The Role of Actuaries in Managing Defined Contribution Risks

By Minaz Lalani

Traditionally actuaries have participated in managing and quantifying Defined Benefit (DB) risks. There is sparse literature on managing and quantifying Defined Contribution (DC) risks; this lack of literature may be explained by the fact that the historical view has been that the plan sponsors bear the risks of DB plans and employees bear the risks in DC plans. The reality is that DC plans carry material risks for sponsoring employers, and these risks should be actively managed and quantified. This article provides some insights into how actuaries can manage DC plan risks. In a follow-up article, we will address the quantification of DC risks.

DC Plan Risks	Description of Risk	Applicability to DC Plans
Design	Risk of providing less than the intended level of retirement income	Will the DC plan deliver income replacement levels at the target investment return and retirement age? If not (either too high or too low), what are the potential risks to the plan sponsor?
Communication/ Education	Risk of inadequate, or unclear communication	Is employee communication material clear and concise? Is it customized and personalized?
Governance	Risk due to lack of structure, policies and processes	Is there an effective structure that promotes clear accountability and responsibilities? Are the policies and processes well defined?
Inflation	Risk of earning investment return less than the inflation rate	Do the investment options, including default option, prevent employees from achieving inadequate investment returns relative to inflation?
Investment	Risk of not achieving desired / target level of investment return	Can the desired / target investment return be achieved by utilizing the investment options available to employees?
Legal	Risk of failing to meet explicit, or implied contractual commitments	Have you clearly articulated your commitments in employee communications, or relevant documentation? Are you delivering on these commitments?
Longevity	Risk of outliving retirement funds based on standard life expectation	Have employees been made aware of their likelihood of outliving their DC account balances?
Retirement Modelling	Risk associated with using unsophisticated models, or models based on ill-conceived notions	Did employees contribute as expected, to earn matching employer contributions? Did they invest based on their expected risk/return profile?
Market	Risk exposure to potential fall in asset value, or capital loss	Are there safeguards to ensure that employees nearing retirement are not exposed to significant loss of principal?
Operational	Risk due to inadequate processes, systems or ill-trained people	Are there performance standards internally and with external vendors to ensure first-rate service to employees?
Settlement	Risk of conversion to a stream of periodic payment producing lower than targeted amounts	Are settlement options available to employees, or are employees made aware of other settlement or withdrawal opportunities?
Strategic	Risk of failure to meet business objectives	Does the DC plan support business and human resource objectives? For example, attraction / retention strategy

It is important to note that this list of DC plan risks is not exhaustive; also, there are significant interrelationships between the identified DC risks. Actuaries should be aware of these interrelationships when managing and quantifying these risks.

Defined Contribution Risks at a Glance

In order to better manage DC risks for plan sponsors, actuaries should be aware of the key risks inherent in DC plans. These key risks (in no order of priority) are summarized in the table below.

DC Risk Management

Over the next 10-15 years, plan members will retire in increasing numbers from DC plans which were established in the 1990s; many commentators believe that inadequate management of DC plans will result in litigation as DC plan members begin reaching retirement age with less than adequate retirement funds. Actuaries can play a significant role in assisting DC plan sponsors manage DC plan risks, and can have an immediate impact by contributing towards a key risk control — developing and implementing DC plan member education and communications strategy and policies. Below is a list (albeit an incomplete list) of actuarial involvement:

- participating with the DC plan sponsor in clearly defining the sponsor's intended portion of the employer's total retirement income and ensuring that the communication material is internally consistent and accurate
- preparing illustrations and projections of retirement income that are based on sound and acceptable assumptions for investment returns, mortality and retirement ages
- assisting DC plan sponsors in developing alternative scenarios (including stochastic analyses) to better understand investment and longevity risks for pre-retirement (accumulation phase) and post-retirement (withdrawal phase)
- developing web-based retirement modelling tools that provide a more sophisticated and complete picture of expected range of total retirement income using internally consistent actuarial assumptions

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Secretariat Holiday Schedule

Please note that the CIA office will be closed on the following days:

Monday, December 24, 2007
Tuesday, December 25, 2007
Wednesday, December 26, 2007
Tuesday, January 1, 2008