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## Interest-Rate Modelling in Collateralized Markets: Multiple curves, credit-liquidity effects, CCPs

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*(Submitted on 4 Apr 2013)*

The market practice of extrapolating different term structures from different instruments lacks a rigorous justification in terms of cash flows structure and market observables. In this paper, we integrate our previous consistent theory for pricing under credit, collateral and funding risks into term structure modelling, integrating the origination of different term structures with such effects. Under a number of assumptions on collateralization, wrong-way risk, gap risk, credit valuation adjustments and funding effects, including the treasury operational model, and via an immersion hypothesis, we are able to derive a synthetic master equation for the multiple term structure dynamics that integrates multiple curves with credit/funding adjustments.

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