# Credit Risk N <u>O</u>VA Models NOVA SCHOOL OF **BUSINESS & ECONOMICS Ausenda Pires**

# **Credit Risk Models**



#### **Risk parameters**

**Probability of Default (PD):** probability of a debtor to default at least once in a time horizon of of a 12 months

**Exposure at Default (EAD):** Exposure at default date, including interests and fees

EAD = OnBalance + CCF \* OffBalance

**Credit Conversion Factor (CCF):** proportion of offbalance exposure that will be converted in onbalance at the default date

**Loss Given Default (LGD):** proportion of the EAD that is no recovered from the default date until the end of the recovery process



**Expected Loss Amount** 

ELA = PD \* LGD \* EAD

#### PD modeling process

Data selection and quality process: representativeness, adequacy, completeness, cleansing...

	CUST_AGE	CUST_GENDER	ISSUE_DATE	CUST_ANN_SALA	CUST_CRLIMIT	CARD_PRODUCT
۲.	24	0	20150228	72000000	1000000	AMEX GREEN
	34	0	20150228	12000000	1000000	AMEX GREEN
	42	0	20150327	48000000	18000000	AMEX COBRAN
	42	0	20150328	48000000	18000000	MASTERCARD
	28	0	20150305	216000000	5000000	AMEX COBRAN
	45	1	20150210	404796000	10000000	JCBCARD EMV
	45	1	20150210	404796000	10000000	AMEX GOLD
	45	1	20150210	404796000	10000000	VISACARD EMV
	29	1	20150228	33600000	1000000	AMEX GREEN

Risk drivers' assessment. Definition of calibration segments and scoring/rating grades.







Assessment and quantification of Margins of Conservatism (MoC) (only for IRB) PD calibration at portfolio and grade level



Definition of the likely range of variability



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Ilustrative

# LGD and CCF modeling process



# **Risk models lifecycle**

Ref: EBA/GL/2017/16



# Thank you