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Roger M. Hayne* (roger.hayne@milliman.com), Milliman Inc., 70 South Lake Avenue, Suite 1100, Pasadena, CA 91101-4705. A Stochastic Framework for Incremental Average Reserve Models.

Much of casualty actuarial practice involves extrapolating future payments on books of insurance contracts given historical information of losses from similar contracts in the past. Very often the underlying loss generating process is unknown or poorly understood, so principles-based models, such as those available in many branches of physical sciences are not available. Traditional methods have been heuristic at best and provided "estimates" without any assessment as to the uncertainty in those estimates. We have attempted to cast one of the more common of the traditional methods into a stochastic framework and use the power of maximum likelihood estimation (MLE) to provide not only estimates of future payments but also rough gauges of how uncertain those estimates are, including both process and parameter uncertainty. (Received September 14, 2009)