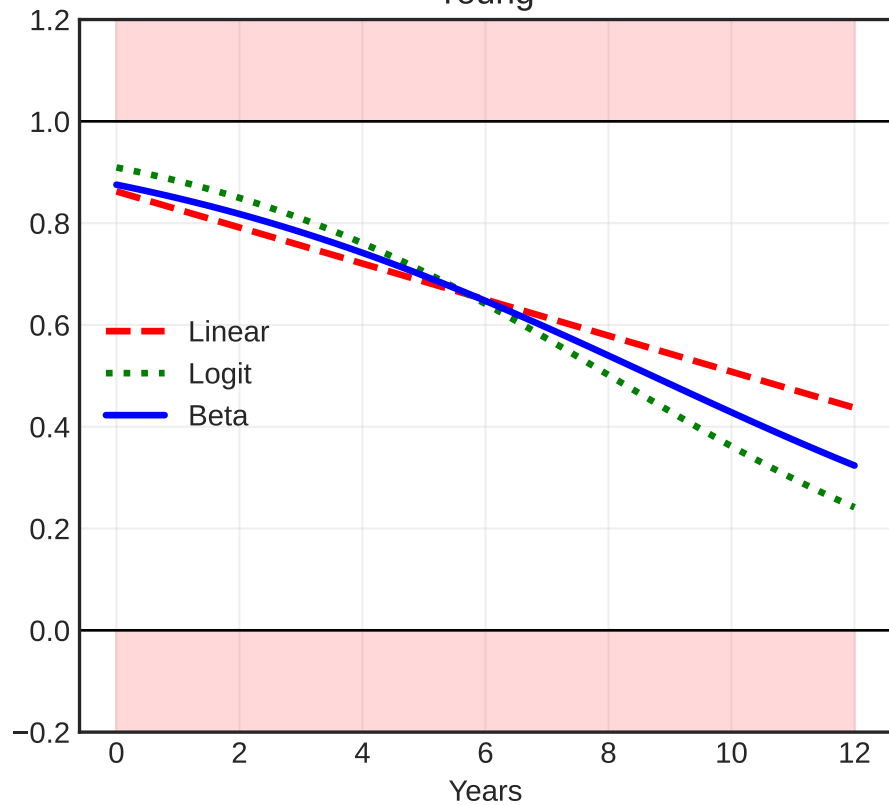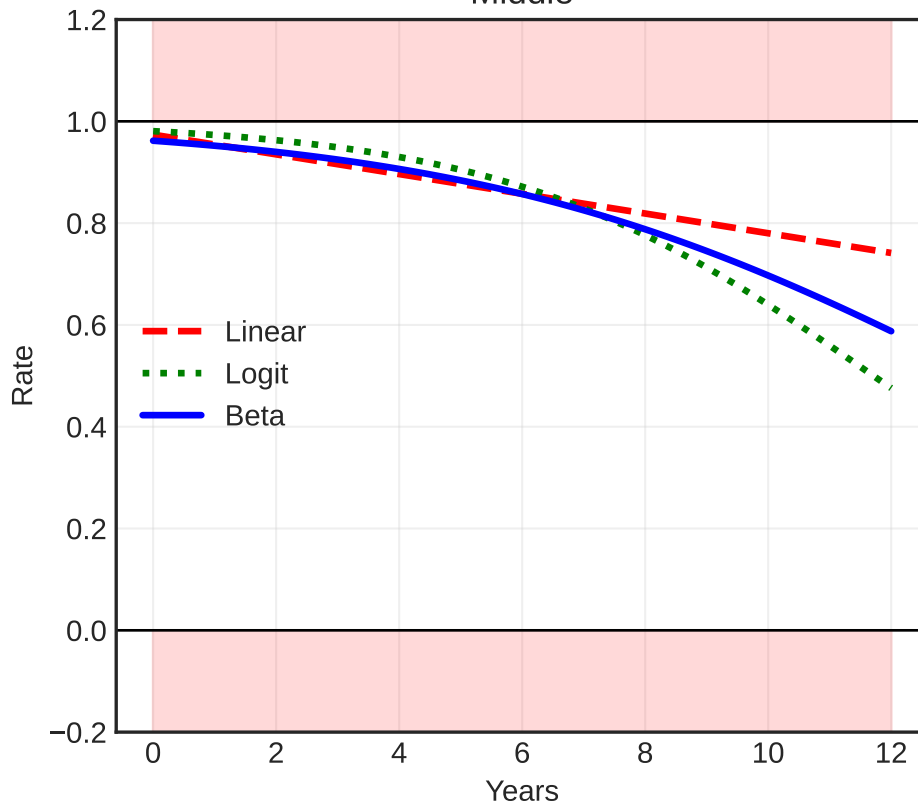Linear Models Break Bounds