Informal Discussion Transcript
Concurrent Session 1B: Late Life Mortality Curves

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KAI KAUFHOLD: My name's Kai Kaufhold. I'm with Ad Res Advanced Reinsurance Services, a consulting firm. First of all, thank you. Those were very interesting presentations, and a very thoughtful discussion.

First, I'd like to just briefly comment on the period cohort discrepancy that Jean-Marie seemed a little bit upset about. I think it is an absolutely valid question to think about period versus cohort mortality, especially when we're trying to actually understand the future lifetime of individuals who have pension liabilities, for instance. So it really depends on your application. The second comment I'd like to make is on the fact that the frailty model, which Leonid has also published on, is essentially the same model as Beard published in 1958, and it's just a nice mathematical feature that you can explain it by having different frailty at birth, but really what it gives you is an inhomogeneous mortality rate.

So I'm with Roland on that one, but my question to Roland is this: Have you actually found a plateau, or have you found a function of the heterogeneity of the different populations that you studied? A comment from my side: If we're actually applying this plateau, or if we're trying to understand this plateau for a pension situation or an annuity situation where we are actually looking at possibly a more homogenous group, will that plateau be the same, and I would argue not.

ROLAND RAU: Sorry, will the plateau be—?

KAI KAUFHOLD: Will the plateau be the same for different portfolios, or can it not be the same, because we have different levels of heterogeneity within different portfolios. Or to rephrase the question: Are the different levels of the plateau for the different countries caused by the heterogeneity within those populations?

ROLAND RAU: Maybe yes, maybe no. I don't know. If you look at the paper, we estimated the plateau for different countries, and you see that they are varying. What would have been maybe a good point of analysis would be to look at what is the chance from birth to reach that age where we start estimating as some kind of indicator how much selection was at work already beforehand.

Session 1B: Older Age Mortality Trends Q&A only

KIRILL ANDREEV: My name is Kirill Andreev, and I'm from the Population Division of the United Nations, and I have actually two comments, not questions. So here's my comment to Leonid. Puzzling results you obtained for the factor 2 for the United States are due to data quality problems with the U.S. data at advanced ages. If you want to make mortality projections based on directly computed death rates, you need to adjust or correct death rates at advanced ages for the United States. Once the death rates are adjusted, you can use U.S. data from 1933. There is no recipe how to do the adjustment; it's an arbitrary decision.

Next my comment for Roland, and it is actually just a repeat of what just was said about the gamma-Gompertz model. Logistic model of mortality was actually proposed in 1932 by Perks, and he was an actuary. Compositional interpretation of the logistic curve was proposed by Beard in 1959. Beard used exactly the same model specification as gamma-Gompertz: gamma distribution for frailty and Gompertz for individual mortality. A proportional hazard assumption was used to combine individual mortality into population mortalities to explain the logistic mortality curve. Thank you.