EXAMINERS' REPORT

May 2022 examinations

Subject F203 — *General Insurance*

Fellowship Applications

INTRODUCTION

The attached report has been prepared by the subject's Principle Examiner. General comments are provided on the performance of candidates on each question. The solutions provided are an indication of the points sought by the examiners and should not be taken as model solutions.

The intention of the report is to be used as a study guide. Students should therefore note that this is considered a model answer and contains far more than the 100 marks shown for the exam.

Subject F203 — *General Insurance*

Specialist Applications
May 2022
MEMORANDUM

Overall

Candidates should note that F203 is the key paper at which we test candidates' broader thinking. This is generally the final paper before qualifying as a professional, and we consider capacity for broader thinking to be one of the best indicators of a candidate's suitability to act as a qualified actuary. As such, we aim to design exam papers that are difficult to pass without displaying some capacity for independent, broad, and commercial thinking.

As with the majority of F203 papers, students failed to show the commercial thinking that is required to pass the exam. Most answers remain very generic and students fail to bring the context of the question into play – choosing to rather take a scatter gun approach.

Markers heavily reward instances where these skills are displayed. When reviewing past papers, candidates should assume that the marks available for generic points are substantially less than those awarded for the more challenging points that would be the mark of high-quality professional insight. Marks available for list items from bookwork are lower still.

For this exam in particular:

- *Candidates struggled to tailor the information given in the pre-amble to the question being asked*
- *Candidates continue to undermine themselves by providing generic or off-topic answers. Specific observations are provided by question throughout this report.*
- *Candidates also did not exhibit much higher order thinking and questions were generally poorly answered considering the number of marks that were available.*

Candidates that planned their way through the exam did not appear to be under time pressure.

Taking a scatter gun approach to the questions will result in wasting time. Markers pick up the generic pattern of ideas applied and do not reward these.

Planning remains a very important part of the paper – but the majority of candidates do not exhibit adequate preparation regarding how to plan in an exam environment.

In conclusion, we would offer candidates two key pieces of advice – read the question properly and take the time to think about what is going on. Time spent making sure that you are answering the question that is asked is therefore more valuable than a panicked rush to put down as many points as possible, regardless of whether they are relevant.

Examiners Feedback on Questions:

Overall:

- The exam contained a generous amount of bookwork with application of the bookwork following the question. The bookwork tested in this exam is not considered difficult or abstract, yet some students still struggle to answer the questions.
- The pass rate for the exam was higher than average. The examiners purposefully tested a different structure to prior exams, containing more questions and hence tried to cover more of the syllabus.
- There is a fundamental difference between answering a F100 level paper and answering a fellowship paper. The fellowship paper focusses on commercial acumen in really applying your knowledge to the question – from the scripts received most students do not appreciate this when answering the paper.

QUESTION 1

You are the chief actuary of a large short-term insurer that operates in the South African market. The insurer writes personal and commercial lines business. The company's 4 largest commercial lines of business include:

- Commercial Property with significant exposure to business interruption
- Commercial Vehicle Fleet Insurance
- Product Liability Cover
- Transport (Marine & Rail – incl. Liability for these lines)

The South African regulator is currently concerned about the potential exposure insurers have to non-affirmative cyber ("NAC") claims, i.e. cyber claims on policies that had not been designed or priced to include claims from cyber-related events but where the policy wording is not sufficiently clear and could give rise to reasonable expectations of coverage.

i. Give one example for each of the above lines of business where non-affirmative cyber ("NAC") related claims could occur.

[4]

Emphasis was on Non-Affirmative Cover – most students listed affirmative type cover and hence did not perform well in the question.

Commercial Property

Malicious hacker causing a malfunction in server room resulting in a fire.
This could lead to a fire at the property – but could also affect processes/operating systems which cannot be used and could lead to cancelled business leading to a business interruption claim.

Vehicle Fleet

Hacking into the logistics system which causes havoc with logistical plans. This means incorrect deliveries/vehicles being led to drop-off points where criminals hi-jack the vehicles/goods in transit.

Product liability

System breach causing a malfunction to product being sold. This could result in product recalls if product is not working as per expectation.

Transport (Marine & Rail)

Like vehicle fleet - container loading is largely automated; fault on systems causing navigation errors; flooding on board etc. Could lead to property and GIT claims. Fault could be hard to find – thereby insurer only picks up the resultant property/liability damages.

ii. Suggest, with reasons, two metrics you could use to measure the potential exposure your company has to cyber risk.

[4]

Policy Limits
Could make use of the policy limits under each line of business and section; and then try to run a scenario test across your portfolio to see how your portfolio would react to a large-scale malicious attack.

This will require classification into similar industries/types of clients to accurately allow for an aggregation event.

Need to determine the extent to which your policyholders are exposed to similar events. Linking court cases against certain defendants with that of your portfolio (e.g. court case against one large marine carrier could have easily been a court case against your client.)

Regulatory fines are usually expressed as a % of turnover, and therefore ransom payments usually follow suit to a lesser degree. <u>Knowing the potential fines could give insight into the potential claim.</u>

Gross Written premium/Net Written Premium

Similar to above but at a higher level - determine the potential loss as a % of GWP at either a portfolio level or industry level.

In the commercial space, individual underwriting plays a much larger role compared to the personal lines space. Hopefully your system allowed for these intricacies to be captured at an underwriting stage and that you can meaningfully extract this data.

iii. State, with reasons, the benefits to the wider economy when insurance markets offer cyber risk coverage.

[4]

- Insurance coverage for cyber risk provides a means for companies and individuals to transfer a portion of their financial exposure to insurance markets.
- Insurance markets and companies can potentially contribute to the management of cyber risk by promoting awareness, encouraging measurement, and by providing incentives for risk reduction.
- The process of seeking insurance coverage requires policyholders to understand (and quantify) the risk that they face to determine the amount of coverage that they require.
- The underwriting process will usually involve an assessment of risk management and security. practices, including recommendations on further preventative measures that could be taken
- The pricing of risk should provide incentives to reduce the risk to the extent that the investments in risk reduction will lead to reductions in premiums.

For insurance to have a significant impact on risk reduction, the market must be offering a material level of coverage to a large share of companies and individuals at risk - (which is not currently the case)

(Other Reasons - Diversification/Pooling of risk etc…) were all considered in the marking.

Following the work you have done on the above to respond to the regulator, the CEO is interested in developing a cyber insurance product covering the perils for the commercial segments:

- Privacy Breach - unauthorised disclosure of third party identifiable information
- Denial of Service - Leading to unavailability of functions within an organisation
- Cyber-Fraud - Illegitimate financial transfer made as a result of social engineering – e.g. Phishing* attacks
- Cyber-Extortion – ransomware that impede access to data or a network until a ransom is paid

**The fraudulent practice of sending emails purporting to be from reputable companies in order to induce individuals to reveal sensitive or confidential information, such as passwords and credit card numbers.*

iv. Describe the rating factors you would use to determine the risk premium for the product as well as outlining the potential challenges in determining the appropriate risk premium for this product. [8]

Rating Factors

- Type of Industry (i.e., data custodian like TransUnion / Bank - different to Fleet company)
- Revenue - larger organisations typically have greater exposure to cyber threats.
- Number of Assets/Central Servers/Remote workers
- Number of Employees

Specific Security Questions:

- Type of Infrastructure used
- Disaster Recovery Protocol
- Various companies provide security scores based on standard testing to measure a company's resilience to cyber attacks
- Penetration Testing Results
- Data storage protocols. (where etc.)
- Data handling – encryption/backup/safety software

<Max 5 for this section of the question>

Difficulty in deriving the Premium

- Since historical data is not likely to be sufficient to price for the risk – the actuary will most likely have to rely on models.
- Gather data on the likely pay out (benefit levels); recent court awards; data breach ransoms etc.
- This will rely on the information gathered above in the cyber risk assessment.
- Typical to any pricing exercise you will need to consider the likely frequency & severity of each type of event covered which could give you an indication of the burning cost.

- You will need to understand the extent of potential cyber catastrophes

- Consider the Geographic scope of the cyber risk
- Pricing for the human element becomes the most subjective.

- New technology is constantly changing – assessment will need to be done more frequently. Your desktop risk analysis will become very important

The above will rely on specific factors being applied to each policyholder to determine likely exposure within a year:

- Estimated Loss per Internet exposed infrastructure (Vendors + Companies)
- Estimated cost in the case of a Loss of technology (i.e., confiscation / locked down)
- Estimated Loss per customer record they keep (should these be lost)

v. For each type of cover provided as set out above: Describe a potential loss event and how it could lead to a claim under the policy.

[8]

Privacy breach
Losses relating to damage to, or loss of information from, IT systems and networks
Business interruption losses to the policyholder arising from loss of use of IT systems / hardware / websites because of an insured peril

Denial of Service
A virus infecting a computer system and causing damage such as failure to start certain programmes slowing performance speed, corrupting or deleting data.
Employee accidentally opens infected email
Policyholder accidentally transmits the virus to anyone they do business with / via their company website.

Cyber Extortion
A hacker takes control of computers or the website of the company
and steals customer data and demands ransom to not release data
. . . or releases data (Could list the possible further accumulation examples) (TransUnion problem of 2022)
uses computer for malicious purposes (e.g. distributing spam)
May access or steal assets (warehouse control)
Or intellectual property owned by the company (patents etc.) which they could distribute.

Cyber Fraud
Policyholder's use or access to their own systems may be suspended during a police investigation into the attack
Infringement of intellectual property, defamation or libel
Policyholder accidentally infringes a trademark on their website
Email from policyholder (or its employees) causes defamation or libel
Online identity fraud
A third party fraudulently uses policyholder's online identity to enter into a contract/agreement

<Other Marked>

- Personal data or privacy issues, e.g. loss of or disclosure of private data
- Losses relating to breaches or actions by suppliers or business partners

vi. The CRO is particularly concerned about unintentional coverage and wants to ensure sufficiently "tight" terms and conditions. **Recommend with reasons** potential policy exclusions or terms and conditions (including behavioural requirements) to limit these losses on the new policies being sold.

[8]

Depending on the type of policy, **an excess** would be payable to reduce an insurer's claim cost and thus policyholder's premium. This also ensures that the policyholder retains an interest in avoiding a claim

Exclusions

- Viruses created by the policyholder
- Deliberate or reckless acts (Avoid moral hazard)
- Any damage caused by an employee of the company or anyone given deliberate access to computer systems (e.g. subcontractors) should be covered by other insurance policies
- Also only cover claims in a certain jurisdiction (Certain countries prone to attack)
- Claims relating to download of inappropriate business materials e.g. pornographic or obscene materials,
- Policy can specify restrictions in terms of only covering certain business activities
- Any damage which is recoverable against a third party for example failure of 3rd party software where there is a claim against the 3rd party (Software Vendor)
- State sponsored attacks (Ukraine/Russian situation - exclusions for War) - Will prevent the accumulation of losses
- Failure of ISP or hosting (Or Other third-party service providers). This again avoids accumulations of losses
- Personal injury or damage as secondary outcome of an event
- Claims relating to issues or events already known about by insured and not declared (similar to pre-existing damage)
- No cover for Reputation or goodwill losses (Subjective assessment of damages)
- Data loss if no there is no backup (or IT with no firewall, no antivirus or other poor client behaviours)

Further Terms and Conditions

- Minimum security standards met (e.g. like vehicle inspections)
- Limit latent issues in the question
- Anything done that could affect the internal risk management of the company.

Notification of losses

- Failure to notify law enforcement promptly
- or commence remediation
- or communicate to affected individuals
- Or to notify to insurer
- To avoid paying for unnecessarily inflated costs due to poor response

<Credit for other valid suggestions with valid reasons>

vii. Taking into consideration the size of the insurer, discuss reasons for the types of reinsurance coverage you would recommend for the new product as well as coverage for NAC risks to the wider portfolio.

[4]

Capital unlikely to be a problem - hence could probably accept volatility and thus limited need for a quota share arrangement. However, could benefit from reinsurers' experience in the market - and therefore enter into a QS type partnership with a reinsurer.

Surplus reinsurance would work well given the diverse risks that will be insured.

Would like to avoid significantly large losses - hence would require individual XOL cover.
Aggregation of cover across a certain industry would also be required. Hence Aggregate XL will be needed to cover certain events.
Unlikely to get a stop loss on the portfolio
For very large policies (i.e., outside of the risk appetite) likely that FAC cover would be required.

Given the exposure mentioned in question 1 - would the reinsurers review all existing exposure for non-affirmative risks - possibly review the terms and conditions offered / as well as possible exclusions now built in due to the new product.
Will we be able to get aggregate cover for NAC / will this be lumped together with our existing RI programme?

<Specifically needs to consider Size in the question - likely QS || Expertise || Non-Affirmative risks that will be added to the portfolio>

Following a very successful launch of the product in the local market, the regulator is interested to understand the risk management process followed by the company.

One component that should be covered in the ORSA is the justification of the use of the Standard Formula Model to determine the capital requirements of the entity.

viii. Describe how you would classify the new product within the standard formula, as well as reasons for using (or not using) the standard formula to assess the capital requirements.

[7]

Given the current classes of business available - you will probably opt to lump this within the Miscellaneous other class.
This further extends to either being personal lines or commercial lines.
There is no difference though between the factors assigned to commercial / personal lines
Considering the formula, this could create a potential arbitrage by not stating this as potential liability cover - as the claims could follow this type of pattern. Although - the reserve risk factors are greater for Miscellaneous compared to liability

To determine whether the standard formula is accurate - need to consider the aims of the formula - present likely 1 in 200 shocks to the balance sheet of the insurer given the insurance portfolio characteristics.

ORSA should be making argument for whether the factors applied to premium and reserve risk presents a likely 1 in 200 year scenario. This could be checked with reverse stress testing.
If you have a standard reinsurance coverage - also likely that the formula is catering for this loss. Need to determine whether your policy coverage includes anything that is a specific reinsurance exclusion.

Questions to ask:
Is premium and reserve risk a good volume measure to stress the portfolio.
There is no Man-Made Catastrophe risk charge built into the formula for miscellaneous (should you rather classify as something else?)
Do our exclusions adequately not allow for secondary risks - i.e. accident & Health; Further liability exposure etc.
By writing significant volumes of this product, it is likely that this will be a serious shortcoming in the Standard Formula and will need to be addressed in the ORSA process.

ix. The regulator is interested in the scenario testing you performed prior to the product launch. Detail 3 examples of possible scenarios you would have used to justify the viability of the product as well as informing your reinsurance purchase.

[3]

Any stress tested will need to determine the impact on your terms and conditions underlying the policy (i.e. benefits to be paid out)

Stress on possible accumulation. Large corporate client is hacked facing liability from its clients following a data breach. How much do you pay out in this instance?

Will need to determine your exposure in this event - policy limits applying.
What will you cover - legal costs; computer repair; business interruption?
Need to model your aggregation against all perils covered in the policy

Similar scenario: however not your client being hacked. But Personal Lines policyholders now being exposed to identity theft / phishing / smishing.
One portion losing money - claiming for indemnity
One portion having to restore online data - ensuring the mitigation of future potential threats
You will need to aggregate across your portfolio - to check likely exposure & cost.

Combination across your commercial and personal lines portfolio, i.e., your commercial client is attacked, leading to very large exposure across the market affecting your personal lines policyholders as well. Leading to further aggregation.

[Total 50]

QUESTION 2

You are a qualified actuary, who has been appointed by Company ABC, upon instruction from the Prudential Authority to independently review the financial soundness of Company ABC. Company ABC is a relatively new national short-term insurer that only sells personal lines motor vehicle insurance.

i. Give reasons why the Prudential Authority could have made this request.

[3]

The Prudential Authority may have been notified by Company ABC that they:

- Have failed to hold assets or invest those assets in accordance with the prescribed requirements;
- Have failed to calculate their technical provisions in accordance with the prescribed requirements;
- Have failed to meet their solvency capital requirement or minimum capital requirement;
- Are going to fail to meet their solvency capital requirement or minimum capital requirement in the following three months.

Or the Prudential Authority believes that the method, assumptions, techniques, calculation or model used by Company ABC to calculate its financial soundness needs to be investigated.

Upon further investigation, it is revealed that the actuarial analyst, responsible for calculating the Solvency Capital Requirement, has since left the employ of Company ABC. There is minimal documentation regarding Company ABCs approach to the calculation, but you have noted the following in the latest annual regulatory return submitted to the Prudential Authority:

- The largest component of the SCR is Market Risk;
- Company ABC only has a one reinsurance treaty in place, which is a quota share with 10% of all business ceded to one reinsurer;
- The current asset portfolio consists mostly of short-term deposits and fixed interest bonds in South African Banks and entities;
- The projected earned premium for the next 12 months is less than those earned in the 12 months prior;
- There are only Tier 1 Own Funds;
- The MCR has been reported as R10 million;
- Premium and Reserve Risk includes an allowance for geographical diversification;
- Longevity risk has been reported in the return;
- Company ABC currently has a deferred tax asset showing in their balance sheet and the company is expected to make a loss again in the next financial year; and
- Company ABC was impacted by a number of hail events and as a result, there has been a significant delay in claim settlement.

ii. Explain how you would independently review the Solvency Capital Requirement calculation by explaining what you would review in each of the sub-risk modules and what you suspect may be incorrect given the above information.

[15]

Market Risk

- Unlikely that a short-term insurer with a "vanilla" asset portfolio would have Market Risk as the largest component of the SCR, either Market Risk or another component i.e. Non-Life Underwriting Risk has been incorrectly calculated.
- The asset portfolio would suggest interest rate risk, credit risk and concentration risk. <u>Check if the asset portfolio is consistent with the underlying Market Risk sub-modules.</u>
- This is a South African insurer investing in South African assets and so one would not expect any currency risk.
- Has reinsurance debtors been included in default risk and concentration risk?
- Has the correct investment information been used i.e. counterparty or instrument credit rating, modified duration or standard duration, market value, ultimate counterparty?
- Unlikely to have illiquidity premium risk

Operational Risk

- Has the correct factor been applied.?
- The business is shrinking so one would expect the factor to have been applied to the historic gross earned premium but will need to check the 12 months prior to the past 12 months earned premium. One would also have to compare this to the technical provisions to ensure the correct measure was chosen to calculate operational risk.
- Is the earned premium on a gross of reinsurance level?

Participation Risk

- One would expect that there should not be a participation risk capital charge as there has been no indication that this insurer belongs to a group or has any subsidiaries?

Premium and Reserve Risk

- One can assume that Company ABC has not applied to the Prudential Authority for permission to use ISPs.
- Has the correct standard deviation been applied (the company only writes motor lines of business)?
- Has the premium volume measure been calculated correctly, this should be the last 12 months NEP given that the book is shrinking?
- Has the premium volume measure been calculated on a net basis given there is a QS treaty in place?
- No allowance for geographic diversification should have been made given that Company ABC only writes business in South Africa.
- One would expect relatively higher reserve volume given the delay in claims would result in high claims outstanding at the valuation date.
- Check the forecast for the next 12 months premium - why is this lower?

Non-Life Catastrophe Risk

- Is there a risk charge for natural catastrophe risk? Motor lines of business would be exposed to earthquake, hail and smaller more frequent events.
- Has exposure been accurately allocated to each cresta zone, assuming that level of detail is available?
- Has the correct risk factor, for each zone been applied?
- Has the reinsurance treaty been taken into account to reduce the catastrophe loss and has this been reduced for the default risk?
- One would not expect a capital charge for Method 2 Non-Life Catastrophe Risk.
- Have the correct man-made catastrophe risks been calculated given this is a motor personal lines business i.e., only Motor we wouldn't expect the other scenarios to be applicable.

Non-Life Lapse Risk
It is unlikely given the type of business written that there would be significant lapse risk.
One would expect this to be negligible or zero.

Other considerations

- Loss absorbing capacity of deferred tax – one would not expect there to be a component for LACDT as Company ABC would be unable to prove that they would be able to recover the deferred tax asset in the next three years.
- Longevity risk – this is a Life Risk component and one would not expect this for a short-term insurer, hence it must be incorrect.
- Own Funds – have the own funds been correctly allocated to each Tier, given that there is a deferred tax asset which would be considered as Tier 3, it is unlikely that this allocation has been done correctly.
- Minimum Capital Requirement – has the MCR been calculated correctly given that the MCR is subject to a minimum of R15m, and it is currently being reported as R10m it is most likely incorrect.

As part of your investigation, you could not find any evidence of an actuarial reserving model being used and noticed the insurer was still using the previous solvency regime's interim measures.

iii. State what impact a more data driven statistical approach could have on the financial position of the insurer.

[7]

Interim Measures were calibrated as a market average with some implicit margin allowed for. Students could note that since this is a new company, streamlined claims processes could be in place and we would expect to observe the following:

- Reduce the average time of reporting and settlement delays

- This will reduce the company set provision vs that of Interim Measures.
- Reducing the provisions - will allow for an improved Own Funds position - and an improved solvency coverage

On the other hand: Since this is a new company, processes might not have matured and therefore process & settlement delays might take a lot longer than standard

- This will cause the provisions to be understated on the interim measures basis, requiring provisions to be increased
- This will have the opposite effect of the above - hence reducing the own funds position.

The interim measures merely consider the IBNR portion of the provision and assumes that adequate case estimates are held for OCR.

- This could very well not have been the case and ABC's case estimates could be understated.
- In this instance the technical provisions would be understated, and you would need to increase the provisions
- This will result in a deteriorated financial position of the insurer

Although, the interim measures were calibrated to include some margin, the margins you deem to hold based on your actuarial model could be significantly different driven by data concerns or the above-mentioned process.

Other points: if using the results of the resultant cashflows - these could vastly differ between IM and the actuarial model. This is unlikely to influence the financial position unless discounting plays a factor

After correcting the standard formula calculation, Company ABC does not meet the solvency requirements.

iv. Define the term SCR coverage ratio.

[1]

- The solvency capital coverage ratio is the ratio of surplus assets to the solvency capital requirement amount.
- Regulatory own funds/required regulatory solvency capital requirement.

v. Describe four suitable solvency relief measures Company ABC could use to increase the SCR coverage ratio, describing the advantages and disadvantages of each.

[12]

1. Increase the amount of own funds the company has. This could be via a shareholder loan, share issues, capital injection etc.

+ Will directly increase the own funds and hence the capital coverage ratio
+Could be relatively straightforward depending on the company's capital and group structure
-Will diminish the return on capital and more return will be required to maintain the return on equity
-Could be inefficient to raise more capital
-May be difficult to raise in stressed economic times
- Also, there is no mention of Company ABC being part of a Group, may not be an option

2. Increase the amount of reinsurance ceded/purchased

+Might be straightforward to arrange.
+Could be done with good profit sharing and commission structures in place
+ Would be good to include other reinsurers on the panel to reduce counterparty default risk
-Will also cede away some of the profit
-Will need to be ceded to reinsurers with good credit quality otherwise counterparty default risk will increase the SCR and the overall benefit will not be as good as anticipated
-May be issues with availability or price

3. Change investment strategy to invest in assets with lower capital charges (although this already seems to be the case)

+ Reduced market risk capital charge, more liquid assets and reduced SCR
-May result in mismatch of assets and liabilities
-Potential lower return on investments which may be an important source of income
-Unlikely to be much that can change from the current asset portfolio
-Moving assets to cash and deposits with banks may then increase counterparty default risk and concentration risk

4. Diversify business by writing different lines of business or in different regions not already targeted.

+ Potentially reduce non-life underwriting risk (especially premium and reserve risk) as a result of diversification benefit
+ Other lines of business or regions could be more profitable ultimately increasing own funds
- However, will depend on new lines sold, if these are loss making then this would ultimately reduce own funds.
- Will need to potentially apply to write new lines of business
- May not have skills or data to price for new lines of business

After interviewing the Board of Company ABC it is apparent that Company ABC has never submitted an ORSA report and there is general confusion as to what such a report entails.

vi. Describe what an ORSA is and list the items you would expect in the annual ORSA report.

[5]

The ORSA is the own risk and solvency assessment of an insurer which is part of SAM Pillar 2.
An insurer is required to conduct an ORSA at least annually where an ORSA report is then submitted to the Prudential Authority.
The objective of the ORSA is to determine the specific risk profile of the insurer and understand the overall resulting solvency given the risk profile, risk appetite and strategy of the insurer.
The ORSA demonstrates to the Prudential Authority that the risk profile of the insurer is embedded in the decision-making process of the insurer.

Items in the ORSA report

- Current financial information of the company
- Current capital requirement and capital target ratios
- Projected solvency capital, for at least 3 years
- Key performance indicators and key risk indicators
- Risk profile of the company (including top risks identified)
- Stress and scenario testing
- Future business activities that will impact capital usage
- Material changes to the ORSA from previous report
- Details regarding any review of the ORSA

You have submitted your independent review to the Prudential Authority.

vii. What courses of action may the Prudential Authority take depending on the outcome of your report?

[2]

- The independent review may indicate that Company ABC is financially sound and no remedial action is necessary, although this would seem highly unlikely.
- The more likely outcome would be that Company ABC is found to have deteriorating financial soundness which may result in the Prudential Authority:
    - Instructing the company that no declaration, payment or distribution of dividends be allowed, if applicable
    - Requiring the company to hold a capital add-on
    - Instructing the company to stop selling any new policies
    - Conducting regular on-site visits
    - Prescribing governance and risk management frameworks

Company ABC previously engaged the services of a Head of Actuarial Function.

viii. List the requirements that the HAF report should cover in its annual reporting to the board of the insurer.

[5]

[Total 50]

Express an opinion to the board of directors on the reliability and adequacy of calculation of the insurer's technical provisions, and minimum solvency, including on:

- the appropriateness of the methodologies and underlying models used, and assumptions made;
- the sufficiency and quality of the data used;
- best estimates and associated assumptions against experience when evaluating technical provisions;
- the accuracy of the calculations;
- the appropriateness of and impact of assumed future management actions and the effect of risk mitigation instruments; and
- the appropriateness of approximations or judgments used in the calculations due to insufficient data of appropriate quality.

Express an opinion to the board of directors on the appropriateness of the Asset Liability Management Policy, Underwriting Policy and Reinsurance Policy.

Express an opinion on the adequacy of reinsurance and other forms of risk transfer arrangements.

Evaluate and provide advice regarding the standard formula and assessing whether the model is an accurate reflection of the insurers risk profile, considering the risk appetite and business strategy

Assess in the insurer's investment policy

Assess the financial soundness of the insurer including the impact of any proposed dividend payments

END OF REPORT