Implementation of a continuous-in-time financial model <u>Tarik Chakkour</u>

SOFI is a software tool marketed by the company MGDIS. It is designed to the public institutions such local communities to set out multiyear budgets. SOFI is based on a discrete financial modeling. Consequently, the default of SOFI is using tables of type Excel. We build in [1, 4] a new model with using an other paradigm. This new model is based on continuous-in-time modeling and uses the mathematical tools such convolution and integration, etc. We study in [2, 5, 6] the inverse problem of this model on the space of square-integrable functions defined on a compact, and on radon measure space.

We have developed in [3] two industrials libraries to implement measures and fields for the continuousin-time financial model. In this presentation, we describe how we implement and check this API. We called them LemfAN (Library Embedded Finance And Numerical Analysis) and Lemf (Library Embedded Finance). The integration and the validation of these libraries in SOFI are succefully made.

Keywords: API; mathematical computation; algorithms; discrete mathematics; software tool.

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Tarik Chakkour, INRA, Institut national de la recherche agronomique, 5 chemin de Beaulieu, 63000 Clermont-Ferrand Tarik.Chakkour@inra.fr