

# 2018 Errata

\*Important Errata in [blue](#)

## Brehm Ch. 1

- ◇ The question for EP #1 should ask for "the four stages of the evolution of a single LOB." (03/23/18 - page 1157)

## Brehm Ch. 2

- ◇ Each reference to RAROC should say RORAC to be consistent with how the paper describes it. I am making this a blue errata because I want to make sure you use the correct terminology on the exam. This errata affects the small section where it shows up in the outline, as well as EP #5 (03/23/18 - pages 981, 1017, and 1024)

## Brehm Ch. 3

- ◇ The third bullet should say "If  $R(1) > 0$ ..." (02/15/18 - page 1071)

## Goldfarb

- ◇ The first dividend shown when calculating  $V_0$  should be 15000, not 20000. The final answer should be \$778,892 (02/15/18 - page 904)
- ◇ On page 857, I mention the reasons why the FCFF method is difficult to use for insurance companies. I want to add a bit more explanation to the "policyholder liabilities vs. debt" reason. The FCFF method requires us to subtract debt from the total firm value to obtain the equity value. For insurance companies, debt is difficult to define. How do you know what should be considered as debt? For example, there is no economic reason to treat policyholder liabilities differently from debt. This is the issue. For insurance companies, there is no clear guidance on what should be subtracted. (03/23/18 - page 857)
- ◇ For MP #9 part b, the problem should say "Calculate the value of the **ability to delay the investment decision.**" The value of the opportunity is calculated in part a. We are calculating the value of the option in part b. (04/16/18 - page 894)

## Errata

### Mack (2000)

- ◇ On MP #4, I should have specified that  $c = p_k$ . Do the problem using that assumption (02/02/18 - page 13)

### Marshall

- ◇ In my solution to part g., the wording for the HO CoV under “External systemic risk” is poor. The intent of the solution is to point out that the HO CoV is odd since we would typically assume it would be lower than the WC or auto CoV for outstanding claim liabilities (04/04/18 - page 847)
- ◇ The solution to ES #11 should say “how key assumptions underlying the **central estimate** calculation would need to change in order to produce a **central estimate** equal to the risk-loaded actuarial central estimate.” Note that this is described correctly in the guide and the online video. It’s just ES #11 where the description says “risk margin” when it should say “central estimate” (04/28/18 - page 825)

### Meyers

- ◇ On EP #4, graph A should be monotonically increasing. When answering the problem, assume the graph is monotonically increasing but has the same general shape (02/02/18 - page 779)
- ◇ In the outline, I mentioned that the ODP model for paid losses produces estimates that are biased high. Please ignore the line on the bottom of page 763 that says “by producing higher expected loss estimates, the left tail becomes lighter.” This is a typo. Meyers is not commenting on the tail size and/or the size of the loss distribution. He’s just saying that all of the estimates produced by the model are too large (i.e.the model is shifted too far to the right) (03/23/18 - page 763)

### Sahasrabuddhe

- ◇ The first subscript in  $F_{3,2}^{5000}$  is incorrect. Since we are using the simplified method, we assume that the triangle given in the problem is at the latest cost level. Thus, the first subscript should be a 4. Each instance of  $F_{3,2}^{5000}$  in the solution should actually say  $F_{4,2}^{5000}$  (02/22/18 - page 664)

## Shapland

- ◇ The definition of  $F(d)$  in the source is a bit confusing. The simplest way to think about it is as an age-to-age factor. Thus, on the bottom of page 465 of the outline, it should say "  $F(d)$  = the factor applied to  $c(w, d)$  to estimate  $c(w, d + 1)$ " (02/02/18 - page 465)
- ◇ On page 482 and 538, it should say "**three**" options for dealing with extreme outcomes. On page 547, the final option should be removed (this comes from the original version of the paper before it became a monograph) (03/23/18 - pages 482, 538, and 547)
- ◇ When adjusting for heteroscedasticity using variance parameters, always use **standardized** residuals. In the example and practice problem shown in the guide, this is what happens. However, the formula for the adjustment factor  $h_i$  shown in the guide is missing  $H$  subscripts which signify that standardized residuals are being used. Since the same formula was copied and pasted throughout the outline, this error shows up on multiple pages. Bottom line, when using variance parameters, use standardized residuals to produce the adjustment factor. When using scale parameters, use unscaled Pearson residuals to produce the adjustment factor. In both cases, the adjustment factor is applied to the standardized residuals. (04/04/18 - pages 486, 488, 530, and 567)
- ◇ In the solution to part b, the second bullet should say "adjust the latest diagonal of each sample back to a **three**-month period..." (04/04/18 - page 560)
- ◇ In the solution to part c, there is a reference to using the maximum standard deviation to calculate the hetero-adjustment factors (under the variance parameters approach). This is a holdover from the old Shapland/Leong paper. In the new paper, we use the **total** standard deviation to calculate the hetero-adjustment factors (again, under the variance parameters approach) (04/16/18 - page 570)