Associated with every positive interest term structure there is a probability density function over the positive half line. This fact can be used to turn the problem of term structure analysis into a problem in the comparison of probability distributions, an area well developed in statistics, known as information geometry. The key idea is to take the square-root of the density function, which embeds the space of densities into a Hilbert space. As a consequence, Hilbert space operations can be employed to study the structure of interest rate models. Some of the information-theoretic and geometric aspects of term structures thus arising will be illustrated. In particular, we introduce a new term structure calibration methodology based on maximisation of entropy, and also present some new families of interest rate models arising naturally in this context.

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