

# Discussion of “Recovery on Defaulted Debt” by Mark Carey and Michael Gordy

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**Moody's Investors Service**

# Standard Reduced-Form Approach


$$\text{LGD} = B_1 * \text{Security Class Dummies} + \\ B_2 * \text{Company-Specific Factors} + \\ B_3 * \text{Macroeconomic Factors}$$

## Some Shortcomings

- Security class imperfect indicator of priority standing
- Ignores capital structure (debt above & debt below)
- Assumes “factors” equally impact all security classes



# Carey/Gordon Separate Firm-Wide LGD Analysis From Debt-Level LGD Analysis

- Macro- & firm-specific factors affect firm LGD
- Firm liability structure explains bond & loan LGDs
- Focuses discussion
  - After controlling for variations debt structure & price of risk (ultimate v. price at default), is LGD cyclical?
  - How does debt structure impact firm-wide LGD?
  - What determines debt structure?
- Supports Moody's approach to LGD 



# Why Predicting Value at Default Is Difficult

- Companies strong today won't be when they default
  - Factors driving PD don't drive LGD
  - LGD uncorrelated with ratings > 1 yr before default
- Lending practices anticipate valuation in default
  - Industries with low LGD in one cycle tend to have high LGD in the next (except regulated utilities)
  - Firm with "hard" assets tend to be more leveraged at default and do not have systematically higher recoveries

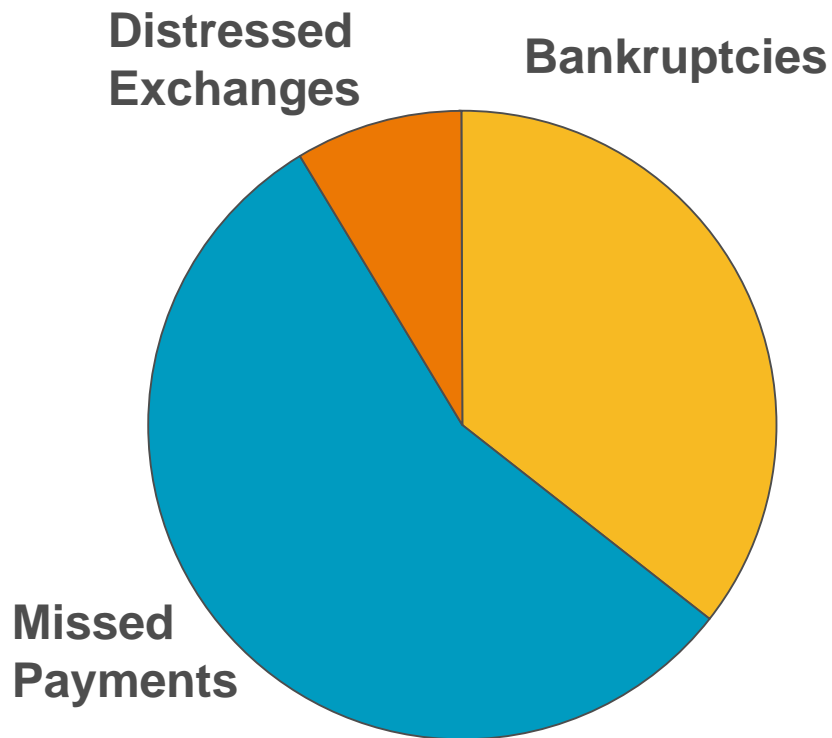


# What Factors Likely Do Drive Firm LGD?

- Term structure of debt (Moody's KMV)
- Liquidity (Davydenko (2005))
- Bank lender's share of debt (Carey/Gordon)
- Market conditions – systemic fluctuations in valuation



# How Often Do Bank Lenders “Pull the Trigger?”



- 1,500 defaults since '70
- About ½ (bankruptcies & distressed exchanges) directly bank controlled
- Other ½ begin as missed bond payments, of which ½ of these are resolved via distressed exchange, rest through bankruptcy



# Moody's Approach to LGD Assessments

- Estimate liability structure at default
- Estimate firm-wide LGD rate probability distribution
  - Historical average distribution away from default
  - Distressed firm analysis close to default
- For each potential firm-wide LGD rate, find bankruptcy-code-implied LGD for each security
- Expected LGD for each security = probability-weighted average of LGDs across firm LGD outcomes



# Testing the Framework

- 580 loan & bond ultimate LGDs from 250 US bankruptcies from '91-'05
- Assume beta distribution for LGD rate with 26% SD
  - 50% mean for most firms
  - 35% mean for bank loan only firms
- $R^2 = 48\%$  for out-of-sample model predictions v. 34% for in-sample security class name dummies
- Model over-predicts secured debt LGDs, perhaps because non-debt liabilities are missing

