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Chau Nguyen. *Ruin Probabilities on Two Finite State, Birth-Death Chains Connected in Parallel.* Preliminary report.

Consider two finite state birth-death chains, with arbitrary birth and death probabilities, having states $\{0, 1, 2, \dots, N$ and $0', 1', 2', \dots, N'\}$ connected in parallel by upward transition probabilities and downward transition probabilities, that are state dependent. For a fixed but arbitrary starting state j where $j = 0, 1, 2, 3, \dots, N - 1$, we determine the ruin probability of reaching either state 0 or state $0'$ before reaching state N or state N' given an infinite amount of time. Related problems are also discussed. (Received September 29, 2005)