

## **Rate Filing Task Force Model User Hints**

### **User's Guide**

Read the Model User's Guide found on pages 5-8 of the Model Documentation (ratemodel\_2\_june04.pdf). Note there are model specific instructions for each of the Current Market, Pre-Funding, Interblock Subsidy, and Individual Market Pool spreadsheets.

### **Review Input**

Always review the input sheet of the AAA Rate Filing Model - Exhibits.xls spreadsheet to ensure that the input is as you intended. In making multiple tests, it is quite easy to forget to undo previous changes in assumptions.

### **Run Rate Compression Macro**

You must run the IBS Rate Compression model's macro to restore profit each time you modify any global or model specific assumptions that affect the IBS Rate Compression model. Depending on the speed of your computer and the type of assumption being tested, the macro can take quite some time to run. The macro button is found in the AAA Rate Filing Model - Interblock Subsidy.xls spreadsheet, Rate Compression Assumptions sheet, cells AO2 through AQ and is labeled as Set Profit Difference % to Zero.

### **Expected Premium Relationship To Company New Business Rates**

The Expected Premium assumption for each model should generally be within \$1 of the Company New Business rate. The Expected Premium value should be the same for the Current Market, Individual Market Pool and Interblock Subsidy models. The Pre-Funding model requires a different Expected Premium. This value is entered in the following cells:

AAA Rate Model - Current Market.xls, Current Marker Assumptions sheet cell E15

AAA Rate Model – Pre-Funding.xls DBPR Assumptions, cell E10

AAA Rate Model – Individual Market Pool.xls, IMP Assumptions sheet, cell R43

AAA Rate Model – Interblock Subsidy.xls, Current Market Assump 5 blocks sheet, cell M15

The need for an Expected Premium arose when developing the Pre-Funding model. With that model we need to start the pricing process with some idea of what the final premium will be, in order to adjust the lapse rates used in setting the reserve factors. Manually setting an Expected premium allows us to avoid circular formula references. Once we introduced the Expected Premium concept in the Pre-Funding model, we also included it in the other models, which made the pricing more accurate. The Pre-Funding model is a bit more sensitive than the other models to getting the Expected Premium right, because missing it doesn't just give you the wrong first year premium, it also gives you the wrong reserve factors.

### **Partial Pre-Funding Input**

You can do partial pre-funding in the Pre-Funding model by setting the "Excess of Premium Trend over Claim Trend" assumption in the DBPR Assumptions sheet, cell F11, to something greater than 0%. "Full Pre-Funding" means that premiums are expected to increase with age and medical trend; all durational effects are pre-funded. "Partial Pre-Funding" means that premiums go up not just with age and trend, but also by a bit more for durational effects. Reserves are set up to reduce the amount of increase due to duration, but do not eliminate durational increases.

### **Review Output At Detail Level**

The AAA Rate Filing Model – Exhibits.xls spreadsheet summarizes many variables but by necessity does not contain all the detail results. Some results are shown as averages and the direction or magnitude of an assumption change may not be readily apparent. It is often helpful in these situations to track the effect of an assumption change at a detail level for an issue year cohort. The models contain up to 15 years of issues and each issue year cohort may react differently to any assumption change.

### **Understand What You Are Changing**

Review the Documentation to be sure you understand what the values in the Global Assumptions sheet of the AAA Rate Filing Model – Global.xls spreadsheet are intended to do and where they might be used. Note each model, Current Market, Pre-Funding, Interblock Subsidy, and Individual Market Pool, picks up its global assumptions from the AAA Rate Filing Model – Global.xls spreadsheet. There are unique assumptions for each model which are also summarized in the Input sheet of AAA Rate Filing Model - Exhibits.xls spreadsheet.

### **Only Open One Version Of Exhibits.xls spreadsheet**

Do not open more than one AAA Rate Filing Model - Exhibits.xls spreadsheet at a time. For example, if you run several tests and could save the results as AAA Rate Filing Model - Exhibits1.xls, AAA Rate Filing Model - Exhibits2.xls, AAA Rate Filing Model - Exhibits3.xls, etc. We have observed values in these spreadsheets change when several are open at the same time, even if you did not update links. Even though links are not updated, there seems to be some sort of logic conflict in Excel in that each Exhibits.xls spreadsheet refers to certain assumptions, but those assumptions are not necessarily the same for the different versions of the AAA Rate Filing Model - Exhibits.xls spreadsheets created. We recommend printing the Global Summary and Input sheets for each run you make. Then the printed versions can be compared or you can view one of the AAA Rate Filing Model - Exhibits.xls spreadsheets and compare it to previously printed versions.