



Fibrations of financial events

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In this paper we shall prove that the plane of financial events, introduced and applied to financial problems by the author himself (see [2], [3] and [4]) can be considered as a fibration in two different ways. The first one, the natural one, reveals itself to be isomorphic to the tangent- bundle of the real line, when the last one is considered as a differentiable manifold in the natural way; the second one is a fibration induced by the status of compound interest capitalization at a given rate i in the interval $]-1, \infty[$. Moreover, in the paper we define on the first fibration an affine connection, also in this case induced by the status of compound interest at a given rate i . The final goal of this paper is the awareness that all the effects determined by the status of compound interest are nothing but the consequences of the fact that the space of financial events is a fibration endowed with a particular affine connection, so they are consequences of purely geometric properties, at last, depending upon the curvature determined by the connection upon the fibration. A natural preorder upon the set of fibers of the second fibration is considered. Some remarks about the applicability to economics and finance of the theories presented in the paper and about the possible developments are made in the directions followed in papers [1], [5], [6], [7], [8] of the author.

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