1067-60-1126 **Yumin Lolita Wang*** (yumin@math.binghamton.edu), Department of Mathematical Sciences, Binghamton University (SUNY), Binghamton, NY 13902, and **Gang George Yin** (gyin@math.wayne.edu), Department of Mathematics, Wayne State University, Detroit, MI 48202.
Quantile Hedging for Guaranteed Minimum Death Benefits with Regime-Switching. Preliminary report.

Quantile hedging for contingent claims plays a key role in incomplete markets when perfect hedging is not possible. Guaranteed minimum death benefits (GMDBs) are present in many variable annuity contracts, and act as a form of portfolio insurance. They cannot be perfectly hedged due to the mortality component and incompleteness resulting from the regime switching, except in the limit as the number of contracts becomes infinitely large. In this article, quantile hedges for regime-switching diffusion models are developed. Numerical examples are also presented to illustrate our results. (Received September 19, 2010)