46. RISK MANAGEMENT

The Bank is subject to several risks during the course of its business.

The Bank's risk-management policy is designed to permanently ensure an adequate relationship between its own funds and the business it develops, as well as the corresponding evaluation of the risk/return profile by business line. Under this scope, the monitoring and control of the main types of financial risks to which the Bank's business is subject to – credit, market, liquidity and operational – is particularly relevant.

MAIN TYPES OK RISK

Credit – Credit risk is associated with the degree of uncertainty of the expected returns as a result of the inability either of the borrower (and the guarantor, if any) or of the issuer of a security or of the counterparty to an agreement to fulfil their obligations.

Market – Market risk reflects the potential loss inherent in a given portfolio as a result of changes in rates (interest and exchange) and/or in the prices of the various financial instruments that make up the portfolio, considering both the correlations that exist between these instruments and the respective volatilities.

Liquidity – Liquidity risk reflects the Group's inability to meet its obligations at maturity without incurring in significant losses resulting from the deterioration of the funding conditions (funding risk) and/or from the sale of its assets below market value (market liquidity risk).

Operational – Operational risk consists in the potential losses resulting from failures or inadequacies in internal procedures, persons or systems, and also in the potential losses resulting from external events.

INTERNAL ORGANISATION

Banco Comercial Português Board of Directors is responsible for the definition of the risk policy, including the approval of the principles and rules at the very highest level to be followed in risk management, as well as the guidelines dictating the allocation of capital to the business lines.

The Board of Directors, through the Audit Committee, ensures the existence of adequate risk control and of risk-management systems at Bank level and for each entity. The Board of Directors also approves the risk-tolerance level acceptable to the Bank, proposed by its Executive Committee.

The Risk Committee is responsible for monitoring the overall levels of risk incurred, ensuring that these are compatible with the goals and strategies approved for the business.

The Chief Risk Officer is responsible for the control of risks in all Group entities, for the identification of all risks to which the Bank activity is exposed and for the proposal of measures to improve risks control. The Chief Risk Officer also ensures that risks are monitored on an overall basis and that there is alignment of concepts, practices and goals in risk management. The activity of every entity included within the Banco Comercial Português consolidation perimeter is governed by the principles and decisions established centrally by the Risk Committee and the main subsidiaries are provided with Risk Office structures which are established in accordance with the risks inherent to their particular business. A Risk Control Commission has been set up at each relevant subsidiary, responsible for the control of risks at local level, in which the Chief Risk Officer takes part.

The Group Head of Compliance is responsible for implementing systems for monitoring the compliance with legal obligations and responsibilities to which the Bank is subject, as well, the prevention, monitoring and reporting of risks in organizational processes, which include, among others, the prevention and repression of money laundering, combating financing of terrorism, prevention of conflicts of interest, issues related to abuse of market and compliance with the disclosure requirements to customers.

RISK ASSESSMENT

Credit Risk

Credit granting is based on a prior classification of the customers' risk and on a thorough assessment of the level of protection provided by the underlying collateral. In order to do so, a single risk-notation system has been introduced, the Rating Master Scale, based on the expected probability of default, allowing greater discrimination in the assessment of the customers and better establishment of the hierarchies of the associated risk.

The Rating Master Scale also identifies those customers that show a worsening credit capacity and, in particular, those classified as being in default. All rating and scoring models used by the Bank have been duly calibrated for the Rating Master Scale. The protection-level concept has been introduced as a crucial element of evaluation of the effectiveness of the collateral in credit-risk mitigation, leading to a more active collateralization of loans and to a better adequacy of pricing regarding the risk incurred.

The gross Bank's exposure to credit risk (original exposure) is presented in the following table:

(Thousands of euros)

Risk items	2017	2016
Central Governments or Central Banks	5,047,298	4,284,363
Regional Governments or Local Authorities	655,673	663,346
Administrative and non-profit Organisations	169,848	370,189
Other Credit Institutions	3,898,664	3,145,466
Retail and Corporate customers	43,570,050	43,536,374
Other items (*)	16,290,455	18,972,579
	69,631,988	70,972,317

Note: gross exposures of impairment and amortization, in accordance with the prudential consolidation perimeter. Includes securitization positions.

(*) In addition to positions in equity, collective investment and securitization, the Other items contain other assets subject to credit risk in accordance with article 134 of the CRR.

Collaterals and Guarantees

On the risk evaluation 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 collaterals and the relevant guarantees can be aggregated in the following categories:

- financial collaterals, real estate collaterals or other collaterals;
- receivables;
- first demand guarantees, issued by banks or other entities with Risk Grade 7 or better on the Rating Master Scale;
- personal guarantees, when the persons are classified with Risk Grade 7 or better;
- credit derivatives.

The financial collaterals accepted are those that are traded in a recognized stock exchange, i.e., on an organized 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 process associated to credit recoveries.

Regarding guarantees and credit derivatives, it can be applied the substitution principle by replacing the Risk Grade of the client by the Risk Grade of the guarantor, (if the Risk of Grade Degree of the guarantor is better than the client's), when the protection is formalized through:

- State, Financial Institutions or Mutual Guarantee Societies guarantees exist;
- personal guarantees (or, in the case of Leasing, there is a recovery agreement of the provider);
- Credit derivatives;
- Formalization of the clause of the contracting party in leasing contracts in which it is an entity that is in a relationship of dominion or group with the lessee.

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.

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 reviews carried out are performed by external expert valuers and the ratification process is centralized in the Appraisals Unit, which is independent of the clients' areas.

In any case, they are the subject to a written report, in a standardized 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 Regulation (EU) 575/2013 and Law 153/2015 of 14 September and are ratified by the Appraisals Unit.

Regarding residential real estate, after the initial valuation and in accordance with Notice n. 5/2006 of Bank of Portugal and e CRR 575/2013, the Bank monitors the respective values through market indexes. If the index is lower than 0.9, the Bank revaluates choosing one of the following two methods:

i) - depreciation of the property by direct application of the index, if the amount owed does not exceed Euros 300,000;
ii) - review of the property value by external valuators, depending on the value of the credit operation, and in accordance wit the established standards from ECB and Bank of Portugal.

For all non-residential real estate, the Bank also monitors its values through market indexes and to the regular valuation reviews in accordance with the Regulation (EU) 575/2013, in the case of offices, commercial spaces, warehouses and industrial premises.

For all real estate (residential or non-residential) for which the monitoring result in significant devaluation of the real estate value (more than 10%), a valuation review is subsequently carried out by an expert valuer, preserving the referred i) above.

For the remaining real estate (lan or country side 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 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 specialized 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.

As at 31 December 2017, the following table includes the fair value and the accounting net value of the properties arising from recovered loans, by asset and aging:

(Thousands of euros)

	2017	
	Assets arising from recovered loans results (note 25)	
Asset	**Value of the asset**	**Book value**
Land		
Urban	527,824	484,750
Rural	9,964	7,631
Buildings in development		
Commercials	5,246	4,640
Mortgage loans	40,963	37,473
Constructed buildings		
Commercials	345,152	306,000
Mortgage loans	589,527	528,474
Others	320	123
	1,518,996	1,369,091

As at 31 December 2017, the following tables include the fair value and the accounting net value of the properties arising from recovered loans, by asset and by antiquity:

(Thousands of euros)

	2017					
		Past due since the lieu / execution				
Asset	Number of properties (*)	<1 year	>=1 year and <2.5 years	>=2.5 years and <5 years	>=5 years	Total
Land						
Urban	1,749	44,164	312,587	79,834	48,165	484,750
Rural	211	2,019	3,132	929	1,551	7,631
Buildings in development						
Commercials	41	-	1,303	758	2,579	4,640
Mortgage loans	287	8,392	21,241	4,504	3,336	37,473
Constructed buildings						
Commercials	1,679	62,921	51,278	107,169	84,632	306,000
Mortgage loans	5,908	192,228	192,455	105,783	38,008	528,474
Others	5	14	9	100	-	123
	9,880	309,738	582,005	299,077	178,271	1,369,091

(*) quantified by autonomous fraction

As at 31 December 2016, the following tables include the fair value and the accounting net value of the properties arising from recovered loans, by asset and by antiquity:

(Thousands of euros)

	2016	
	Assets arising from recovered loans results (note 25)	
Asset	Value of the asset	Book value
Land		
Urban	577,207	504,867
Rural	15,417	11,974
Constructed buildings		
Commercials	218,852	189,304
Mortgage loans	650,202	559,334
Others	176,386	148,510
	1,638,064	1,413,989

As at 31 December 2016, the following tables include the fair value and the accounting net value of the properties arising from recovered loans, by asset and by antiquity:

(Thousands of euros)

	2016					
		Past due since the lieu / execution				
Asset	Number of properties (*)	<1 year	>=1 year and <2.5 years	>=2.5 years and <5 years	>=5 years	Total
Land						
Urban	1,776	194,207	203,366	58,786	48,508	504,867
Rural	181	7,196	1,527	906	2,345	11,974
Constructed buildings						
Commercials	1,450	29,943	62,221	71,954	25,186	189,304
Mortgage loans	5,925	302,622	151,819	69,720	35,173	559,334
Others	383	16,894	26,446	64,144	41,026	148,510
	9,715	550,862	445,379	265,510	152,238	1,413,989

(*) quantified by autonomous fraction

Market risk

For the monitoring and control of market risk existing in the different portfolios, the Bank uses an integrated risk measure that includes the main types of market risks identified by the Group: generic risk, specific risk, non linear risk and commodities risk.

The measure used in the evaluation of generic market risk is the VaR (Value at Risk). The VaR is calculated on the basis of the analysis approximation defined in the methodology developed by RiskMetrics. It is calculated considering a 10-working day time horizon and a unilateral statistical confidence interval of 99%. The estimation of the volatility associated to each risk factor in the model assumes an historical approach (equally weighted), with a one year observation period.

A specific risk evaluation model is also applied to securities (bonds, shares, certificates, etc) and associated derivatives, for which the performance is directly related to its value. With the necessary adjustments, this model follows regulatory standard methodology.

Complementary measures are also used for other types of risk: a risk measure that incorporates the non-linear risk of options not covered in the VaR model, with a confidence interval of 99%, and a standard measure for commodities risks.

These measures are included in the market risk indicator of market risk with the conservative assumption of perfect correlation between the various types of risk.

Capital at risk values are determined both on an individual basis - for each portfolio of the areas having responsibilities in risk taking and management – and in consolidated terms, taking into account the effects of diversification between the various portfolios.

To ensure that the VaR model adopted is adequate to evaluate the risks involved in the positions held, a back testing process has been established. This is carried out on a daily basis and it confronts the VaR indicators with the actual results.

The following table shows the main indicators for these measures, for the trading portfolio:

(Thousands of euros)

	2017	2016
Generic Risk (VaR)	2,543	3,877
Specific Risk	99	439
Non Linear Risk	7	8
Commodities Risk	6	16
Global Risk	2,655	4,340

The assessment of the interest rate risk originated by the banking portfolio's operations is performed by a risk sensitivity analysis process carried out every month for all operations included in the Bank's balance sheet.

This analysis considers the financial characteristics of the contracts available in information systems. Based on this data, a projection for expected cash flows is made, according to the repricing dates and any prepayment assumptions considered.

Aggregation of the expected cash flows for each time interval and for each of the currencies under analysis, allows to calculate the interest rate gap per repricing period.

The interest rate sensitivity of the balance sheet, by currency, is calculated as the difference between the present value of the interest rate mismatch discounted at market interest rates and the discounted value of the same cash flows simulating parallel shifts of the market interest rates.

The following tables shows the expected impact on the banking books economic value of parallel shifts of the yield curve by +/- 100 and +/- 200 basis points, on each of the main currencies:

(Thousands of euros)

	2017			
Currency	**- 200 pb (*)**	**- 100 pb (*)**	**+ 100 pb**	**+ 200 pb**
CHF	165	165	454	889
EUR	(103,147)	(102,624)	222,552	428,871
PLN	(3,248)	(2,008)	1,983	3,943
USD	(20,033)	(9,880)	9,457	18,477
	(126,263)	(114,347)	234,446	452,180

(Thousands of euros)

	2016			
Currency	**- 200 pb (*)**	**- 100 pb (*)**	**+ 100 pb**	**+ 200 pb**
CHF	168	168	328	642
EUR	12,984	19,704	68,427	133,741
PLN	(566)	(364)	360	716
USD	(21,312)	(12,006)	11,759	23,263
	(8,726)	7,502	80,874	158,362

(*) Decrease in rates scenario, limited to non-negative rates (which implies effective variations of lesser amplitude than 100 bp, especially in shorter periods).

Foreign exchange and equity risk in the banking book

The exchange rate risk of the banking book is transferred internally to the Trading area (Treasury), in accordance with the risk specialisation model followed by the Group for the management of the exchange rate risk of the Balance Sheet. The exposures to exchange rate risk that are not included in this transfer – the financial holdings in subsidiaries, in foreign currency - are covered by market operations, taking into account the policy defined and the availability and conditions of the instruments. On an individual basis hedge accounting is made for hedge investments on investments os subsisiries, by applying Fair Value Hedge.

The Bank applies, to hedge the foreign exchange risk of the partial investment made in foreign currency in Bank Millennium (Poland), the fair value hedge accounting model.

The amount of the investment subject to hedging is PLN 2,570,017,000 (31 December 2016: PLN 2,285,125,000), with the equivalent amount of Euros 615,484,000 (31 December 2016: Euros 518,134,000), with the hedging instrument in the same amount.

No ineffectiveness has been recognised as a result of the hedging operations, as referred in the accounting policy 1 d).

Regarding equity risk, the Group maintains a series of equity positions of a small size and low risk in the investment portfolio, which are not held for trading purposes. The management of these positions is carried out by a specific area of the Group, with the respective risk being controlled on a daily basis, through the indicators and limits defined for market risks.

Liquidity risk

The assessment of the Bank's liquidity risk is carried out on a regular basis using indicators defined by the supervisory authorities and other internal metrics for which exposure limits are also defined.

The evolution of the Banks's liquidity situation for short-term time horizons (of up to 3 months) is reviewed daily on the basis of two indicators internally defined: immediate liquidity and quarterly liquidity. These indicators measure the maximum fund-taking requirements that could arise on a single day, considering the cash-flow projections for periods of 3 days and of 3 months, respectively.

Calculation of these indicators involves adding, to the liquidity position of the day under analysis, the estimated future cash flows for each day of the respective time horizon (3 days or 3 months) for the set of transactions brokered by the markets areas, including the transactions with customers of the Corporate and Private networks that, due to its dimension, have to be quoted by the Trading Room. The amount of assets in the Bank's securities portfolio considered to be highly liquid is then added to the previously calculated amount, leading to the liquidity gap accumulated for each day of the period at stake.

In parallel, the evolution of the Bank's liquidity position is calculated on a regular basis, also identifying all the factors that justify the variations occurred. This analysis is submitted to the appreciation of the Capital and Assets and Liabilities Committee (CALCO), in order to enable the decision taking that leads to the maintenance of adequate financing conditions to business continuity.

In addition, the Risks Commission is responsible for controlling the liquidity risk. This control is reinforced with the monthly execution of stress tests, to characterize the Bank's risk profile and to ensure that the Group and each of its subsidiaries fulfill their obligations in the event of a liquidity crisis. These tests are also used to support the liquidity contingency plan and management decisions.

Considering the prudential criteria adopted by the Group for liquidity management, continued to receive particular attention, in addition to the reduction of market financing needs, particularly with the ECB, the active management of liquidity buffer provided by the portfolio of discountable assets at the ECB (or other Central Banks). In this line, the portfolio of discountable assets to the ECB finished the year of 2017 with a value of Euros 11,979,049,000, plus Euros 1,280,377,000 than 2016 figure, of which Euros 6,974,487,000 in the BCE policy monetary pool.

The eligible pool of assets for funding operations in the European Central Bank, net of haircuts, is detailed as follows:

(Thousands of euros)

	2017	2016
European Central Bank	6,974,487	7,621,792

As at 31 December 2017, the amount discounted in the European Central Bank amounts to Euros 4,000,000,000 (31 December 2016: Euros 4,100,000,000).

Liquidity coverage ratio

The Bank structurally improved its liquidity profile by recording a credit transformation ratio on deposits calculated in accordance with Bank of Portugal Instruction No. 16/2004 on 31 December 2017 of 97% and on 31 December 2016 this ratio was set at 102%.

The analysis of the balance sheet items by maturity dates is as follows:

(Thousands of euros)

	2017						
	At sight	Up to 3 months	3 months to 1 year	1 year to 5 years	Over 5 years	Undetermined maturity	Total
Assets							
Cash and deposits at Central Banks	1,291,663	-	-	-	-	-	1,291,663
Loans and advances to CI							
Repayable on demand	156,460	-	-	-	-	-	156,460
Other loans and advances	-	827,992	479	410,340	15,000	661	1,254,472
Loans and advances to customers	-	-	7,014,981	4,422,859	22,146,897	2,557,338	36,142,075
Financial assets (*)	-	117,402	1,109,956	1,999,447	3,634,874	744,278	7,605,957
Financial assets held to maturity	-	-	-	224,768	118,017	-	342,785
	1,448,123	945,394	8,125,416	7,057,414	25,914,788	3,302,277	46,793,412
Liabilities							
Resources from CI	-	1,335,169	325,156	4,784,375	1,380,351	-	7,825,051
Resources from costumers	16,661,108	7,323,921	9,585,853	1,452,345	14,200	-	35,037,427
Debt securities issued	-	104,637	213,859	1,288,926	765,890	-	2,373,312
Subordinated debt	-	-	94,359	524,904	298,583	86,928	1,004,774
	16,661,108	8,763,727	10,219,227	8,050,550	2,459,024	86,928	46,240,564

(*) Financial assets held for trading, Other financial assets held for trading at fair value through profit or loss and Financial assets available for sale.

Operational Risk

The approach to operational risk management is based on the business process struture and an end-to-end processes structure, both for business and business support processes. Process management is the responsibility of the Process Owners, who are the first parties responsible for the risks assessment and for strengthening the performance within the scope of their processes. Process Owners are responsible for the updating of all of the relevant documentation concerning the processes, for ensuring the effective adequacy of all of the existing controls through direct supervision or by delegation on the departments responsible for the controls in question, for coordinating and taking part in the risks self-assessment exercises and for detecting improvement opportunities and implementing improvements, including mitigating measures for the most significant exposures.

Within the operational risk model implemented in the Bank, there is a systematic process of capturing data on operational losses that systematically characterizes the loss events in terms of their causes and effects. From the analysis of the historical information and its relationships, processes involving greater risk are identified and mitigation measures are launched to reduce the critical exposures.

COVENANTS

The contractual terms of instruments of wholesale funding encompass obligations assumed by entities belonging to the Group as debtors or issuers, concerning general duties of societary conduct, maintenance of banking activity and the inexistence of special guarantees constituted for the benefit of other creditors ("negative pledge"). These terms reflect essentially the standards internationally adopted for each type of instrument.

The terms of the Group's participation in securitization operations involving its own assets are subject to mandatory changes in case the Group stops respecting certain rating criteria. The criteria established in each transaction results mainly from the existing risk analysis at the moment that the transaction was set, being these methodologies usually applied by each rating agency in a standardised way to all the securitization transactions involving the same type of assets.

Regarding the Covered Bond Programs of Banco Comercial Português and Banco de Investimento Imobiliário that are currently underway, there are no relevant covenants related to a possible downgrade of the Bank.

47. SOLVENCY

The Millenniumbcp's own funds are determined according to the established regulation, in particular, according to Directive 2013/36/EU and Regulation (EU) 575/2013, approved by the European Parliament and the Council (CRD IV / CRR), and Banco de Portugal Notice No.6/2013.

Total capital includes tier 1 and tier 2. Tier 1 comprises common equity tier 1 (CET1) and additional tier 1.

Common equity tier 1 includes: (i) paid-up capital, share premium, hybrid instruments subscribed by the Portuguese State within the scope of the Bank's recapitalization process and not reimbursed, reserves and retained earnings and non-controlling interests; ii) and deductions related to own shares and loans to finance the acquisition of shares of the Bank, the shortfall of value adjustments and provisions to expected losses concerning risk-weighted exposure amounts calculated according to the IRB approach and goodwill and other intangible assets. Reserves and retained earnings are adjusted by the reversal of unrealised gains and losses on cash-flow hedge transactions and on financial liabilities valued at fair value through profits and losses, to the extent related to own credit risk. The minority interests are only eligible up to the amount of the Group's capital requirements attributable to the minorities. In addition, the deferred tax assets arising from unused tax losses carried forward are deducted, as well as the deferred tax assets arising from temporary differences relying on the future profitability and the interests held in financial institutions and insurers of at least 10%, in this case only in the amount that exceeds the thresholds of 10% and 15% of the common equity tier 1, when analysed on an individual and aggregated basis, respectively.

Additional tier 1 comprises preference shares and hybrid instruments that are compliant with the issue conditions established in the Regulation and minority interests related to minimum additional capital requirements of institutions that are not totally owned by the Group.

Tier 2 includes the subordinated debt that is compliant with the Regulation and the minority interests related to minimum total capital requirements of institutions that are not totally owned by the Group. Additionally, Tier 2 instruments held in financial institutions and insurers of at least 10% are deducted.