Credit Risk Modelling: Migration Rates Systems with Renewal and an IFRS9-baseline

Simone Landini
IRES Piemonte, Socioeconomic Research Institute of Piedmont, Turin, Italy,
landini@ires.piemonte.it

Mariacristina Uberti
Department of Management, Università degli Studi di Torino, Turin, Italy,
mariacristina.uberti@unito.it

Simone Casellina
Banca d'Italia: Regulation and Supervisory Policies Department, Rome, Italy
Simoneenrico.Casellina@bancaditalia.it

Extended abstract [1]

In 2014 the International Accounting Standards Board (IASB) promulgated the International Financial Reporting Standard 9 (IFRS9) ([1, 4]). This new accounting standard substitutes the previous IASB39-Financial Instrument since January 2018 and banks are operating with effort to meet the many technical and normative innovations introduced to provide more reliable and well-balanced estimates of Expected Losses (EL). Among these, we focus our attention on two aspects that have impact on the EL estimation that must be (a) prospective and (b) segmented. Moreover, according to the recent prudential standard (Credit Risk Directive, [2], and Credit Risk Regulation [3]), the capital requirements should be forward-looking and consistent with the Unexpected Losses measurement.

The first part of the paper summarizes the main traits of a model for the micro-simulation of a portfolio of a bank that, under the influence of the macroeconomic cycle, dynamically renews with entries and exits and that estimates migration rates matrices conditionally to the cycle ([5]).

[1] Speaker:[Simone Landini, landini@ires.piemonte.it].

The second part prospectively extrapolates future migration matrices for the open system portfolio, and it implements an accounting IFRS9-baseline by reshaping the configuration of the grades according to the segmentation in a 3-stage bucketing. Furthermore, consistently with these accounting principles a forward-looking estimate of the UL for the bank is introduced.

Differently from the more standard static-closed-sample approach, and although developed upon an in-silico bank's portfolio, the obtained results give hints that (a) opening the migration rates matrices to entries and exits and (b) implementing a prospective and segmented estimation of their future dynamics, the bank may expect to a more reliable and less costly estimates of the EL and UL.

Keywords
Credit Risk; Migration Rates Modelling; Expected Loss; Unexpected Loss.

References

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