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## A Framework to Measure Risk of Contingent Indexation for Define Benefit Pension Plans

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This talk will present a framework to simulate the experience of a Canadian defined benefit final average pay contributory pension plan over a period of time. Recent changes in provincial pension legislation have highlighted the link between the notion of future contingent indexation and the stability of future contribution rate. Interesting intergenerational transfer issues thus arise between pensioners, active plan members and the plan sponsor, especially for mature contributory plans. In order to obtain a plausible population of retirees and active plan members for a mature plan, the generation of the population is done over a long period of time using an array of plan participant's characteristics. This provides a representative current population of plan members to simulate the future experience of the plan over a horizon of fifteen years. Combining a stochastic economic scenario generator and the random impact of mortality and other decrements, the plan experience and financial condition is observed annually. Various measurements of interest, such as the annual contribution rate, the funding ratio and the percentage of indexation provided to current retirees in relation to inflation are quantified for the various scenarios. The trade-off between the indexation provided and the level of contribution required is commented.