An extension of the mixed Novikov-Kazamaki condition

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Abstract Given a continuous local martingale M, the associated stochastic exponential $\mathcal{E}(M) = \exp\{M - \frac{1}{2}\langle M \rangle\}$ is a local martingale, but not necessarily a true martingale. To know whether $\mathcal{E}(\mathcal{M})$ is a true martingale is important for many applications, e.g., if Girsanov's theorem is applied to perform a change of measure. We give a several generalizations of Kazamaki's results and finally construct a counterexample which does not satisfy the mixed Novikov-Kazamaki condition, but satisfies our conditions.

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