6. CREDIT RISK MITIGATION TECHNIQUES

6.1. ELIGIBILITY AND TYPE OF MITIGATION INSTRUMENTS

On the risk assessment of an operation or of a group of operations, the mitigation elements of credit risk associated to those operations are considered in accordance with the rules and internal procedures that fulfil the requirements defined by the regulations in force, also reflecting the experience of the loans recovery areas and the Legal Department opinions with respect to the entailment of the various mitigation instruments.

The relevant collateral and guarantees are grouped in the following categories:

• Financial collateral, real estate collateral and other collateral;

• Receivable;

• First demand guarantees, issued by banks or other entities with Risk Grade 7 or higher in the Rating Master Scale;

• Personal guarantees, when the guarantors are classified as Risk Grade 7 or better;

• Credit derivatives.

The financial collaterals accepted are those that are traded in a recognised stock exchange, i.e., on an organised secondary market, liquid and transparent, with public bid-ask prices, located in countries of the European Union, United States, Japan, Canada, Hong Kong or Switzerland.

In this context, it is important to refer that the Bank's shares are not accepted as financial collaterals of new credit operations and are only accepted for the reinforcement of guarantees of existing credit operations, or in restructuring processes associated to credit recoveries.

Regarding guarantees and credit derivatives, the substitution principle may be applied by replacing the Risk Grade of the client by the Risk Grade of the guarantor, if the Risk Grade of the guarantor is better than the client's, when the protection is formalised by:

• State, Financial Institutions or Mutual Guarantee Societies guarantees;

• Personal guarantees (or, in the case of Leasing, a returns agreement from the supplier);

• Credit derivatives;

• Adhering contractor clause (in leasing operations), when that part is an entity that controls or has a group relationship with the lessee.

6.2. PROTECTION LEVELS

An internal level of protection is attributed to all credit operations at the moment of the credit granting decision, considering the credit amount as well as the value and type of the collaterals involved. The protection level corresponds to the loss reduction in case of default that is linked to the various collateral types, considering their market value and the amount of the associated exposure.

In the case of financial collaterals, adjustments are made to the protection value by the use of a set of haircuts, in order to reflect the price volatility of the financial instruments.

6.3. COLLATERAL VALUATION

In the case of real estate mortgages, the initial appraisal of the real estate value is done during the credit analysis and decision process.

Either the initial evaluations or the subsequent value reviews carried out are performed by external expert valuers and the respective analysis and ratification process is centralised in the Appraisals Unit of the Rating Division, which is independent of the clients' areas.

There is always a written report, in a standardised digital format, based on a group of predefined methods that are aligned with the sector practices – income, replacement cost and/or market comparative - mentioning the obtained value, for both the market value and for purposes of the mortgage guarantee, depending on the type of the real estate. The evaluations have a declaration/certification of an expert valuer since 2008, as requested by the applicable regulation – namely, Law 135/2015, from the 14th of September - and are ratified by the Appraisals Unit.

Regarding residential real estate, after the initial valuation and in accordance with Notice 5/2006 of 11 October from Banco de Portugal and with the CRR, the Bank monitors the respective values through market indexes. If the index is lower than 0.9, the Bank revaluates through one of the following three methods:

i) depreciation of the property by direct application of the index, if the amount owed does not exceed 300 thousand euros;

ii) review of the property value based on recent reviews, geographically close, certified by internal expert;

iii) review of the property value by external valuators, depending on the value of the credit operation, and in accordance with the ECB's and Banco de Portugal's standards.

For all non-residential real estate, the Bank also monitors its values through market indexes and revaluates properties through regular reviews in accordance with the CRR, in the case of offices/services, commercial premises, warehouses and industrial premises. For all real estate (residential or non-residential) for which the monitoring results in significant devaluation of the real estate value (more than 10%), a valuation review is subsequently carried out by an expert valuer, without prejudice of following method i) above referred.

For the remaining real estate (land or countryside buildings, for example) there are no market indexes available for the monitoring of appraisal values, after the initial valuations. Therefore, for these cases and in accordance with the minimum periodicity established by the regulation for the monitoring and reviewing of this type of real estate, valuation reviews are carried out by expert valuers.

The indexes currently used are supplied to the Bank by an external specialised entity that, for more than a decade, has been collecting and processing the data upon which the indexes are built.

In the case of financial collaterals, their market value is daily and automatically updated, through the IT connection between the collaterals management system and the relevant financial markets data.

6.4. WRONG WAY RISK

The Wrong Way risk corresponds to the risk of a given exposure being adversely correlated with the counterparty's credit risk. Within credit granting this risk stems from the correlation between the collateral value and the credit worthiness of the borrower, i.e., when the deterioration of the credit risk of the latter leads to a devaluation of the collateral.

Similarly, in the case of derivative and repo transactions, this translates to the risk associated with the fact that the exposure at risk is adversely impacted by the credit quality of the counterparty.

Overall, the Bank considers this risk as immaterial, taking into account the composition of financial collateral. In terms of credit granted, the borrower's own securities (shares or bonds) represents a very small percentage of the total amount of credit, corresponding mainly to structured finance, including Project Finance, where the usual pledge of shares from the companies or vehicles is part of a comprehensive guarantees' package. Indeed, almost all of the credits that have a securities' pledge have additional collateral to secure the exposure.

In the case of derivative and repo operations, in which the Bank mitigates counterparty credit risk through ISDA contracts with CSA, the coverage of market receivables is exclusively made through deposits at the Group itself; hence, wrong-way risk does not apply. In terms of credit default derivatives (CDS or TRS) or other guarantees provided by counterparties, the Bank is also not subject to material wrong-way risk, as the risk covered is not positively correlated with the protection provider.

Table 48 summarises the impact as at 31 December 2017 of the credit risk mitigation techniques used by the Group within the scope of the standardised approach, with effects on the substitution of exposures as well as on the exposure amounts, by risk class.

TABLE 48 – TEMPLATE EU CR3 – CRM TECHNIQUES - OVERVIEW

(Thousand euros)

Exposures	Exposures unsecured - Carrying amount	Exposures to be secured	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
Total loans	11,291,413	35,419,522	31,886,126	3,533,396	
Total debt securities	11,738,714	1,150,730	806,871	343,859	
TOTAL EXPOSURES	**23,030,127**	**36,570,252**	**32,692,997**	**3,877,255**	
Of which: defaulted	554,513	3,544,004	3,181,444	362,560	

Note: Securities of the trading book are not included.

TABLE 49 – TEMPLATE EU CR4 – STANDARDISED APPROACH – CREDIT RISK EXPOSURE AND CRM EFFECTS

(Thousand euros)

	Exposures before CCF and CRM		Exposures post CCF and CRM		RWA and RWA density	
	On-balance-sheet amount	Off-balance-sheet amount	On-balance-sheet amount	Off-balance-sheet amount	RWA	RWA density
Central Governments or Central Banks	11,298,450	37,966	12,039,031	4,160	1,476,081	12.3%
Regional Governments or Local Authorities	693,901	50,792	568,180	16,933	117,138	20.0%
Public Setor Entities	258,612	49,416	228,693	14,595	128,129	52.7%
Multilateral Development Banks	19,432		19,432			
International Organisations						
Institutions	1,236,991	946,906	1,402,779	54,437	571,584	39.2%
Corporates	5,000,776	2,994,755	4,209,511	145,328	4,323,451	99.3%
Retail	2,258,871	265,772	2,199,112	8,474	1,557,581	70.6%
Secured by mortgages on immovable property	962,884	22,635	931,396	7,490	605,551	64.5%
Exposures in default	783,725	160,059	427,309	4,960	502,353	116.2%
Items associated with particularly high risk						
Covered bonds						
Claims on institutions and corporates with a short-term credit assessment						
Collective Investment Undertakings	22,329		21,139		31,709	150.0%
Equity exposures	22,453		11,480		11,480	100.0%
Other exposures						
TOTAL	**22,558,423**	**4,528,302**	**22,058,064**	**256,377**	**9,325,058**	**41.8%**