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INCURRED BUT NOT REPORTED CLAIMS RESERVES ESTIMATES METHODS FOR AUTO INSURANCE

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07/8512

Dissertation submitted in partial fulfillment of the requirements for the degree Master of Science in Financial Mathematics

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DECLARATION OF THE CANDIDATE

I hereby certify that this dissertation does not incorporate acknowledgement of any material previously submitted for a degree or Diploma in any University, and to the best of my knowledge and belief it does not contain any material previously published or written by another person or myself expect where due reference is made in the next text.

UOM Verified Signature

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DECLARATION OF THE SUPERVISOR

I have supervised and accepted this dissertation for the submission of the degree.

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B.C.Jeewantha

November 2011

ABSTRACT

Due to unprecedented increase in motor insurance coverage, insurance companies are more focus on their financial reporting and general actuaries desire to incorporate more statistical concepts into their daily responsibilities, such as reserve estimates. Recognizing this increased financial oversight, this paper considers develop a model to estimates the Incurred But Not Reported Claims Reserves (IBNR) for Sri Lankan Auto Insurance Market, specifically geared for the work of general actuaries in auto insurance industry. Development factor method also known as completion factor method with the chain ladder approach used to derive the IBNR estimate as a deterministic approach and the regression approach used to develop a model to estimate IBNR for the most recent months. However, combining framework for both methods is important on the same problem. Using the both deterministic and statistical methods, identify the linear and log linear regression models to estimate the IBNR claims for the recent months and then the total estimates throughout the time period after comparing the estimated values with the values obtained from the completion factor method. The developed models will geared for the work of general actuaries in auto insurance in Sri Lankan insurance industry and this will serves to stimulate further research and development of innovative techniques for more accurate IBNR predictions.

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