam for the past two sessions. Few candidates made reference to ORSA or the Use Test. A number of candidates offered some general comments on Solvency II with little effort to tie this back to the question.*

(iii) Formalised data capture at individual risk level produces more accurate information than subjective judgements on the account as a whole

This would not only generate the rate movement information that the consultants are benchmarking
but can also be used to estimate the impact of:
lost business
mix change on renewing business
new business

This information is of great value for other areas of the business,
e.g. for reserving, capital modelling or business planning

Management should also have the best information possible on market directions so that they the company can be refocused appropriately.

Capture of data at individual risk level can improve understanding of the account
Mix change effects in particular would not be picked up by the benchmark index approach.
This would reduce risks of anti-selection / competitive issues.

Having a more formal and documented rating process will encourage the underwriters to use their rating models for all their policies
This will reduce the risk of errors in judgement or mental calculation
Formal process and consistent models could be more easily updated for changing assumptions.

A formal rating process also ensures greater consistency between:

- Years
- Underwriters
- Risks
- Classes

Robust rating processes are viewed favourably by key stakeholders including reinsurers, brokers, regulators, rating agencies and capital providers / shareholders

This could lower the cost of reinsurance or capital,
… attract more and better quality business
… and lessen regulatory issues.

Under solvency II, poor pricing processes could lead to a higher capital requirement.
A formal rating process produces a clear audit trail that allows better internal controls
This audit trail will also assist with business continuity / handover in the event of a change in underwriting staff

A project to formalise rating processes would most likely identify other areas of work which may yield other benefits, e.g. more streamlined writing of business, refinements to the rating model etc.

Comments on Q1(iii): *This question was generally comparatively well answered. Some candidates did give too much focus on what to take into account in setting a technical price, whereas the question very specifically focused on the pricing **process**.*

(iv) *Technical Pricing Assistance*
The actuary can assist with calculation of the technical rate
- Helping with loadings (expenses, capital etc)
- Modelling Latent claims
- Modelling Large claims & CATS
- Triangle projections
- Sensitivity and scenario testing

- Relevant generic examples

… and development of underwriting models

- Relevant generic examples

particularly if the company has a sufficient volume of credible data to analyse

The actuary can act as a second pair of eyes
or in an audit capacity
This may be of particular use in checking that the models already in use are fit for purpose

Actuaries can offer assistance with pricing of individual larger risks or schemes
This can be of particular value when the risk has some unusual features which are not always allowed for accurately by underwriters
e.g. profit commissions, aggregates, excess layers or other relevant examples

Actuaries can help ensure that appropriate allowances are made for claims inflation
This could incorporate their knowledge of regulatory and legislative changes
Examples – PPO / Ogden tables
Actuaries could also contribute awareness of fiscal changes e.g. tax laws

Allowance could also be made for changes to the general claims environment e.g. because of recessionary effects

Process Changes
They can design rate monitoring processes
and data systems to capture the data

They can help monitor aggregations and accumulations
Mention of actuarial control cycles

General support / communication
The actuary can act as a second pair of eyes
or in an audit capacity
This may be of particular use in checking that the models already in use are fit for purpose
They can offer sign off of pricing and other terms and conditions as part of the license process
Actuarial involvement is viewed favourably by key stakeholders including reinsurers, brokers, regulators, rating agencies and capital providers / shareholders.
They can communicate with third parties around rating issues including regulators, reinsurers, agents / brokers, senior management, clients, finance staff, claims departments, and other actuarial functions such as reserving and capital modelling.

Comments on Q1(iv): *A number of candidates focussed on the individual components of a technical rate and neglected to even mention practical issues such as development of pricing models.*

(v) *Specific considerations*

Mix of business

One key issue is the mix of trades underwritten
This should be considered throughout all years of account as far as the data allows as mix changes over time could lead to a significantly different development profile.

The lack of adequate rate monitoring processes could potentially exacerbate the impact of mix changes, with the potential for the historical experience to have been benign due to cross-subsidies from areas of business that no longer make up such a high proportion of the account.

The high early stage development of more recent years compared to the high late stage development for earlier years suggests that there may well be some mix change factors which should be accounted for.

Benchmark issues

The benchmark may be inappropriate for a number of reasons

- Mix / Class
- Length of tail
- Out of date
- Territories
- Coverage
- Different claims handling process
- Just plain wrong

Late stage development / potential latency issues

Also, the development profile appears to be longer than a benchmark market development curve, suggesting that the mix of trades might be biased towards longer tailed exposures.
One example might be trades with high levels of chemical exposures causing latent illnesses not identified for many years after the policies are written
or pollution liabilities where the environment damage is not immediately apparent
or industrial diseases such as vibration white finger
Any other relevant examples

As the account has only been in existence since 2001, there could still be significant exposure to risks such as these so it is critical to understand the historical mix of business.

Once the potential exposures are understood it should be possible to make use of market benchmarks for APH development to supplement the internal data.

Discussions with the consultants should indicate the level of potential latency they have been allowing for in the previous reported results.

Depending on the quality of data systems, analysis of the late stage claims by type of claim should give some indication as to the source of the late development.
Failing that, discussions with the claims department about some of the larger individual cases may give an indication.
Consideration should be given to any changes in policy wording that may affect development profiles
Although it should be noted that no EL business can currently be written on a claims made basis

Potential weaknesses in claim estimates

The unusual late stage development could also reflect poor quality reserving and claims estimation processes
Analysis of the late stage movements should give some indication as to whether this is the case. If the movements are the result of increases in reserves for claims already recorded, this would suggest a deficiency in the claim estimation process,
Whereas late notification of claims would be more likely to indicate latent exposures

The combination of this feature with the high level of early reserves for more recent years suggests that claim estimation processes across all years of account may have moved to a different basis in recent years.

Claims inflation may also have been higher than anticipated.
Legislative impacts may also have increased reserves.

If reserves were discounted in the past, need to know the levels of discount applied and their changes over time. Need to check that the market data used for benchmarking is on the same basis.

Other examples of changes to the reserving process, e.g. Levels of prudence

All such changes should be fully investigated as they are critical to any analysis of the claim development.

Regardless of any changes to processes, some assessment of the appropriateness of the current claim reserves would be of value
Spot checks on individual claim reserves may assist with this, perhaps using an independent external claim assessor.

Influx of small claims
EL & PL are low frequency classes so claims volumes would not generally be expected to be significant.
An analysis of the nature of these claims should be undertaken in order to understand them better

Potential explanations may include:

- A weakness in the policy cover
- Selection effects with a particular type of client
- Perhaps due to poor pricing structure (particularly as regards premium loadings to act as a disincentive to make small claims)
- or the quality of vetting of clients health and safety processes
- or unusually low levels of deductibles or warranties
- The company may have a reputation for poor claims control leading to an increase in fraudulent claims
- This will be a particular issue with the recent recession
- although a recession on its own may lead to a higher propensity to make valid smaller claims
- There may be a few key insureds driving this experience
- Claims farming activity
- Claims leakage / poor claims handling
- Greater awareness of potential to claim / litigiousness
- Other valid explanations

If the issues are driven by specific issues different process could be explored

- Changing deductibles on PL
- Sunset clauses
- Different pricing structures
- Other appropriate examples

It is important to note that deductibles can NOT be imposed on EL policies, only warranties
As EL is statutory cover to protect employees from the risk of negligence on the part of the employer, all financial liability for the claim must pass to a regulated insurer
Policies can however be written with warranties under which the employer commits to reimburse the insurer for the first tranche of any claim.
In most cases this acts in the same manner as a deductible, but in the event of failure of the employer the employee would still be covered for the full quantum of claim without any reduction from the deductible.
At an account level therefore, warranties would produce broadly similar benefits to deductibles in terms of disincentives for the coverholder to make small claims.

If the claims appear to originate from a few key insureds, risk types or trade types, consideration should be given to non-renewing those clients, tightening the policy wording or declining / increasing rates on those trade types.

General investigations

Undertake internal reserving analysis
Review current pricing structure & models
Individual analysis of any particularly large cases

Cost / benefit analysis for any outwards reinsurance
Analysis of backing investments
Assessment of capital costs (with reference to mix type / weighting to large claims etc.)
Review of potential accumulations.
Generic expense analyses
Benchmarking exercises against competitors
Profitability investigations
Review past assessments of rate change
Comments on other factors that should be taken into account in analysis of rate movements (claims inflation, propensity to claim, macroeconomic issues)

Comments on Q1(v): *Candidates generally provided a relatively comprehensive but disappointingly generic answer. A number of candidates did provide challenge to the suitability of the benchmarks and consideration to potential latency issues with EL claims. Few candidates mentioned the most obvious initial investigation to narrow down the cause of the deterioration in older years: identifying whether the deterioration is down to new claims, suggesting latency issues, or to deteriorations on existing claims, suggesting under-reserving issues. Many focussed almost exclusively on a claims investigation and went into great detail on this. Clearly this is relevant but is just part of an answer that needs to consider much wider issues such as reserving adequacy, reinsurance, expense analysis etc.*
The majority of candidates suggested raising deductibles to address the small claims issue, in spite of a previous examiners' report that clearly drew candidates attention to the fact that as EL is a statutory cover there are no allowable deductibles.

(vi) *Issues with the underwriter's approach*

Taking a single scheme in isolation over a single year, the underwriter's approach is not too damaging
However, any expected loss ratios used in planning / reserving / capital modelling / pricing for an account will most likely consider the aggregation of a number of schemes,
with the summary longer term averages also considering the aggregation across different accident years as well.
Such loss ratios are not expected to apply to every risk within the account, but are an average of some schemes making higher than average profits while others make losses.

This effect is particularly marked for low frequency / high severity business, where average loss ratios are likely to comprise the majority of accounts outperforming and earning profit commissions while only a few accounts significantly underperform with large claims / catastrophes.

Failure to allow for these issues not only distorts the summary level estimates used elsewhere in the business, i.e. pricing, reserving planning.
It also leaves the underwriter unable to fairly compare the relative long term profitability of different risks.

Comments on Q1(vi): *Candidates almost universally missed the point of this question, with most identifying only that it might lead to a degree of understatement for reserving / pricing /*

planning. Very few candidates recognised that the issue with the proposed approach is that most expectations, e.g. reserves, would tend to include some risks that outperform and other risks that underperform. As such the proposed approach is only reasonable for a single scheme in a single year, and when aggregated totals are considered it would clearly be flawed. Some candidates failed to answer the question asked and described the problems of using profit commission rather than the problems with the underwriters not making allowance for it.

(vii) *Allowing for profit commissions*
Methods
Stochastic
Stress testing
Full DFA
Subjective margins
Replicating portfolio / reinsurance arrangement

Volatility issues
Impact of profit commissions is highly dependent on the volatility of the business
The greater variance there is in loss experience, the greater the proportion of the account that will outperform sufficiently to trigger profit commissions.
Analysis of past data could provide some indication of the overall volatility of the account.
Barring accounts with relatively stable and credible data however, volatility can be significantly harder to estimate accurately than a mean loss ratio might be.
At the simplest, the standard deviation shown by past loss ratios will give a very crude indication of volatility.
Unless the account has been running for a number of years however, there will not be enough data points from the overall account to produce a statistically reliable estimate

This is an even greater issue for longer-tailed classes where loss ratios for more recent years will be smoothed estimates due to lack of data
Perhaps reserved using a BF method for example.
Such an approach would not be a fair reflection of the potential volatility once that year of account has matured.

Care must also be taken when analysing loss ratios from different years of account where effects of the underwriting cycle can easily distort the underlying volatility.
Past loss ratios can be adjusted for rate movements which should substantially reduce this effect
Although loss ratio cycles have historically shown greater amplitude than rating indices, and the extent of this deviation is extremely difficult to allow for.

Reserving cycles can also affect the validity of past loss ratios and there are unlikely to be relevant indices that can be used to adjust for this.

Differences between different risks:

In practice, differing volatility assumptions are likely to be needed for different schemes as the volatility for each scheme can be influenced by a number of factors:

- The size of the scheme is critical – all else being equal, the larger the scheme is the more stable the experience will be.
- For lower frequency business, small schemes could well run largely claim free over a number of years purely due to good fortune
- The level of diversity within the scheme will also have a material effect - undiversified schemes could produce a significant risk of accumulations hitting a particular time period, with other times producing low claim volumes
- The nature of the business covered will also have a material effect, with some risk types being more weighted towards a volume of stable, attritional experience than others.
- If a risk includes any profit commission sub-pools this needs to be allowed for as it is the size of each distinct segment which is critical
- Any other relevant factors

Grouping of risks

One potential approach might be to group the schemes to produce pools of data where broadly similar volatility might be expected.
Aggregating the different loss ratios within these pools would produce a more stable set of data points from which volatility could be estimated.
As profit levels can be significantly different between different schemes however it may be best to rebase the loss ratios for each scheme to produce the same averages so that this feature does add to the derived volatility

The grouping of schemes is likely to be a highly subjective process
and may be complicated by some schemes having years of account which would be expected to show significantly different volatility
perhaps due to start up years where volumes were low as the scheme grew / *other relevant example*

Although this method is not perfect, it is relatively easy to implement in practice and to communicate to underwriters,
and would encourage explicit consideration of the volatility of the account when underwriting
data requirements to implement this would also be minimal

Volatility model for aggregation

Another method would be to derive a loss model which could be applied to the specific exposures for each account.
Such a model could estimate the frequency relative to the exposure measure used along with a severity curve for example

Again some differentiation between risks may be appropriate, with some risk types having different loss profiles
Risks of each type could be aggregated from a number of schemes for the loss model to be parameterised.

While this method is potentially more accurate than the alternatives, it does pose some significant data requirements
Many insurers have not historically captured exposure data at a sufficiently granular level for analysis of this type

The method would also be harder for the underwriters to manage and maintain themselves on an individual account basis.

General data requirements on an individual risk basis

Profit commission rate
Threshold at which profit commission becomes payable
Details of any escalation in profit commission with more significant outperformance
Expected loss ratio for the scheme for comparison with the profit commission thresholds
Expenses payable to the insurer when making the profit calculation
Policy conditions
Sensible comments about ways of tying in insureds (tie-ins)
Sensible comments about aggregating a number of years in the calculation (carry overs etc.)
Number of years before any earned commission is released.
Any clawback provisions if experience deteriorates after commission is released.
Creditworthiness is a potential issue in any clawback

The scope of business – which products, distribution channels, territories or currencies are included/excluded.
Will there be a single pool or several sub-pools?
The duration of the agreement.
When will the profit commission be calculated?
Will the profit commission be paid in a single installment or in several payments?
Termination terms and profit commission payments after the termination of the relationship.
Arbitration arrangements.
Profit commission formula.
Sensible comments around appropriate reserves in profit commission formula.

Comments on Q1(vii): *This was the most poorly answered question. Candidates almost universally missed the point of this question, with the majority failing to even recognise that the key consideration for profit commissions is the volatility of the individual risks. As such, candidates missed the majority of marks for this question, which considered the extent of the possible data issues for volatility and how these issues might be resolved in practice. Disappointingly, the majority of answers to this question were clearly too short for the marks*

available, suggesting that candidates should have known they were missing something.
Few candidates even considered the most basic of practical issues for profit commissions : the terms on which the commission is set and payable. In spite of the data requirements being specifically prompted in the question, candidates appeared unable to propose anything other than the generic data items they would need for e.g. a reserve review.
Overall, this question was highly disappointingly answered for the final paper before qualification. While this is not a subject that is directly in core reading or a subject that has been examined before, it is something that candidates should have been capable of forming sensible answers for based on their understanding of the underlying risks and principles.
Candidates often recognised that one might wish to create a stochastic model or derive appropriate subjective risk margins. At this level candidates should be able to display higher order thinking, and anticipate how they would go about e.g. parameterising a stochastic model what problems they might encounter in practice and how they might resolve them.
A number of candidates went into great detail in terms of the necessary data, however it appeared they were answering a question about a claims investigation rather than the more broader points appropriate for a question concerning profit commission.
Some candidates suggested not using profit commission and gave alternatives. This was not what the question required.
Some students went into great detail about capital allocation methods. These were not relevant to this question.

2 (i) *Mutual*

An insurer owned by policyholders,
… to whom all profits ultimately belong.

Comments on Q2(i): *Many candidates only managed half the definition of a Mutual Insurer: owned by the policyholders but no mention of the profits ultimately belonging to them.*

(ii) *Reasons to provide Takaful*

Muslims are required to purchase Takaful in preference to conventional insurance.
5% of the Texel population are Muslims, but there are no Takaful products currently available in Texel.
There is therefore likely to be a level of demand for Takaful in Texel.
Potentially compulsory so demand may be significant
There may be a "first-mover" advantage for Vibe if it decides to launch its product now.
Being seen as innovative/cutting edge may improve Vibe's standing in the insurance market.
Cross selling
Expand to other countries
Possible diversification benefits – risk profile may be different
Less drink driving so may be lower risk

Many Islamic financial businesses operate on an essentially mutual basis.
Vibe is a mutual, so may be better suited to this venture than commercial insurers.
In other countries, new Takaful ventures are increasing on a for-profit basis.

While Vibe is a mutual, it may still price on a commercial basis. Takaful may provide an attractive additional revenue stream.

Elements of Takaful may appeal to the non-Muslim population, who may decide to purchase the products,
e.g. policyholders are entitled to share in any surplus.
… a share of any profits would typically be given to charity.
… certain "unethical" investments are forbidden.

Comments on Q2(ii): *This question was relatively well answered, although there were a significant number of points on the schedule available for restating points raised in the question itself and the additional points were identified more rarely.*

(iii) *Difficulties*

As the first Takaful business, Vibe should expect the authorisation process to be considerably more difficult than for a conventional insurance start-up.
It is unclear how regulations that have been written to apply to conventional insurers should apply to Takaful.
The application of tax and other legal requirements may also be less than straightforward.
Investigations may indicate that these regulations put Takaful at a disadvantage to conventional insurers, which would affect the competitiveness and viability of the business model.
The costs of investigating these issues would be in addition to the usual expenses of starting a business.

A viable business model requires a large pool of potential customers.
It cannot be assumed that all Muslims will follow religious guidance.
Some Muslims do not agree that the Takaful models used in western countries are Shariah-compliant.
Some Muslims may be prepared to purchase conventional insurance, if the available products are cheaper than Vibe's offering.
Some Muslims may simply choose to go without non-compulsory insurances, particularly if they have not previously had cover.

In order to price the business, it would be necessary to consider the risk profile of the potential market and the extent to which this is reflected in premiums.
This information may be difficult to collect.
A potential niche is considered attractive if the market is currently charging a high premium relative to the risk.
It would be difficult to attract business if conventional insurance premiums for the groups being targeted are already competitive.

Vibe may be concerned that a Takaful business is not run solely by the directors, since it must adhere to the rulings of its Shariah board.

Shariah-compliant reinsurance (retakaful) may not be easily available in Texel.

Vibe may have to reinsure on a conventional basis or put up additional capital to ensure that it remains solvent.

Shariah-compliant investments may not be easily available in Texel.
Restricted investment freedoms may reduce profits or have other impacts
There may be difficulties in recruiting the board of Islamic scholars
There may be reputational issues for Vibe
The target market for this product may require significantly different distribution channels and may have low awareness of the existing Vibe brand.
Separation of funds
Sensible comments around issues resulting from separation of funds

Comments on Q2(iii): *Most answers were disappointing here missing many obvious points such as the potentially greater cost of double compliance and difficulties with sourcing Takaful compliant investments.*
Some students seemed to forget that Vibe was a mutual and started talking about shareholders or about the need to set up a mutual company.

(iv) *Business Plan*

Premium Comments

Significant premium growth is anticipated for the Takaful product in the first three years.
Minimal growth is anticipated for the existing personal motor business.

The projected 2013 Takaful premium income appears large relative to the non-Takaful premium, given that Vibe is a large insurer specialising in personal lines.
However, its not possible to be sure from these numbers.

Loss Ratio Comments

Planned loss ratio for existing motor business is 90% in each year.
Planned loss ratio for Takaful is 90% in 2011, reducing to 70% in 2013.

It is not clear how Vibe will achieve a lower claims ratio for the Takaful business than the existing business.

Vibe would also need to explain the downward trend in loss ratios from 2011 to 2013.

Alternatively, the high profits may suggest that Vibe believes this product will appeal to a profitable niche of customers.
Specific features of the likely customer base may make takaful more profitable – e.g. reduced likelihood of drinking
Differences in investment income may account for the differences in pricing
The directors would want to be sure that Vibe has sufficient data to be confident in this assumption.
The relevant data may be difficult to obtain.

Expense Ratio Comments

Planned expense ratio for existing motor business is 10% in each year.
Planned expense ratio for Takaful is 5% in each year.

It is not clear how Vibe will achieve a lower expense ratio for the Takaful business than the existing business.

The absolute amount of expenses is low in the first year (at $0.3 million).
It appears unlikely that the costings allow for significant spending on launch and set-up costs.
The level of growth anticipated would likely require a significant amount of marketing spend, and possibly investment in new infrastructure such as call centres.

As a consequence of the claims and expense ratios, the gross and net profit margins for Takaful are much higher than for the existing business.
The net margins for the existing business are nil, and the net margins for Takaful increase to 25% in 2013 *(or other relevant numerical example).*
This may suggest that Takaful is being sold at a higher price than conventional insurance.
Customers may not be prepared to pay a premium for this product, even if they are obliged to purchase by their religion.
Obtaining higher profits from Takaful may not be perceived as being consistent with the nature of the product (reputation risk for Vibe)
Obtaining higher profits from some groups of customers rather than others may not be consistent with Vibe's constitution as a mutual.

If the market has the levels of profit shown, Vibe should expect other insurers to enter the market.
Competition could mean that the level of growth and profits assumed may not be sustained in to 2013.
The loss ratios as currently displayed for Takaful may be before any distribution of profits and/or charitable donations and the net results at a company level may be significantly different after this
As such distribution of profit is contingent on the profits being made, however, the capital requirements may be comparatively lower on this business

A full business plan would need to include additional information e,g. tax, investment income, capital requirements, reinsurance.
These may differ between the Takaful and existing motor business.
Sensible comments about potential alternative ways of interpreting the numbers.

Based on the information available, the Takaful business plan would not appear to be plausible unless there are valid explanations not reflected in the information given.

Comments on Q2(iv): *Too many candidates missed some very easy marks through either not calculating the expense and claim ratios for each year or making careless errors when doing so. Weaker candidates seemingly took the figures at face value and commented just on their implications rather than questioning their validity too.*
A significant number of candidates commented that it would be unrealistic for Vibe's Takaful premium income to increase to 13% in 2013 on the basis that Muslims only make up 5% of the population and therefore the difference would have to be made up from non-Muslims seemingly missing the point that the 13% applied to Vibe's business and not to the total population.

END OF EXAMINERS' REPORT