INTRODUCTION TO ACTUARIAL MODELS

ASSIGNMENT: -

NAME - SANSKAR JAISWAL

CLASS- FY-BSC

SECTION -A

ROLL NUMBER - 35

1.) The key steps in model development are the following-

- Create a well-defined set of goals that need to be met through information analysis results.
- Obtain the data required for analysis.
- Collection of information from relevant sources.
- Processing and formatting data for analysis, e.g. upload to spreadsheet, website or other model.
- Cleaning data, eg dealing with unusual, missing or inconsistent values.
- Test data analysis, which may include descriptive analysis, abstract analysis or predictable analysis.
- Modeling data.
- Communicating results.
- Process monitoring; update data and repeat process if needed.

2.) The items to be included are as follows: -

- Simple random sampling e.g. selecting 10 cars from over 100 cars of different brands. Each car has an equal choice. So we could end up choosing 10 Honda cars.
- Stratified samples e.g. when we divide 10 brands into groups and select one from each group. So the sample shows the genre diversity as seen in the group.
- Alternative sampling method.

3) The stages we can go through in identifying the appropriate model are -

- Clarify the purpose of the task. Why does the government want death predictions? When is the forecast required?
- See available literature on death-dealing models, and talk to a specialist in the field of practice. Consider using or modifying existing models used in other countries.
- Based on what data is available, describe the model you intend to use. If the data is simple and has no details, then the complex model is incorrect. Will a deterministic or stochastic model fit in this case?
- Identify the appropriate computer software to use the model, or, if not, write the prescribed program.

• Remove an error in the system or, if the existing software is in use, check that it performs the functions you intend to perform.

4.) The most important things I will include in the model text are -

• Modifications performed to verify the output of the model.

• Description of input data.

• Any model limitations noted (example - possible infidelity).

• The basis on which the model type is selected (example - deterministic or stochastic)

• References to any research papers or interviews with qualified professionals.

• Summary of model results.

• Name and professional qualifications.

• The purpose or objectives of the model.

• Guessing under the model.

• How the model can be modified or expanded

6.) Possible reasons for different results are the following: -

• One or both of the runs (first or new) may have been incorrect as, for example, the second student may not have fully mastered the set (for example he may not have

followed the procedure correctly, or he may have used a different guess).

- The difference between the two runs may not be just the parameter change, for example two runs may use different random seeds, or a second run may have fewer simulations.
- Expecting the model to be resistant to this parameter may have been incorrect.

7.) The suitability of the proposed model depends on the following criteria: -

- Model is specific to describe editors / developers.
- It should consider whether there are trends in interest rates, rather than simply using current prices.
- Mortality rates will not be significant compared to speculative uncertainty, because age rates with non-egg fertility rates should be low and infant mortality rates should be low.
- The current age distribution of the area may not represent that of the new city as, for example, rural areas may have a different distribution of urban areas.
- Look at the type of houses being built and how they are marketed e.g. are they family houses?
- The model should be easy to use.

• The specified data may be obtained from trusted sources.

• Although it is possible that the first place for organized people can be a mistake

8.) The factors that a company should consider when developing a model are the following: -

• Common cases of illness at the national level may need to be addressed.

• Model and resources available for modeling.

• Staff capacity. Will external coordinators be required?

• A description of the illness and the level of benefits paid under this scheme.

• Is the company planning to change the characteristics of its employees? For example, does it plan to hire more mature people?

• Model communication ease

• Staff capacity. Will external coordinators be required?

• That the company has made any previous efforts to model disease levels among its employees, and how successful they are.

• Model complexity, e.g. whether it should be stochastic or deterministic. More sophisticated models will be more expensive to prepare and use, but ultimately there may be

A reduction in the return to additional complications.