2020 Case Competition Workshop
January 8, 2020
Agenda

• What to Know
• Prior to First Meeting
• Walkthrough
• Final Words and Tips
What to Know

• Underclassmen ≠ burdens
• Expect to spend long hours
• No single correct solution
Prior to First Meeting

• Set aside a ton of time to meet up, and meet as early and as much as possible
• After you receive the case, read it thoroughly and come to first meeting ready to discuss

• **Advice**: Don’t waste valuable group time reading
Walkthrough
1) **Write down your action plan**

- Prioritize more immediate tasks (e.g. understanding the Excel workbook)
- Look closely. The case might give you a to-do list!
2018 Case:

You will want to compare the actual plan experience against the expected assumption, using a 95% confidence interval around the expected assumption. You may assume

Once you have completed your analysis, you will create a presentation of your results which will be presented to Client. Your presentation should include at least the following items:

- Actual plan experience compared to current assumptions, and possible real life explanations for any changes
- Proposed updated assumptions with justification using the above explanations, if appropriate

You will use the data to perform your experience study, assessing the validity of the current assumption and proposing new assumptions, if necessary. The assumptions you will be studying are:

- Active Retirement Rates
- Terminated Vested Retirement Rates
- Active Termination Rates
2019 Case:

Part a:

Before setting up the rater, you are asked to verify the Driver Age factor from a prior model output. (See “Driver Age Factor” tab for details and instructions)

Part b:

Given the rating steps and factor tables (including the Driver Age factor you just calculated), create a rater in Excel that has the following functionalities:

- Display the rating factor for each rating step
- Display the total premium for each vehicle by coverage
- Display the total premium for the policy
2) Look for definitions and other information in the case

- This can help you get started on that to-do list
- Find out what information you already know from the case question and what you still need to figure out
2018 Case:

- The case question defined each rate; we just needed to determine how to calculate them.

Note that **Active Retirement Rates** apply to current actives who are eligible for immediate retirement. The decrement describes the probability that they will commence their benefit in the next valuation year.

**Terminated Vested Retirement Rates** apply to current Terminated Vested participants who are eligible to commence their benefit. The decrement describes the probability that they will commence their benefit in the next valuation year.

There are a few types of participants that you will see in the data files:

- **Active:** These participants are currently employed at CliEnt and earning service toward their pension.
- **Terminated Vested (TV):** These participants are no longer employed at CliEnt. They are owed a future benefit, but have not commenced their benefit yet.
- **Terminated Not Vested (TNV):** These participants are no longer employed at CliEnt. They are not owed any future benefit, because they did not vest in their benefit before termination.
- **Retiree:** These participants are no longer employed at CliEnt and are currently receiving their pension benefit from CliEnt.
The company offers four main auto insurance coverages: Bodily Injury Liability (BI), Physical Damage Liability (PD), Comprehensive (COMP), and Collision (COLL).

Besides the “Driver Averaging”, another common option used for driver level rating is called “Driver Assignment” — Each vehicle in the policy will be assigned to a primary driver, whose driver profile will be used to determine the driver level factors.
3) Examine data

- Comparing the data to your action plan, determine what information you need to know
  - Is there any terminology you need to look up?
  - Do you need to research the qualitative factors contributing to the numbers?
- Think about what you know and what you do not know. Discuss with your teammates what steps need to be taken to accomplish your task
4) Delegate duties appropriately

• Excel isn’t like Google Sheets where you can collaborate in real-time
• Person most experienced with Excel can be the “keeper” of the team’s data
• Roles are fluid and are NOT strict
Deep Dive into Excel Role

- Rearranges data to best suit team’s needs at different times
- Uses PivotTables to quickly determine useful numbers
- Takes breaks to convene with rest of the team when there’s a major obstacle to overcome
- Explains Excel procedures to another member who’s experienced with Excel to catch potential errors
- Ex: Between group meetings, the Excel person on my team created columns using COUNTIF to sort data
Deep Dive into Non-Excel Roles

• Don’t avoid Excel (i.e. may help fill in gaps)
• Research background info, like qualitative trends that may be associated with quantitative trends in data
• Discuss how to make certain calculations. Once everyone agrees on the methods, assign calculations to each person
Roles are not isolated!

- If multiple team members are experienced with Excel, you should swap roles periodically and check in with each other.
- Non-Excel people can ask Excel person to determine useful numbers for calculations.
- Excel person contributes to major discussions and must also agree with methods for calculations.
- Non-Excel people can double check Excel person’s work and process.
Example of Collaboration Between Roles

To work around the lack of real-time collaboration in Excel:

- Non-Excel people can make calculations and graphs in their own Excel sheets
- Individual sheets are shared with Excel person to be compiled into one central document
- Excel person shares consolidated sheet with rest of the team so that everyone has updated info to work with
5) Assign tasks to each person

- Excel person starts organizing data in useful manner
- Other team members select one piece and start analyzing
- Re-assign new tasks as they’re completed
  - i.e. Researching qualitative trends, creating other figures, etc.
6) Assign different parts of the presentation to each person

- Each person creates PowerPoint slides for their respective parts
- Send the slides to one person to compile into a single presentation
- Share the unified presentation with the whole team
7) Everyone writes the executive summary

• Using Google Docs to collaborate may be a good idea
• Discuss content to be included and create an outline
• Assign each person a part to write
• Read the entire summary as a group and make edits as needed
8) Practice presenting

• Practice individually
• Run through entire presentation as a group
• Practice gestures and body posture (also think about where each person will stand)
• Don’t be afraid to give each other feedback
9) SUBMIT DELIVERABLES ON TIME!

- Include presentation slides, executive summary, and Excel workbook (as necessary)
- You can’t present what you don’t submit!
Recap of Walkthrough

1) Write down action plan
2) Look for definitions/information
3) Examine data
4) Delegate duties
5) Assign tasks
6) Make the presentation
7) Write the executive summary
8) Practice presenting
9) SUBMIT DELIVERABLES
Final Words and Tips

• Try your best and present ANYTHING you come up with, even if you don’t think you have much to present

• There’s nothing wrong with stating what you know and don’t know
  • My team included a tedious formula for calculating liabilities that we WOULD’VE used if we had more time
  • If you know you don’t have time to do something, don’t waste time on it; focus on getting something that CAN be presented

• Use presentations from previous years’ finalists as examples
Final Words and Tips

• ABSOLUTELY talk to each other constantly
  • Explain process of calculations of Excel procedures to each other to reveal errors or details that were overlooked

• Keep a running list of any assumptions you make, calculation methodologies, etc.

• Don’t stress over lack of Excel experience
  • Attend BAS Excel workshops
Final Words and Tips

• Prepare for the unexpected
  • My team 100% didn’t think we’d make it to the final round, but we ended up winning
  • Don’t be intimidated out of doing the case competition!

The Case Competition is a worthwhile experience regardless of the outcome. What are you waiting for?