



复旦大学数学科学学院 数学综合报告会

报告题目: **The X-Valuation Adjustment and BSDEs**

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摘要: Economic capital (EC) can be used as a funding source by banks, at a risk-free cost instead of the additional credit spread of the bank in the case of unsecured borrowing. This results in a significant reduction of funding costs and an FVA (funding valuation adjustment) ignoring it would be grossly overestimated. Mathematically the intertwining of EC and FVA leads to an anticipated BSDE (ABSDE) for the FVA, with coefficient entailing a conditional risk measure of the one-year-ahead increment of the martingale part of the FVA itself. Accounting further for the KVA (capital valuation adjustment) component of economic capital, with the ensuing feedback condition that EC must be greater than KVA, yields a system of ABSDEs for the FVA and the KVA processes considered simultaneously.

In this talk we show that the ensuing (FVA, KVA) system of ABSDEs is well-posed and we establish the convergence of a Picard approximation scheme. This is first done for a bank without debt. In the realistic case of a defaultable bank, the resulting ABSDEs, which are stopped before the default of the bank, are solved by reduction to a reference filtration.

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