

**Discussion of  
Bank Stress Testing: A Stochastic Simulation Framework  
to Assess Banks Financial Fragility  
Montesi and Papiro**

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October 30, 2015

# Basic premise

- The established frameworks for stress testing are flawed
- The recommended approach is to simulate the balance sheet of a bank
- Which then will give the appropriate stressed outcomes

# The paper identifies these problems with the established approach

- A small number of scenarios
- Dependence on macroeconomic outcomes driving bank stress
- Stressed outcomes are added linearly with no dependence and so aggregates highly granular outcomes up to a bank level
- Stress tests are done by banks not supervisor

# Authors caveat

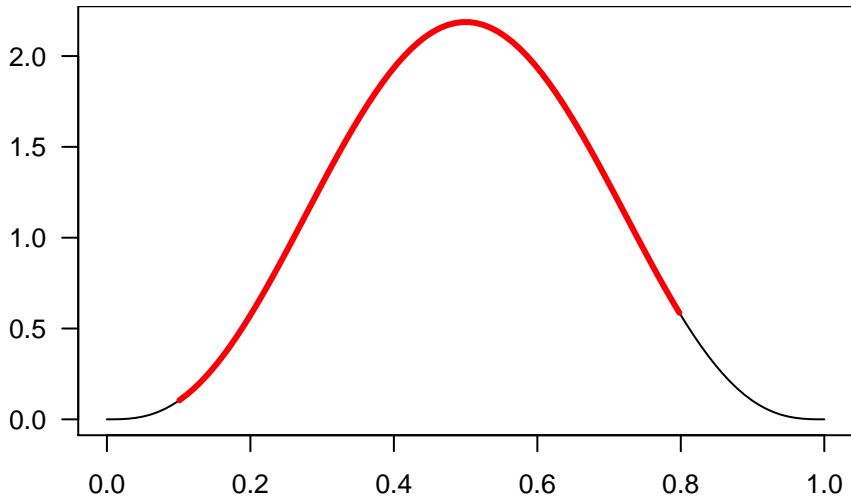
“stress test exercise ... exclusively ... for illustrative purposes and does not represent to any extent a valuation on the capital adequacy.” [scenarios] “one possible sensible set of assumptions and do not by any means represent the only or the best implementation”

## Subset of model

- defaulted credit flow(t)=PD(t) \* gross performing loan(t-1)
- gross performing loan(t)=g(t) \* gross performing loan(t-1)-defaulted credit flow(t) + b(t) \* NPL(t)

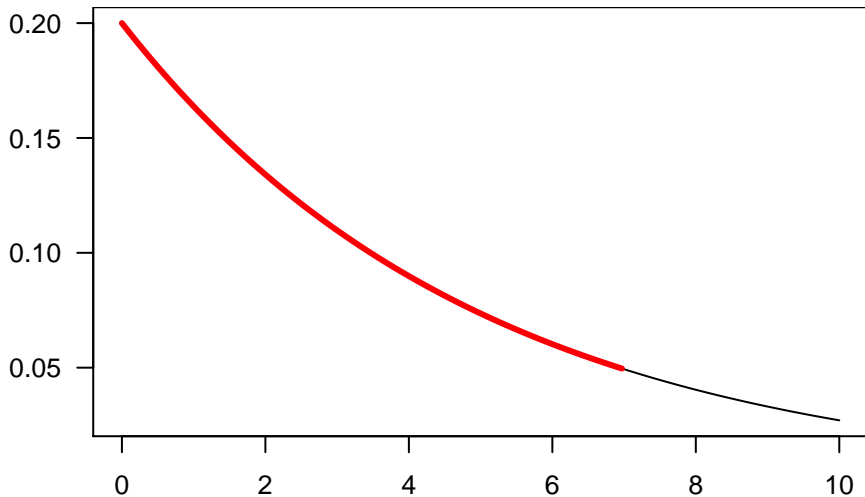
# Interest received on earning asset

truncated beta(4,4)



# Default rate

truncated weibull(4,1)



# Issues

- Treats banks as static entities
- Small sample used to get calibration parameters
- No confidence bounds
- Does not have a way to get the types of extreme outcomes associated with crises (both within distribution and uses linear dependence )
- Does not consider the interaction between bank and system
- Does not consider feedback between banks