1116-91-1187 Albert Cohen*, albert@math.msu.edu, and Nick Costanzino. Bond and CDS Pricing with Stochastic Recovery.

The quantitative finance literature tries to decompose the risk premia of corporate debt through a number of risk drivers. This helps quantify the exposure to each risk factor and gives the investor a program to hedge away any unwanted risk. The typical risk drivers are default risk, interest rate risk, liquidity risk, and contagion risk. Recovery risk as a source of risk premia has not received much attention so far, most likely due to the difficulties around decomposing the expected loss. Thus, an investor has no way to quantify their exposure to recovery risk, and no way to determine how to hedge away the unwanted risk. This view is supported by a recent empirical study which shows that investors are taking on a significant amount of recovery risk for which they are not being properly compensated.

Classical structural models like Merton and Black-Cox provide an internally consistent way to price credit risk, especially default risk, in many financial instruments. We present here a methodology that enables separation of the recovery risk premium from the default risk premium in these two models. (Received September 17, 2015)