

The Post Exam Summary is designed to provide candidates with insightful observations on candidates' exam performance, coupled with expert recommendations for improvement. This resource consists of a general summary section that applies across multiple exams, followed by individual sections for each of the exams administered during the last sitting. We will continue to expand on this format and enhance the summary in the future.

## **General Observations and Study Tips:**

- Candidates should note that the instructions for constructed response / spreadsheet items explicitly say to show all work; graders expect to see enough support on the candidate's answer sheet to follow the calculations performed. While the graders make every attempt to follow calculations that were not well-documented, lack of documentation may result in the deduction of points in cases where the calculations cannot be followed or are not sufficiently supported. Candidates can reference "An Open Letter from a CAS Grader" for additional insights.
- For spreadsheet items, graders make every effort to locate cells with solutions, but some candidates construct obscure responses within the grey question area. Candidates should attempt to organize their solutions outside of the grey question area and format their solution to assist graders with identifying and assigning credit accordingly. The spreadsheet environment allows for the full calculation without rounding. Do not round along any steps of calculations unless explicitly told to do so. Candidates should make every attempt to link their final answer in the yellow cell when applicable.
- For spreadsheet questions, candidates should list all assumptions within their solutions.
   Some candidates thought certain questions were defective but described their assumptions in the survey instead of within their response. Candidates should be mindful that graders can only award credit based on candidate responses to the specific item, and not information included in the survey.
- An incorrect response to one part of a question will not preclude candidates from receiving credit for correct work on subsequent parts of the question that depended upon that response.
- Candidates should be cognizant of the way an exam question is worded. They must look for key words such as "briefly" or "fully" within the problem. We refer candidates to the Future Fellows article from December 2009 entitled "<u>The Importance of Adverbs</u>" for

additional guidance on this topic.

- Some candidates provide lengthy responses to a "briefly describe" question, which only
  takes up additional time during the exam when a shorter answer would still receive full
  credit.
- It should be noted that all exam questions have been written and graded based on
  information included in materials that have been directly referenced in the official
  Syllabus and exam specific content outlines, which are located on the CAS website.
  Additionally, terminology used in the items is intended to be consistent with the
  terminology used in the official text references. Candidates are encouraged to read the
  text references directly rather than rely solely on alternative sources.
- Candidates should be careful to read the item as it is written. Sometimes the candidate may expect the problem to provide one piece of information (number of variables, e.g.) but it actually provides a different piece of information (number of parameters, e.g.).
- Candidates should familiarize themselves with the Pearson VUE environment before taking the exam. Candidates should not expect all formulas and spreadsheet functionality to work in a similar fashion to other software. Common mistakes include anchoring references (need to manually anchor), and not sorting (e.g., using RANK, SMALL, LARGE) correctly. Candidates are encouraged to review the <a href="Athena"><u>Athena</u></a>
   Spreadsheet Function Comparison.
- Candidates should take care to check cell references in the testing environment.
   Candidates should also be familiar with the potential item types as described in the Content Outline.
- The exam committee appreciates comments made during the exam, especially when candidates feel there is an ambiguity in the item. These comments are read and help the development of future exams.
- Candidates should be sure to review the <u>Know Before You Go</u> page on the CAS website for additional information regarding their exam experience.

# **Exam MAS-I Specific Comments:**

- Overall, the candidates performed best on Domain A, with no one item standing out as particularly troublesome to candidates as a whole.
- Candidates struggled on items from Domain C more than other domains.

### **Exam MAS-II Specific Comments:**

- Some candidates struggled with response options seeming subjective in nature. Reading the text references will help candidates identify the best responses out of the options provided.
- Candidates struggled with understanding and calculating the intraclass correlation coefficient.

#### **Exam 5 Specific Comments:**

- Candidates should review all adjustments and calculations required to calculate an indicated rate level change. Some areas in which candidates struggled on this exam included:
  - o The calculation and application of premium and loss trend periods and factors.
  - Correctly calculating a loss provision or indicated premium using the pure premium method but not correctly translating that into an indicated rate level change.
  - Understanding when to use written or earned premium when calculating underwriting expense provisions. As an example, refer to Spring 2017, Question 4.
- Some candidates had difficulty determining final implemented rates that considered regulatory constraints such as a cap on premium impacts. Candidates should be familiar with the calculations in the example in Chapter 14 of the text and may also refer to Fall 2017, Question 13.
- Some candidates misunderstood the application of coinsurance in the context of property insurance. Candidates should understand the purpose of coinsurance and related calculations. Refer to Fall 2018, Question 13 for an example.
- Candidates should be prepared to analyze graphical results from a GLM analysis and should be familiar with the sample model output provided in Appendix F of the text.
- Candidates should be familiar with techniques used to estimate unpaid allocated and unallocated loss adjustment expenses and should be able to apply them when provided with data. Candidates can review Fall 2018, Question 23 (ALAE) and Fall 2017, Question 26 (ULAE) for examples of these calculations.
- Candidates should understand the mechanics of unpaid loss estimation techniques and be able
  to apply the techniques when provided with data. This sitting, candidates made errors in the
  application of the Bornhuetter-Ferguson and Berquist-Sherman techniques.

## **Exam 6C Specific Comments:**

- Within Content Outline Task A1, candidates often did not answer items related to usage-based insurance pricing (covered in FSCO Technical Notes) and major filing including the items to be included in the filing to support new pricing model (covered in FSCO Private Auto).
- Regarding the flood insurance question, candidates who provided an answer often received full
  credit, but a significant number of candidates left the item blank and could benefit from
  additional review of the GOC Flood Risks reading.
- Overall candidates did poorly on the PACICC question. Some candidates left this question blank
  while others used the wrong limit. Candidates may benefit from additional review of the
  unearned premium refund calculation (and example provided in the paper), with particular
  attention to the dates used in the calculation, as well as from ensuring they are familiar with the
  updated coverage and limits noted on the PACICC website itself.
- Some candidates struggled with IFRS 17 questions related to the loss component. Candidates should be able to describe and calculate the loss components. Sample questions on this topic can be found on the CAS website.
- Some candidates struggled with reinsurance risk transfer related questions. Specifically, some candidates failed to select an interest rate used for risk transfer analysis.
- Some candidates could benefit from further review the CIA Use of Models Educational Note, to
  ensure they are able to list the considerations including but not limited to when using a model
  outside expertise, during sensitivity testing and considerations of input data.
- Some candidates could benefit from further review of the updated CIA Subsequent Events
   Educational Note to better understand the actuarial disclosure of a subsequent event. Many
   candidates discussed how to determine a subsequent event and provided samples of
   subsequent events instead of providing the content of the disclosure of a subsequent event
   (such as nature/description of the event, estimate of financial impact, impact on future financial
   results, etc.)
- Some candidates struggled with disclosures for risk adjustments under different approaches.
   Those candidates may benefit from further review of the updated P&C Memorandum to the Appointed Actuary paper.

### **Exam 61 Specific Comments:**

- Although Domain D, International Reinsurance, is only weighted 5-15% on the exam content
  outline, candidates must be able to understand the basics of reinsurance accounting and the
  resulting impacts on financial statements.
- Candidates should have a clear understanding of any US-based material that is presented
  within the readings as the US is an important player in the international marketplace. A
  significant number of candidates struggled with the small number of questions that were UScentric.
- Candidates should fully review any sample IFRS 17 calculations presented in the readings
  including the Excel appendices of the illustrative example in the <a href="IFRS 17 study note">IFRS 17 study note</a> which is
  available on the CAS website.
- Candidates should closely review the citation list of the current exam content outline to confirm
  exactly which reading sections they are responsible for. Note that the specific sections tested
  and the countries that the exam focuses on may change from exam sitting to sitting.
- A number of candidates had difficulty in describing the oversight role of the actuarial function.
   The professional responsibilities of the actuary in financial reporting are a key concept that should be clearly understood.

### **Exam 6U Specific Comments:**

- Overall, candidates struggled on Section A (United States Laws and Regulations), specifically with the ability to recall information and demonstrate knowledge related to:
  - The state-based regulatory system
  - The US financial regulatory system
  - Examples that would/wouldn't apply under specific laws
  - Considerations and impacts of Credit Score use in insurance considerations and impacts
- Some candidates were challenged with articulating the details of Terrorism Risk Insurance.
- Candidates struggled to apply all the steps to calculate RBC from various datapoints, specifically with the concentration adjustments necessary in some portions of the calculation.
- Candidates had difficulty with the nuances of rating-and experience-based Uncollectible Reinsurance Reserve calculation methods.
- Candidates overall performed well on content related to the Statement of Actuarial Opinion and Actuarial Opinion Summary.

### **Exam 8 Specific Comments:**

 Based on candidate feedback, it is understood that one of the options in one of the multipleselect questions can be interpreted in different ways; to address this, two answers were accepted as full credit.

- Candidates generally perform well on questions related to Bailey & Simon, Couret & Venter, Mahler, and ISO CGL readings.
- For GLM questions, candidates did really well with the quantitative questions, but many struggled with qualitative questions. In particular, candidates have trouble interpreting the outputs of GLM, identify and propose possible solutions, and provide critique on GLM limitations as needed.
- For questions related to calculating trends, many candidates struggled with the number of years
  that needed to be trended. Some common errors relating to trending also include confusion of
  primary/excess and frequency/severity trends. Candidates should be expected to know that
  trending will cause some claims to penetrate the excess layer.
- Some candidates struggled with basic premium calculation. Candidates are reminded to read
  carefully on the plan details of the question and should not assume it is an NCCI retro plan
  (unless it is specifically stated in the question stem). Again, most candidates struggle with
  providing qualitative information about retrospective plans.
- Many candidates struggled with the interactions with policy limit, occurrence limit, per event deductible, and aggregate deductible and identifying them in the Lee Diagram. Some candidates have trouble distinguishing policy limit and individual claim limit related to the calculation of the standard premium.