



# Discussion: *A transitions-based framework for estimating expected credit losses*

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\* The views expressed are those of the discussant and do not necessarily reflect the official position of the EBA

# The paper

- The paper examines a transitions-based framework for estimating expected credit losses for residential mortgages using:
  - realized cash-flows at the loan level;
  - transitions-based multi-state probability of default estimation for computation of expected losses;
  - macroeconomic scenarios (coefficients on unemployment, Loan to Value ratio, interest rates) which impact the probability of default and cure rate at loan level applied in the comprehensive assessment of the European banks carried out in 2014 by EBA and SSM;
  - other loan-level covariates such as bank, Buy-to-Let status and vintage which impact transitions probabilities;
  - collateral and house price information at loan level to estimate LGD in the three years horizon.
- The study is based on five years of historical mortgage data from the Ireland and UK, covering respectively 66% and 2.01% of the mortgage market.
- The results show that:
  - the framework improves traditional loan-level default models which generally use logit models to estimate a lifetime probability of a loan entering default.
  - in Ireland, an increase in the time spent in default from three months to one year leads to a decrease in the probability of loan cure from 30 to 12 per cent.
  - decreasing cure probabilities represent the “scarring effect” of long durations in default – if loans do not cure in a relative rapid timeframe, the probabilities that they will return to performing status diminishes greatly.

# Comments

## General comments

- The paper:
  - has been motivated by challenges in estimation and integration of different risk components;
  - is well-structured and scientifically founded while at the same time it is easily read by the non-experienced reader;
  - uses alternative methods in estimation of probability of default, loss given default and expected losses under macroeconomic scenarios;
  - address the issues bimodality of realized losses by differentiation between cure rates and losses given liquidation.
- The results are country-specific for residential mortgages portfolio.

## Specific comments

- The paper could focus more on the major challenges in LGD estimation, namely different definition of defaults (impact on data), multiple defaults in estimation of cure rates, and treatment of incomplete workout cases.

# Policy implications

- The work presented in this paper provides an empirical relationship between time since default and probability of cure at the loan level, therefore could be valuable for the supervisors and the EBA to build further requirements for LGD in-default models.
- This study provides a good proxy for the validation of IRB models by the supervisors, in terms of risk drivers that can influence LGD (e.g. specification of cure rate, LTV), connection between cure rate and probability of default and application of different macroeconomic scenarios.

# Suggested improvements and extensions

- Explain clearly the outcomes (under or over estimation of risk) by comparing the applied methodology vs. different models.
- Explain the applicability of this method given by data limitations and characteristics of realized loss rates, namely treatment of multiple defaults in estimation of cure rates and incomplete workout cases.
- To extend the research for the rest of the EU countries, it could provide a practical example on how the time between default and the repossession of collateral is driven by different legal and policy environment in different countries.



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