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Canada, *Martingales in Banach lattices*.

ABSTRACT. We present a version of martingale theory in terms of Banach lattices. A sequence of contractive positive projections (E_n) on a Banach lattice F is said to be a filtration if $E_n E_m = E_{n \wedge m}$. A sequence (x_n) in F is a martingale if $E_n x_m = x_n$ whenever $n \leq m$. Denote by M the Banach space of all norm uniformly bounded martingales. We investigate properties of M and its relationship to F . We discuss when M is itself a Banach lattice and present examples where it is not. We show that if F is a KB-space and $E_n x \rightarrow x$ for every $x \in F$ then F is a projection band in M .