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**Stephanie Sapp\*** (sapp.stephanie@gmail.com), 7731 North Shore Drive, Spicer, MN 56288,  
and **Amol Kapila**. *On Certain Sequences of Dependent Random Variables*.

We investigate various generalizations of sequences of dependent binomial variables in which the conditional probability of a success in each trial is dependent upon the rate of success in previous trials. We explore the possibility of generalizing previous results to larger classes of random variables and to allow for the case in which the unconditional expectation of each random variable varies. An example of the models explored is the following:

$$E[X_{j+1}|\mathcal{F}_j] = \mu_{j+1} - \frac{\theta_j}{j} \sum_{i=1}^j \mu_i + \frac{\theta_j}{j} S_j,$$

where  $\{X_1, X_2, \dots\}$  is a sequence of random variables,  $E[X_j] = \mu_j$ ,  $\theta_j$  is a dependence parameter,  $S_j = \sum_{i=1}^j X_i$ , and  $\mathcal{F}_j$  is the  $\sigma$ -field generated by  $\{X_1, X_2, \dots, X_j\}$ . (Received September 16, 2008)