A capital allocation based on a solvency exchange option

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Capital allocation is an important aspect of insurance risk management. In this talk we introduce a new capital allocation method based on the idea of a solvency exchange option. The proposed method explicitly accommodates the notion of limited liability of the shareholders and can further decompose the allocated capital, so that each stakeholder can have a clearer understanding of their contribution. We also challenge the no undercut principle, one of the widely accepted allocation axioms, and claim that this axiom is a property that certain allocation methods may or may not meet.