## **COMPLETION REPORT**

## **Research Summary**

Two manuscripts have been resulted from this research project.

The first one is entitled "Personal Injury Compensations in Japan, Singapore and Malaysia: A Comparative Study"(日本、シンガポール、マレーシアの人身傷害保険:比較研究). Singapore, a common law country, has been adopting the conventional approach to selecting multipliers. This approach is based on the applied wisdom of the courts over many years. In choosing a particular multiplier, the court will make comparisons with multipliers used in similar cases. The "consensus" in Singapore is evolved from the awards made by Singapore judges over the years. It should be noted that English cases are not the authority for amounts to be awarded. The conventional method is based on analogy, which has apparently been recommended for use in Singapore, by the judges, in the wake of the Privy Council decision in Lai Wee Lian v Singapore Bus Service (1978) Ltd ([1984] 1 MLJ 325). In Malaysia, since the enactment of the Civil Law (Amendment) Act 1984 on 1 October 1984, a fixed statutory formula for calculating the multiplier has been in force. It is, in fact, a rather unique method of calculating loss of future earnings compared to other jurisdictions. The obvious disadvantage of the Malaysian method is that there is little, if any, actuarial and economic evidence in support of the formula. Japan is a civil law country and, under the Automobile Liability Security Law Enforcement Order (Cabinet Order No. 286, 1955) -- 自動車損害賠償保障法施行令(昭和30年政 令第286号) --, periodic payments may be capitalized using prescribed annuity factors. These tables of factors are publicly available, for example, the webpage of Non-life Insurance Rating Organization of Japan (www.nliro.or.jp). Analogous to the English Ogden Tables, the Japanese tables of annuity factors are constructed using sound actuarial and economic principles.

The second manuscript is entitled "Actuarial Assessment of Damages in Personal Injury Litigation in Japan: the Impact of Demographic and Financial Risks" (日本における人身傷害所公による損失の数理的な評価:人口統計的な影響と金融的なリスク). Actuarial tables, based on the past demographic data, have been used in assessment of damages in personal injuries in Japan. Given that multiplier tables require an estimate of how long the average person will live into the future, there is general agreement in Western countries that it makes more sense to use projected rather than historical survival probabilities. However, in Japan, actuarial tables based on projected population figures are not available. In this manuscript, we construct the multiplier tables for Japan using a Lee-Carter mortality forecasting model. A set of Japanese actuarial tables have been derived and compared with the existing tables. The financial risks and impacts of the longevity on claims of personal injury litigation are discussed.

## Publication of the Results of Research Project:

Verbal Presentation (Date, Venue, Name of Conference, Title of Presentation, Presenter, etc.)
"An Actuarial Approach to Assessing Personal Injury Compensations in Singapore: Theory
and Practice", The 3 <sup>rd</sup> General Insurance Conference, "Managing Risk or Rolling the Dice?"
Singapore, 2 June 2011. Presenter: Wai Sum Chan.
** presentation slides attached, and the grant from Sumitomo Foundation of Japan acknowledged **
Thesis (Name of Journal and its Date, Title and Author of Thesis, etc.)
Book (Publisher and Date of the Book, Title and Author of the Book, etc.)