

## BASEL 3 INTERNAL MODELS FOR CREDIT RISK

The Basel Committee's reforms ("Basel 3") have been translated into EU laws and regulations, effective 1 January 2014. The objective of the reforms is to strengthen banks' ability to absorb shocks arising from financial and economic stress, whatever the source, and improve risk management and governance as well as enhance banks' transparency and disclosure.

In order to abide by the Basel 3 reforms, the Group has implemented appropriate initiatives ahead of the Basel 2 Project targets, aimed at improving measurement systems and the related management systems of risks.

As regards credit risk, the supervisory regulations provide for two approaches for the calculation of the capital requirement: the Standardised approach and the Internal Rating Based (IRB) approach, in which the risk weightings are a function of the banks' internal assessments of their borrowers. The IRB approach is in turn broken down into a Foundation Internal Rating Based (FIRB) and an Advanced Internal Rating Based (AIRB) that differ in the risk parameters that banks are required to estimate: under the foundation approach, banks use their own PD estimates and regulatory values for the other risk parameters, whereas under the advanced approach these are also estimated internally.

The table below describes the situation as at 30 June 2019.

Portfolio	PD - Model Type	LGD - Model Type	EAD - Model Type	Status
Corporate <sup>(1)</sup>	Default model	Workout model	CCF/K factor model	FIRB authorised since December 2009, AIRB LGD authorised since December 2010, EAD authorised since September 2017
Specialised Lending	Simulation models	Simulation models	Regulatory parameters	AIRB authorised since June 2012
Retail <sup>(2)</sup>	Default model	Workout model	CCF/K factor model	PD and LGD Retail Mortgages authorised since June 2010, IRB Retail authorised since September 2018
SME Retail <sup>(3)</sup>	Default model	Workout model	CCF/K factor model	AIRB authorised since December 2012
Banks <sup>(4)</sup>	Default model	Market model	Regulatory parameters	AIRB authorised since June 2017
Public Entities <sup>(4)</sup>	Default model (Municipalities and Provinces) Shadow model (Regions)	Workout model	Regulatory parameters	AIRB authorised since June 2017

- 1) Intesa Sanpaolo: FIRB authorised since December 2008, LGD AIRB since December 2010 and AIRB since 2017 (EAD model authorisation). Mediocredito Italiano since December 2009. Banca IMI (2012), ISP Ireland (2010), VUB (2010), Banca Intesa dd (2017), and ISP Luxembourg (2017). Since 2017, the Corporate model has also been used to calculate the risk on the banking book equity portfolio with LGD 65%/90%
- 2) The authorisation for the IRB Retail model received in 2018 represented a model change for the Retail Mortgage component, already authorised in 2010, and a new validation for the Other Retail component. VUB has been authorised since June 2012 for the PD and LGD Retail Mortgage models.
- 3) VUB authorised since June 2014.
- 4) Intesa Sanpaolo, Mediocredito Italiano and Banca IMI authorised since 2017.

The development and application of the IRB systems with respect to other segments and the extension of the company scope are being carried out in accordance with the Group's Basel 3 roll-out plan.

Certain exposures, which are the subject of a request for authorisation for the permanent partial use of the standardised approach, are not included in the plan for adopting the advanced approaches. Specifically, these relate to the following: exposures to central governments and central banks; exposures to own banking group; exposures to minor operational units, and non-significant exposure classes in terms of size and level of risk (this category includes loans to Non-Bank Financial Institutions).