

# Utility-based models of default

BY JOHN AQUILINA

## Abstract

We study a simple model of default where agents with exponential utility own shares of assets entitling them to Gaussian consumption streams. Basing their decisions on observed consumption levels, agents choose to keep, reduce or relinquish their ownership of assets to maximize lifetime expected utility. The once-asset case is a standard first-passage-time problem for diffusions where we can solve for the agents' optimal strategies in closed form. In the multi-asset case, closed-form answers are not available but one can show that sub-optimal strategies exhibit contagious defaults which persist under the optimal strategy. This contagion may occur even with zero correlation between assets.