# MARKET DISCIPLINE

2008





# Market Discipline 2008



# **Table of Contents**

Foreword	3
1. Responsibility Statement	3
2. Scope and risk management policies	3
2.1 Scope	3
2.2 Risk management strategies, processes, structure and organisation	3
2.3 Scope and nature of risk measurement and information systems	6
2.4 Risk coverage and mitigation policies	7
3. Capital adequacy	8
3.1 Own Funds	8
3.2 Capital adequacy	8
4. Counterparty credit risk	12
4.1 Exposure Limits	12
4.2 Quantitative information	12
5. Credit risk	13
5.1 Definitions	13
5.2 Concentration risk	14
5.3 Standardised approach	
5.4 Portfolio structure	
5.5 Past due and impaired loans	
6. Credit risk mitigation techniques	18
7. Securitisations	18
7.1 Previous issues	18
7.2 Methods of calculation of risk-weighted exposures	
7.3 Accounting policies	
7.4 Quantitative information	
8. Position, credit, counterparty and settlement risk on the trading book	
8.1 Methods of calculation of capital requirements	
8.2 Methods for assessing risk on the trading book	
8.3 Quantitative information	
9. Exchange rate and commodity risks on the banking and trading books	
9.1 Method of calculation of minimum regulatory capital requirement	
9.2 Method of commodity risk assessment	
9.3 Quantitative information	
10. Equity exposures in the banking book	
10.1 Management goals	
10.2 Accounting techniques and assessment methods used	
10.3 Quantitative information	22
11. Operational risk	22
12. Analysis of sensitivity to interest rate risk	23
12.1 Interest rate risk on the banking book	
12.2 Stress tests	
12.3 Quantitative information - interest rate risk	25



# **Tables and charts**

Table 1 - Mapping between internal ratings and Moody's ratings	/
Table 2 – Capital ratio projections for the various stress scenarios	9
Table 3 - Solvency ratio, 2004-2008	. 10
Table 4 –Tier 1 ratio, 2004-2008	. 10
Table 5 – Capital adequacy for regulatory capital purposes	. 10
Table 6 – Capital adequacy for capital requirement purposes	. 12
Table 7 – Capital adequacy	. 12
Table 8 – Counterparty credit risk	. 13
Table 9 – Provisions and value corrections	. 14
Table 10 – Sector concentration index	. 14
Table 11 – Individual concentration index	. 15
Table 12 - Distribution of exposures in the credit portfolio by risk class	. 15
Table 13 – Geographical distribution of exposures in the credit portfolio by risk class as at 31	-
12-2008 (as a % of original exposure at default)	. 16
Table 14 – Sector distribution of exposures in the credit portfolio by risk class as at 31-12-200	8(
(as a % of original exposure at default)	. 16
Table 15 – Residual maturity of the credit portfolio by risk class as at 31-12-2008 (as a % of	
original exposure at default)	. 17
Table 16 – Breakdown of past due and impaired exposures	. 17
Table 17 – Credit risk mitigation techniques	. 18
Table 18 – Previous securitisation	. 19
Table 19 –Outstanding exposure amount on securitised loans as at 31-12-2008	. 20
Table 20 – Regulatory capital requirements (trading book)	. 21
Table 21 – Equity exposure	. 22
Table 22 – Operational risk (Basic indicator method)	. 23
Table 23 – Interest rate risk (banking book) as at 31-12-2008	. 25
Chart 1 - Distribution of types of guarantee by segment	7



#### **Foreword**

This document is based on a prudential approach in compliance with the provisions of Bank of Portugal Notice no. 10/2007 regarding the public disclosure of information, which states that the information provided should cover the risks incurred, taking into account strategic goals and the processes and systems of assessment carried out. It takes the end of 2008 as its point of reference.

# 1. Responsibility Statement

The board of directors of Caixa Económica Montepio Geral (CEMG) acknowledges and warrants the truthfulness and accuracy of the information provided in this document, which represents the best information available on the date it was written for the reporting date in question.

# 2. Scope and risk management policies

#### 2.1 Scope

This report has been produced on a consolidated basis for prudential purposes and covers both CEMG and Banco MG Cabo Verde IFI, SA.

# 2.2 Risk management strategies, processes, structure and organisation

Risk analysis and control in CEMG is performed by the Risk Analysis and Management Department (Portuguese abbreviation - DAGR), which is also responsible for advising the board of directors on measures for risk management. Implementation of risk management and control mechanisms is in general the responsibility of the units where the risks in question arise.

In line with the recommendations of the Basel Committee, the DAGR reports directly to the board of directors and enjoys independence from the departments responsible for the business. In addition, and again in an independent manner, the Internal Audit Department and the Compliance Office analyse the adequacy of processes and their implementation from the standpoint of internal and external rules.

The DAGR consists of four units:

- (i) Credit Risk Unit responsible for developing internal credit risk analysis models and incorporating them in decision-making processes, and also for prudential reporting on regulatory capital and internal reports on credit risk;
- (ii) Market Risks Unit performs analysis and prudential and internal reporting on market, interest rate, exchange rate and liquidity risks, as well as being responsible for incorporating that information in the decision-making processes of the dealing room;
- (iii) Operational Risk Unit responsible for the operational risk management;
- (iv) Corporate Credit Analysis Unit Made up of the credit analysts who are responsible for assessing credit proposals and assigning internal credit risk ratings in the corporate segment.



As identified in the risk assessment model developed by the Bank of Portugal, CEMG is exposed to a set of different risks. Most significant among these are credit risk on the retail and corporate portfolios, interest rate risk and liquidity risk.

The institution's risk profile takes into account the capital requirements associated with deals through the definition of decision-making rules and credit pricing.

The main principle of **credit risk** analysis is independence from business decisions, with direct reporting to the board of directors. In this type of analysis, tools are used and rules defined according to the size of the exposure, the degree of familiarity with the type of risk in question (e.g. the capacity to model those risks) and the liquidity of the instruments in question.

The pricing of loans reflects the corresponding expected loss, along with the cost of borrowed capital and of own funds, as well as administrative costs. In quantifying the expected loss, the marginal probability of default for the maturity of the operation associated with the internal risk class is taken into consideration, as is the severity of the loss, quantified by market estimates, taking into account the type of credit and of collateral. Pricing also reflects the strength of the commercial relationship with customers and associates of Montepio Geral Associação Mutualista.

The level at which pricing decisions are taken is defined according to risk adjusted return on equity (ROE), in accordance with the principle that the authority to approve operations with a lower risk-adjusted ROE lies with the higher levels of management.

Rejection criteria are defined in such a way as to minimise the risk of adverse selection, assuring that there is always at least one rejection risk class. In the case of loans to individuals, override authority lies with the board of directors, while in operations in the corporate segment, the decision must be taken at the level immediately above.

Therefore, credit rejections are determined by the occurrence of credit events in the financial system, breach of credit rules (e.g. borrowing capacity) and whenever the incorporation of risk in pricing significantly increases the risk of adverse selection. In addition, automatic credit rejection classes have been defined.

The degree of scrutiny in credit risk analysis is based on the scale of the operations concerned. Thus, in the case of loans to individuals (where the loan amounts are typically smaller), application scoring models are used that are specific to the main credit portfolios (e.g. mortgage loans, personal loans and credit cards). Analysis of customers is differentiated according to the period of time for which they have had a relationship with CEMG.

In pre-approved consumer credit campaigns, behavioural scoring is also used to define the terms on which operations are offered, which may subsequently be changed following submission to reactive scoring.

Regarding corporate loans, limits are set for size of operation and overall exposure, along with thresholds for compulsory consultation of DAGR independent credit analysts. The contents of the reports issued by these analysts vary according to the size of the customer and of the exposure: a broader and deeper analysis is required for larger exposures (companies with sales turnover of more than 500,000 € or aggregate exposure greater than one million €).



In these cases, the reports produced include the internal risk rating, the exposure limit assigned for the loan maturity, taking into account the company's capacity to generate cash flows and its financial costs, as well as the absorption of CEMG's own funds by unexpected losses on operations, a restriction that tends to be binding only in larger loans.

In addition, customers in this segment must have an internal rating, which must be updated regularly (at least every six months).

Intervention thresholds are also defined for the different decision-making levels, by size of operation and overall customer exposure, type of operation/collateral and pricing. These thresholds are approved by the board of directors. At the top of the decision-making hierarchy is the board of directors, which exercises that authority through the Credit Committee, which includes, among others, the heads of the commercial departments and the DAGR.

In the field of **market risk**, *Value-at-Risk* (VaR) is a fundamental instrument in analysing and imposing limits on exposure. Thus the internal regulation that defines the management guidelines of the front office of the Financial and International Department includes market risk limits based on VaR that reflect the volatility of asset prices and the corresponding liquidity. In the case of particularly complex products with low liquidity, in which VaR is necessarily less aplicable, specific more conservative limits are set. In extreme situations, those risk limits are consumed by the total value of the investment and not the VaR.

Stop-loss limits and quantitative limits on exposure to asset classes and rating levels are also in place.

At the level of **liquidity risk**, static and dynamic 12-month gaps are calculated regularly for monitoring CEMG's liquidity position, in accordance with bimonthly reports submitted to the Bank of Portugal. In this context, CEMG also carries out exercises to simulate potential adverse events, defined by the board of directors. In addition, the liquidity ratio is calculated on a daily basis.

Exchange rate gaps are also calculated, albeit less frequently, as the proportion of business that involves exposure to **exchange rate risk** is small, so the scale of such gaps is typically modest.

At the level of **operational risk**, an operational risk management system has been implemented that is based on identifying, assessing, monitoring, measuring, mitigating and reporting risks of this type. The main management tools are periodical self-assessment of risks and controls, capture of loss events stemming from operational risk, supervision and actions to mitigate operational risk, specifically at the level of business continuity, and production of periodical (quarterly and annual) reports on CEMG's operational risk profile.

At the level of business continuity, an integrated project to identify and design steps to be taken is nearing completion. The implementation and monitoring stages will be carried out subsequently, according to the conclusions reached at the previous stages and the strategy that CEMG adopts.

CEMG is already equipped with important tools to ensure its continuity, namely a contingency plan at the level of information technology (Production Environment Disaster Recovery Plan) and human resources and infrastructure (Internal Emergency Plans). As regards liquidity, the liquidity contingency plan assesses the availability of various sources of financing in a range of crisis scenarios.



There are internal committees regulated, focusing on risk management issues, namely the Risk Committee, with a monthly frequency. The DAGR is a member of this committee, being responsible for presenting relevant risk indicators and information. In addition, the DAGR is part of the Investment and Management Committees of Futuro.

#### 2.3 Scope and nature of risk measurement and information systems

Risk analysis also involves regular internal reporting on the main types of risk to the board of directors and the business areas involved. As regards credit risk, a monthly internal report is produced, with information broken down by commercial department, the main credit portfolio risk indicators and metrics on override levels. In addition, a half-yearly report is produced, with more aggregated risk information; a watchlist summarising exposures that deserve closer supervision and action is drawn up for the Credit Committee to examine and discuss. A weekly report on IMM counterparty risk is also produced.

In the field of market risk, given the relatively small size of the trading book, a weekly risk report is made on the proprietary portfolio of assets available for sale and the pension fund portfolio. These reports contain information on market risk (e.g. *Value-at-Risk*), credit risk (external ratings and credit VaR) and compliance with VaR, stop-loss and portfolio composition limits by rating, type of security and issuer. Operational risk is also the subject of quarterly and annual reports.

As regards analytical methods relating to credit risk, risk control techniques and models are derived from econometric modelling based on CEMG's own experience in granting different types of credit and also, wherever possible, in terms of recovery.

Thus internal rating models are used for the corporate segment (including small businesses) and reactive scoring models are used for lending to individuals. The rating model used in corporate credit makes a distinction between the construction sector and other economic sectors, while in lending to individuals specific models are used for the main credit portfolios – mortgage loans, personal loans and credit cards – and a distinction is drawn between individuals who have been customers of CEMG for more than a year and others.

Internal rating models classify companies in seven performing risk classes and a final class corresponding to default<sup>1</sup>. Taking into account relative 1-year frequencies of default, these classifications can be related to the rating classes of the Moody's agency as shown in the table below:

Market Discipline - 2008

<sup>&</sup>lt;sup>1</sup> Although the seventh risk class also includes companies that are in default within the Portuguese financial system, despite performing in Montepio.



Table 1 - Mapping between internal ratings and Moody's ratings

Rating Model for	the Construction Sector	Rating Mod	el for Other Sectors
	Corresponding Moody's		Corresponding Moody's
Internal Rating	Rating	Internal Rating	
1	Aaa-Baa3	1	Aaa-Baa3
2	Baa3	2	Ba1
3	Ba1	3	Ba1
4	Ba3	4	Ba2
5	B1	5	Ba3
6	B2	6	Ba3
7	B3	7	B2

The application scoring models for mortgage loans and personal loans use a scale that includes 10 classes for each portfolio, in both cases aggregating already existing and new customers. Application credit card scoring classifies credit proposals into four risk classes.

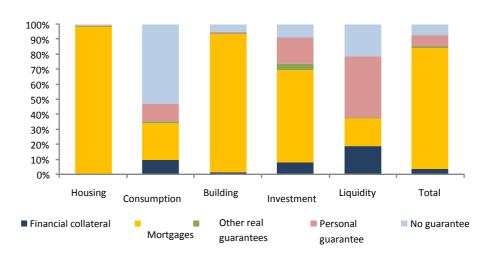
Along with application scorings, behavioural scoring models are used to classify the risk associated with each customer in a differentiated manner, depending on the type of relationship with CEMG. These are dynamic models that use only variables that are continuously updated and enable constant oversight of how customer risk levels change over time. Because of the diversity of this portfolio, it is segmented according to the products held by customers, with a model for each of the three segments considered most relevant (mortgage loans, consumer credit and cards/overdrafts).

#### 2.4 Risk coverage and mitigation policies

Collateral requirements depend on the size of the unexpected loss and typically apply to operations of greater volume, especially those that involve lending for construction or for house purchases. Where operations involve real collateral, the loan-to-value ratio is taken into consideration for purposes of pricing, as an indicator of the loss severity.

Different coverage policies are defined for different types of credit. The distribution of types of guarantee by credit portfolio segment is as shown below:

Chart 1 - Distribution of types of guarantee by segment <sup>2</sup>



<sup>&</sup>lt;sup>2</sup> In the case of operations with multiple guarantees, the amount in question has been allocated to the guarantee with the greatest liquidity (financial collateral). The amounts shown under personal guarantee correspond to operations without any type of collateralisation.



Mitigation of risk through collateralisation of operations is taken into account in the pricing of operations, either by way of the borrower's credit risk (e.g. in the case of real collateral), or by way of reduction of the exposure level, in situations involving financial collateral (where the market risk of the assets involved becomes relevant).

As a rule, personal guarantees are required in loans to individuals whenever the customer does not comply with debt-to-income rules, while in the context of corporate credit they are demanded in loans involving larger amounts, smaller companies and wherever there is an intention to further mitigate risk, in light of the collateralisation level of the operation.

#### 3. Capital adequacy

#### 3.1 Own Funds

For the purposes of solvency, the own funds of a credit institution include core and complementary capital, minus their negative components.

Core or Tier 1 capital means:

- Paid-in share capital;
- Issue premiums on shares and participation securities;
- Legal, statutory and other reserves made up of retained earnings;
- Positive results for the year in progress and previous years, net of provisions, depreciation, tax and expected dividends.

Complementary or Tier 2 capital means:

#### Upper Tier 2

- Revaluation differences on assets available for sale;
- Revaluation reserves on fixed assets:
- Other authorised reserves;
- Subordinated liabilities with no fixed term to maturity;

#### Lower Tier 2

- Participation securities;
- Subordinated loans;
- The released portion of redeemable preference shares;

Negative elements of regulatory capital correspond to:

- Own shares:
- Assets held by the bank that are part of the regulatory capital of a third party;
- Intangible fixed assets;
- Negative results for the year in progress and previous years;
- Negative revaluation reserves;
- Shortfalls in provisions.

# 3.2 Capital adequacy

CEMG's goal for own funds is to achieve a level of resources that enables it to cope with especially adverse circumstances. Therefore, this goal is related to maintaining conditions of access to the wholesale funding market. Thus it is desirable to maintain internal ratings similar to those currently held (long-term ratings of A- and A2, awarded by Fitch Ratings and Moody's respectively).

Bearing in mind the levels of default historically associated with the ratings awarded and with the capital requirements established in Pillar I, and the absence of any large risks, it is



considered that these requirements adequately reflect CEMG's capital needs. Nevertheless, in view of its exposure to the real estate sector, CEMG intends to have a tier I ratio not below the minimum recommended by the Bank of Portugal (8%) and a solvency ratio of not less than 10%

Projections have been designed for the evolution of capital ratios using in-house methods, starting from a base scenario that considers internal estimates of how the business will progress. The results shown in the following tables for the various stress scenarios illustrate the soundness of current levels of capital:

Table 2 - Capital ratio projections for the various stress scenarios

Scenario		Tier I Ratio	Solvency Ratio
31-12-2008		7.9%	11.4%
Base Scenario	3	7.6%	10.9%
Stress Scenario I	4	7.2%	10.4%
Stress Scenario II	5	6.9%	10.0%
Stress Scenario III	6	6.4%	9.2%
Stress Scenario IV	7	7.6%	10.9%

The market risk capital requirement is an order of magnitude greater than the estimate made by in-house models.

Capital requirements to cover operational risk are calculated in accordance with the basic indicator method and reached approximately 59 million Euros at the consolidated level in 2008. Using the standardised approach, which breaks down the relevant indicator by business segments, capital requirements would be approximately 9 million Euros lower, because of the relative importance of retail banking within CEMG's business.

In light of the strategic plan drawn up for the three-year period 2009-2011 and the business plan for the current year, no significant changes are anticipated in the material dimensions of the various types of risk. As regards lending to individuals, greater collateralisation of new loans is expected, together with a drop in the average loan-to-value ratio, allowing for lower capital requirements.

The strategy of business diversification, particularly in the corporate segment, will work in the opposite sense, increasing exposure to sectors not related to civil construction and so reducing the level of collateralisation of new loans.

<sup>&</sup>lt;sup>3</sup> The base scenario includes a downgrade of the Portuguese Republic's risk rating from AA- to A+ (on the Standard & Poor's scale) and a 50% increase in capital requirements for market risk. For credit risk a moderate increase in exposure in the class "Claims secured by real estate" is assumed, as against a more marked increase in exposure in the classes "Retail portfolio", "Companies" and "Local authorities".

<sup>&</sup>lt;sup>4</sup> Stress scenario I adds to the base scenario a forecast of a 50% increase in exposures at default in the class "Items past due".

<sup>&</sup>lt;sup>5</sup> Stress scenario II adds to the base scenario a forecast of a 100% increase in exposures at default in the class "Items past due".

<sup>&</sup>lt;sup>6</sup> Stress scenario III adds to Stress scenario I the effect of a potential devaluation of collateral on assets included in the class "Claims secured by real estate". This effect causes a worsening of loan-to-value ratios, thus increasing the risk weighting on these exposures.

<sup>&</sup>lt;sup>7</sup> Stress scenario IV adds to the base scenario a forecast of default on the five biggest positions in the class "Companies" and a similar increase in credit past due in the class "Retail portfolio".



It is believed that the magnitude of these effects will tend to be equal. For this reason CEMG will stick to its adopted strategy of gradually increasing capital requirements, with the aim of guaranteeing sound levels of solvency, illustrated by solvency ratios of not less than 10% and tier I ratios of not less than 8%.

CEMG has a higher solvency ratio than the main Portuguese banks, as shown by the tables below.

Table 3 - Solvency ratio, 2004-2008

			Solvency Ratio				
Bank	Moody's Rating	Assets				0005	0004
		(thousand €, 2007)	2008	2007	2006	2005	2004
Montepio	A2	16.898	11,4	8,9	9,8	10,7	11,7
Maximum (1)		103.554	11,3	13,3	13,1	12,9	12,1
Minimum (1)		7.776	10,5	9,6	9,5	11,5	9,4
Mean (1)*		63.542	10,4	10,3	10,9	12,4	9,23

<sup>&</sup>lt;sup>1</sup> with reference to the five largest Portuguese banks

Table 4 - Tier 1 ratio, 2004-2008

				Ti	er 1 Rat	tio	
Bank	Moody's Rating	Assets (thousand €, 2007)	2008	2007	2006	2005	2004
Montepio	A2	16.898	8,0	6,5	7,0	6,8	7,6
Maximum (1)		103.554	8,8	7,7	8,4	7,4	8,1
Minimum (1)		7.776	6,6	5,5	6,6	6,4	6,2
Mean (1)*		63.542	7,0	6,5	7,2	7,1	5,9

<sup>&</sup>lt;sup>1</sup> with reference to the five largest Portuguese banks

The table below provides a summary of solvency figures in 2008, considering only Pillar I requirements.

Table 5 - Capital adequacy for regulatory capital purposes

<sup>\*</sup> weighted by assets

<sup>\*</sup> weighted by assets



		Part 1	Dec-08	Jun-08
1.	Total	regulatory capital for solvency purposes	1.202.345	1.107.373
1.1.	Core	capital	839.195	786.522
	1.1.1.	Eligible share capital	660.000	660.000
		1.1.1.1. Paid-in share capital	660.000	660.000
	1.1.2.	Eligible reserves and results	209.445	150.712
		1.1.2.1. Reserves	175.864	175.864
		1.1.2.3. Results from the previous year and provisional results for the current year	33.874	0
		1.1.2.7. Revaluation differences eligible for base regulatory capital	-293	-25.152
	1.1.3.	Fund for general banking risks	0	0
	1.1.4.	Other items eligible for core capital	29.477	33.617
		1.1.4.1. Impact of transition to the IAS/AAS (negative impact)	28.623	32.809
		1.1.4.2. Other items eligible for core capital	854	807
	1.1.5.	(-) Other items deductable from core capital	-59.727	-57.807
		1.1.5.1. (-) Intangible fixed assets	-14.775	-13.994
		1.1.5.3. (-) Other items to be deducted from core capital	-44.952	-43.812
1.2.	Comp	olementary capital	386.420	339.791
	1.2.1.	Upper Tier 2	8.420	111.791
	1.2.2.	Low er Tier 2	378.000	228.000
	1.2.3.	(-) Deductions from complementary capital	0	0
1.3.	(-) De	ductions from core and complementary capital	-13.758	-10.460
	1.3.a.	Of which: (-) From core capital (82)	-6.879	-5.230
	1.3.b.	Of which: (-) From complementary capital (83)	-6.879	-5.230
1.4.	Total	core capital for purposes of solvency (87)	832.316	781.292
1.5.	Total	complementary capital for purposes of solvency (88)	379.541	334.561
1.6.	(-) De	duction from total regulatory capital (89)	-9.507	-8.481
1.7.	Total	complementary capital available to cover market risks	0	0
1.8.	For th	e record:	0	0
	1.8.4.	Reference capital for the purpose of limits in relation to large risks	1.202.349	1.107.373

Unit: Eur1000



Table 6 - Capital adequacy for capital requirement purposes

			Part 2	Dec-08	Jun-08
2.	Regulat	ory capital r	equirements	840.469	841.442
2.1.	For cred	dit risk, cou	nterparty credit risk, risk of decrease in receivables and delivery risk	776.151	783.473
	2.1.1.	Standardise	ed approach	776.151	783.473
	2.1.1.1.	Risk classe	s in the standardised approach excluding securitisation positions	776.151	783.473
		2.1.1.1.1.	Claims or conditional claims on central governments and central banks	113	110
		2.1.1.1.2.	Claims or conditional claims on regional governments and local authorities	821	840
		2.1.1.1.6.	Claims or conditional claims on banks	21.655	52.567
		2.1.1.1.7.	Claims or conditional claims on companies	203.745	180.981
		2.1.1.1.8.	Claims or conditional claims on the retail portfolio	169.097	149.766
		2.1.1.1.9.	Claims or conditional claims secured by real estate	298.660	312.584
		2.1.1.1.10.	Items past due	70.185	61.987
		2.1.1.1.12.	Mortgage bonds and public sector bonds	53	70
		2.1.1.1.13.	Exposures to collective investment undertakings	4.255	8.323
		2.1.1.1.14.	Other items	7.567	16.246
	2.1.1.2.	Securitisation	on exposures in the standardised approach	0	0
	2.1.1.3.	(-) Provision	ns for general credit risks	0	0
2.2.	Settlem	ent risk		0	0
2.3.	Capital	requirement	ts for position risk, foreign exchange risk and commodities risk	5.265	2.223
	2.3.1.	Standardise	ed approach	5.265	2.223
	2.3.1.1.	Debt instru	ments	5.122	2.042
	2.3.1.2.	Equity secu	ırities	144	181
	2.3.1.3.	Exchange r	ate risk	0	0
	2.3.1.4.	Commoditie	es risk	0	0
2.4.	Capital	requirement	ts for operational risk	59.053	55.746
	2.4.1.	Basic indica	ator method	59.053	55.746
2.5.	Regulat	ory capital r	requirements - fixed general expenditure	0	0
2.6.	Tempor	ary capital r	equirements or other capital requirements	0	0
				Unit	: Eur1000

Table 7 - Capital adequacy

Part 3	Dec-08	Jun-08
Surplus (+) / Shortfall (-) in regulatory capital	361.880	265.931
Solvency ratio (%)	11,44%	10,53%
	L Init:	Fur1000

# 4. Counterparty credit risk

#### **4.1 Exposure Limits**

Various limits are defined for the main risks found in the course of business. As per counterparty credit risk, particular attention is paid to large-risk limits, being set limits for money market exposures, based on banks' ratings and profit levels.

In corporate loans, exposure limits for the maturity in question are also defined, taking into account the company's capacity to generate cash flows and its financial costs, along with absorption of CEMG's own funds in the event of an unexpected loss on the operations.

# **4.2 Quantitative information**

The counterparties of these assets are generally central governments or financial institutions, while non-financial companies account for only a small part (less than 10%).



Table 8 - Counterparty credit risk

31-12-2008	Original exposure	Credit risk reduction techniques	Value of fully adjusted exposure	Risk- weighted exposure
Bonds	711.476	0	711.476	208.595
Derivatives	78.327	0	78.327	16.234
IMM	167.257	0	167.257	33.451
Funds	4.874	0	4.874	4.795
Securitisations	27.066	0	27.066	6.052
Mortgage bonds	5.582	0	5.582	663
Other	117.719	0	117.719	115.351
Total	1.112.301	0	1.112.301	385.141

Unit: Eur1000

#### 5. Credit risk

#### **5.1 Definitions**

For accounting purposes, the following definitions apply:

- Past due credit: all payments of capital and interest not made on the date they fall due;
- Credit subject to impairment: all credits that, according to the analysis carried out, individually or collectively display signs of impairment, which are defined in an inhouse model (and include past due credit, restructured credit, customer rating/score and registration as a risky user in the Bank of Portugal database, etc...);
- Credit in default: all credit contracts with payments in arrears, including both credit falling due and past due credit.

As regards the credit portfolio, value corrections derive from the creation of provisions. On the date of initial recognition, credits are recorded at their face value, in accordance with the procedures defined in Bank of Portugal Notice 1/2005. The intention is that the book value of provisions created in accordance with the rules contained in Notice 3/95 should at all times reflect their realisable value.

The concept of risk subject to impairment for the credit portfolio is defined when financial statements are produced on a consolidated basis. For individual accounts, CEMG adopts the setting up of provisions on the basis of the rules set out in Bank of Portugal Notice 3/95. For the purposes of consolidated accounts, loans over 1 million euros are subject to individual analysis and the expected loss is determined, leading to the creation of provisions in an equal amount. Loans up to 1 million euros are subject to collective analysis and provisions are created according to the respective PD and LGD that have been fixed, on the basis of CEMG's historical information and the trend set by the prevailing economic situation.

The value corrections recorded in 2007 and 2008 achieved 298 and 384 million euros, respectively. For their part, the sums recovered in 2007 and 2008 amounted to 217 and 328 million euros, respectively.



Table 9 - Provisions and value corrections

	31-12-2008	31-12-2007
Initial balance	298.047	297.000
Appropriations	425.566	303.939
Uses	-11.983	-85.806
Reinstatements/Cancellations	-327.710	-217.086
Closing balance	383.921	298.047
Closing balance		298.047

Unit: Eur '000

#### 5.2 Concentration risk

As mentioned above, CEMG applies a strategy of business diversification, with the aim of reducing its relative exposure to the real estate sector. The impact of concentration risk on capital requirements is gauged by way of a simplified approach, based on the calculation of sector and individual concentration indices.

As can be seen from the following table, there is a concentration of credit portfolio exposures in companies in the building and real estate sectors. Accordingly, the sector concentration index is higher than the benchmark established from information published by the Bank of Portugal on the total amount of credit granted by the system as a whole.

Table 10 - Sector concentration index

Type of sector	Montepio % of total credit	Economy as a whole % of total credit*
Secondary	55.25%	19.21%
Tertiary	19.19%	36.71%
Tertiary	9.16%	13.97%
Secondary	4.78%	12.49%
Tertiary	3.19%	3.52%
Tertiary	2.98%	3.26%
Tertiary	2.44%	5.89%
Secondary	0.86%	2.82%
Primary	0.27%	1.60%
Secondary	0.11%	0.41%
Primary	0.01%	0.12%
-	1.77%	0.00%
	35.6%	21.36%
	Sector Secondary Tertiary  Tertiary Secondary Tertiary Tertiary Tertiary Secondary Primary Secondary Primary	sector         % of total credit           Secondary         55.25%           Tertiary         19.19%           Tertiary         9.16%           Secondary         4.78%           Tertiary         3.19%           Tertiary         2.98%           Tertiary         2.44%           Secondary         0.86%           Primary         0.27%           Secondary         0.11%           Primary         0.01%           -         1.77%           35.6%

<sup>\*</sup>source: Bank of Portugal Monetary and Financial Statistics

In order to measure individual concentration risk, the concentration index is calculated for the portfolio's 1,000 largest exposures (aggregated by customer/economic group). As at December

 $<sup>^8</sup>$  Sector Concentration Index =  $\Sigma$  x² / ( $\Sigma$ x)²  $^*$  100, where x represents the total exposure in each sector of economic activity.



31, these exposures accounted for approximately 24% of the portfolio as a whole, leading to an individual concentration index of 0.08%, which is considered appropriate.

Table 11 - Individual concentration index

Dec-08	Absolute value	Percentage
Total credit	16.461.442	100,0%
1000 largest exposures	3.978.756	24,0%
Individual concentration index <sup>9</sup>	0.08%	

Unit: Eur 1000

#### 5.3 Standardised approach

In calculating capital requirements according to the standardised approach, ratings supplied by the agencies Moody's and S&P are used.

This practice is transversal across the risk classes and allocation is carried out in compliance with Notice 5/2007, as follows:

- Where two ratings from different agencies exist simultaneously, the second best is applied;
- In the case of similar bonds and securities, priority is given to the rating of the issue; only where there is no such rating is the issuer's rating used;
- Ratings, where they exist, are used consistently for all exposures at default in all classes.

#### 5.4 Portfolio structure

As can be seen from the table below, the distribution of exposures at default in the credit portfolio by risk class is concentrated in the classes *Claims secured by real estate, Retail Portfolio*, and *Companies*.

Table 12 - Distribution of exposures in the credit portfolio by risk class

Risk Class	Original exposure at default 31-12-2008
CL I - Central government and central banks	208.847
CL II - Regional governments and local authorities	51.414
CL VI - Banks	1.069.728
CL VII - Companies	3.092.853
CL VIII - Retail portfolio	3.184.226
CL IX - Claims secured by real estate	9.051.359
CL X - Past due items	1.256.859
CL XI - Mortgage bonds and public sector bonds	5.582
CL XII - Exposures to CIUs	53.187
CL XIII - Other items	219.550
TOTAL	18.193.606

Unit: Eur 1000

<sup>&</sup>lt;sup>9</sup> Individual Concentration Index =  $\Sigma$  x² / ( $\Sigma$ x)² \* $\Sigma$  x/ $\Sigma$ y \*100, where x represents the total credit of the 1,000 biggest exposures and y represents the total credit portfolio.



In terms of geographical distribution, there is a concentration in areas with the highest population density (Greater Lisbon, Greater Oporto and the Beiras), having CEMG a commercial presence in all regions.

Table 13 – Geographical distribution of exposures in the credit portfolio by risk class as at 31-12-2008 (as a % of original exposure at default)

Risk Class	Lisbon	Oporto	Beira Alta, Baixa e Litoral	Minho	Alentejo	Trás-Os- Montes e Douro	Estrema dura	Algarve	Azores	Madeira
CL I - Central governments and central banks	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%
CL II - Regional governments and local authorities	0.13%	0.00%	0.00%	0.00%	0.00%	0.07%	0.00%	0.00%	0.02%	0.08%
CL VI - Banks	0.44%	0.00%	0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
CL VII - Corporates	7.75%	2.40%	2.12%	1.20%	0.20%	0.93%	0.96%	1.18%	0.40%	0.57%
CL VIII - Retail portfolio	7.33%	3.53%	1.88%	1.57%	0.41%	1.32%	1.18%	0.94%	0.71%	0.37%
CL IX - Claims secured by real estate	20.30%	8.87%	5.47%	3.45%	5.73%	3.50%	2.67%	1.21%	2.04%	1.45%
CL X - Past due items	3.14%	1.57%	0.86%	0.60%	0.07%	0.51%	0.45%	0.13%	0.12%	0.11%
TOTAL	39.10%	16.38%	10.36%	6.82%	6.41%	6.33%	5.27%	3.46%	3.29%	2.59%

As far as the distribution of the corporate lending portfolio by business sector is concerned, the outstanding sectors are construction, real estate and trade.

Table 14 – Sector distribution of exposures in the credit portfolio by risk class as at 31-12-2008 (as a % of original exposure at default)

Secondary Sector						Tertiary Sector						
Risk Class			Other						Public admin. & defence: Compulsory social security: Human health and welfare	Other		
CL I - Central governments and central banks	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.00%		
CL II - Regional governments and local authorities	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.91%	0.00%		
CL VI - Banks	0.00%	0.00%	0.00%	0.00%	0.00%	1.43%	0.00%	0.00%	0.00%	0.00%		
CL VII - Companies	0.18%	24.14%	4.46%	5.96%	5.98%	0.98%	1.13%	1.99%	0.61%	2.10%		
CL VIII - Retail portfolio	0.09%	5.88%	0.62%	2.75%	1.65%	0.24%	0.89%	0.39%	0.40%	1.40%		
CL IX - Claims secured by real estate	0.01%	19.92%	0.10%	5.56%	0.48%	0.13%	0.24%	0.01%	0.17%	0.30%		
CL X - Past due items	0.01%	4.82%	0.66%	1.37%	1.04%	0.01%	0.44%	0.02%	0.10%	0.42%		
TOTAL	0.29%	54.75%	5.85%	15.64%	9.15%	2.80%	2.70%	2.42%	2.20%	4.21%		

As per distribution by remaining maturity, approximately 60% of assets are long-term (remaining maturity of more than 10 years). The majority of these assets is classified as *Claims secured by real estate* and consist of mortgage loans to individuals and credit for corporate investment. Approximately 20% of the total original exposure at default has no defined payment plan, consisting by and large of current accounts to provide companies with liquidity support (revolving credit).



Table 15 – Residual maturity of the credit portfolio by risk class as at 31-12-2008 (as a % of original exposure at default)

Risk class	VR < 1	1 year < VR < 5 years	5 years < VR < 10 years	VR > 10 years	Revolvin g
CL I - Central governments and central banks	0.0%	0.0%	0.0%	0.0%	0.0%
CL II - Regional governments and local authorities	0.0%	0.0%	0.2%	0.1%	0.0%
CL VI - Banks	0.3%	0.1%	0.0%	0.0%	0.1%
CL VII - Corporates	5.4%	2.0%	1.3%	1.1%	7.8%
CL VIII - Retail portfolio	2.0%	1.3%	3.0%	9.2%	3.7%
CL IX - Claims secured by real estate	0.6%	0.6%	1.1%	44.7%	7.7%
CL X - Past due items	1.2%	0.2%	0.5%	4.0%	1.7%
as a % of the original exposure at default	9.5%	4.2%	6.1%	59.2%	21.0%

#### 5.5 Past due and impaired loans

The distribution within the corporate credit segment of past due exposures and the corresponding provisions for impairment by sector of activity reflects the concentration of business in the construction, real estate and trade sectors.

The geographical distribution of exposures with past due loans, as is the case for total exposures as at 31 December 2008, shows a greater concentration in the Greater Lisbon, Greater Oporto and Beiras regions.

Table 16 - Breakdown of past due and impaired exposures

	Total exp	posures (31-12-2008)	% exposures past due	% covered by impairment provisions
(I)	Primary Sector		0,1%	18.1%
(of the	Secondary	Construction	54,2%	23.0%
		Other	7,4%	12.9%
wn by main sectors corporate segment)	Tertiary Sector	Real Estate	15,4%	28.2%
sec		Wholesale and retail trade	11,7%	17.1%
ain s se		Financial and insurance	0,1%	19.4%
y m rate		Hotels and restaurants	4,9%	29.3%
n b		Transport and warehousing	0,3%	5.0%
Breakdown by main sectors corporate segment)		Public admin. and defence: compulsory social security: human health and welfare	1,1%	9.8%
ш		Other	4,7%	21.1%
	Total		100,0%	22,4%
	Lisbon		39,0%	24.9%
_ S	Oporto		20,8%	27.4%
Breakdown by main geographical regions	Beira Alta, Baixa	e Litoral	11,3%	24.5%
reg	Minho		8,0%	22.8%
rn b	Alentejo		7,9%	25.6%
yok jh	Trás-Os-Montes	e Douro	6,7%	24.9%
akc gra	Estremadura		2,5%	24.4%
Bre	Algarve		0,7%	28.4%
<b>–</b> 5	Azores		1,6%	24.0%
	Madeira		1,5%	26.3%
	Total		100,0%	25,3%

Unit: Eur 1000



# 6. Credit risk mitigation techniques

Two types of techniques are used to reduce credit risk on the positions held: personal guarantees that have the effect of replacing the exposure and financial collateral that directly reduces the value of the exposure.

Exposures with risk mitigation through effect of replacement correspond mostly to corporate loans guaranteed by Mutual Guarantee companies (Norgarante, Lisgarante and Garval).

Lending operations in which risk is reduced directly correspond to those collateralised by financial securities, namely term deposits, gold, bonds and shares included in a main index of a recognised stock exchange, as laid down in Annex VI to Bank of Portugal Notice 5/2007.

Table 17 - Credit risk mitigation techniques

Risk Class	Net position	Personal p			credit ection	Effect of	Volatility	Financial collateral:
KISK Class		Guarantee s	Credit derivatives		Other forms of real protection	replacement in exposure <sup>(1)</sup>	adjustment to exposure value	fully adjusted value of protection
	1	2	3	4	5	6	7	8
Total exposure	17.705.576	2.722	0	0	0	2.193	0	492.330
CL I - Central governments and central	208.847	0	0	0	0	0	0	0
CL II - Regional governments and local	51.414	0	0	0	0	0	0	81
CL VI - Banks	1.069.728	0	0	0	0	0	0	1.241
CL VII - Companies	3.091.617	2.614	0	0	0	2.091	0	374.195
CL VIII - Retail portfolio	3.182.765	52	0	0	0	28	0	116.812
CL IX - Claims secured by real estate	9.048.586	0	0	0	0	0	0	0
CL X - Past due items	774.301	56	0	0	0	73	0	0
CL XI - Mortgage bonds and public sector bonds	5.582	0	0	0	0	0	0	0
CL XII - Exposures to CIUs	53.187	0	0	0	0	0	0	0
CL XIII - Other elements	219.550	0	0	0	0	0	0	0

<sup>(1) -</sup> This field is calculated as follows: G\*P1-G\*P2, where G is the value of the guarantee, P1 the original weighting and P2 the weighting after taking the guarantee into account.

Unit: Eur 1000

#### 7. Securitisations

# 7.1 Previous issues

As at 31-12-2008, CEMG was involved as originator in four traditional credit securitisation operations, namely: *Pelican Mortgages* No1; *Pelican Mortgages* No2; *Pelican Mortgages* No3 and *Pelican Mortgages* No4. In all these operations the main goal was to promote greater flexibility in managing the bank's balance sheet, with a positive impact, *inter alia*, on the liquidity ratio.

The degree of involvement (understood as the quotient between the outstanding principal and the sum of consolidated assets and outstanding principal) was below 20%. For prudential purposes, none of the other securitisation operations represented a significant transfer of credit risk.



# 7.2 Methods of calculation of risk-weighted exposures

Given that none of the securitisation operations meets the minimum criteria set out in Annex I to Bank of Portugal Notice no. 7/2007, the exposures at default covered by them are not excluded from the calculation of risk-weighted exposures. Risk-weighted exposures are therefore not calculated for the securitisation exposures held.

# 7.3 Accounting policies

Until 31 December 2004, in accordance with the accounting principles defined by the Bank of Portugal, assets, credits and securities assigned by CEMG under securitisation operations were derecognised. Securities acquired under those operations were accounted for as investment securities and provision was made for them according to the rules defined by Bank of Portugal Notice no. 27/2000.

In compliance with IFRS 1, no changes have been made to the derecognition criterion adopted in CEMG's individual financial statements for all issues carried out prior to 1 January 2004. All operations carried out after that date will have to be analysed according to the derecognition rules set out in IAS 39, i.e., if a substantial portion of the risks and benefits associated with the assets are transferred, or control over the assets is transferred, those assets must be derecognised.

#### 7.4 Quantitative information

Table 18 - Previous securitisation

	Pelican 1	Pelican 2	Pelican 3	Pelican 4	Pelican 5
Tradicional securitisation					
Originator(s)	CEMG	CEMG	CEMG	CEMG	CEMG
Issuer(s)	Oceanus - SGFTC, SA	Banco Finantia,	Sagres STC, SA	Sagres STC, SA	Sagres STC, SA
Information on the operations					
Start date	19-Dec-02	29-Sep-03	30-Mar-07	20-May-08	25-Mar-09
Legal maturity	2037	2036	2054	2056	2061
Step-up clause (date)	n.a.	01-Sep-2010	Mar-16	Jun-17	Jun-18
Revolving (years)	n.a.	n.a.	n.a.	n.a.	n.a.
Securitized assets (in millions of euros)	650	700	750	1.000	1.000
Amount outstanding (in millions of euros)	144	247	487	960	996 <sup>(1)</sup>
Information on involvement of the originator(s)					
Existence of situations of "implicit support"	no	no	no	no	no
Assets ceded (by institution)/Securitised assets (total) (%)	100,0%	100,0%	100,0%	100,0%	100,0%
Initial capital gain/Value of repurchased first-loss position	0,00	0,00	0,00	0,00	0,00

<sup>&</sup>lt;sup>1</sup> Amount outstanding as at 31-03-2009



Unit: Million Eur

Table 19 - Outstanding exposure amount on securitised loans as at 31-12-2008

	Amount	Of which: relating to exposures subject to impairment or past due
Pelican 1	144	13
Pelican 2	247	6
Pelican 3	487	2
Pelican 4	960	2
Pelican 5	996 <sup>(1)</sup>	0
Tradicional securitisations (total)	1.839	24

<sup>&</sup>lt;sup>1</sup> amount outstanding as at 31-03-2009

# 8. Position, credit, counterparty and settlement risk on the trading book

# 8.1 Methods of calculation of capital requirements

As stated in 5.3 above, capital requirements are calculated using the standardised approach.

# 8.2 Methods for assessing risk on the trading book

The trading book is covered in full by the "standardised approach to the trading book".

In accordance with the "standardised approach to the trading book", the following methods are applied to each type of exposure:

Debt instruments

- General risk: method based on maturity;
- Specific risk: weighting of assets according to sector and credit quality of issuer.

# Equity securities

- General risk: multiplication of global net position by 8%;
- Specific risk: multiplication of global gross position by 4%.

The trading book is modest in size and consists for the most part of credit default swaps with notional long positions of 61 million euros and short positions of 32 million euros as at 31-12-2008.



#### 8.3 Quantitative information

Table 20 – Regulatory capital requirements (trading book)

	Trading book risks	Regulatory capital requirements
		31-12-2008
1.	Position risk	
1.1.	Standardised approach to trading book	5.265
1.1.1.	Debt instruments	
1.1.1.1.	Specific risk	5.090
1.1.1.2.	General risk	32
1.1.2.	Equity securities	
1.1.2.1.	Specific risk	48
1.1.2.2.	General risk	96
2.	Counterparty credit risk	
2.1	Bonds	82
2.2	Derivatives	74
2.3	IMM	4.624
2.4	Other	1.297

Unit: Eur 1000

According to the standardised approach, financial products held within the portfolio may be broken down into two classes of asset: debt instruments (including debt derivatives and comparable instruments) and equity securities (including equity derivatives and comparable instruments).

The regulatory capital requirement for each class of asset is calculated according to the coverage needs of the specific risk, which corresponds to the risk of a price variation due to factors associated with its issuer, and the general risk, which corresponds to the risk of a price variation due to a change in interest rates.

# 9. Exchange rate and commodity risks on the banking and trading books

# 9.1 Method of calculation of minimum regulatory capital requirement

The method adopted by CEMG to calculate minimum regulatory capital requirements to cover exchange rate and commodities risk is the standardised approach.

# 9.2 Method of commodity risk assessment

Commodities risk is negligible.

#### 9.3 Quantitative information

In accordance with point 8 of Annex V to Notice no. 8/2007, regulatory capital requirements are calculated for exposures to the exchange rate where their net position exceeds 2% of total own funds.

Given that in 2008 the net foreign exchange position represented approximately 0.17% of own funds, there was no allocation of capital to cover exchange rate risk.



# 10. Equity exposures in the banking book

#### 10.1 Management goals

Investment in equity in CEMG's banking book is of marginal proportions, both as regards the portfolios under management and the balance sheet. The quantitative limit of exposure for the banking book defined in the Financial and International Department's front office regulations is 50 million euros, which corresponds to 0.3% of the balance sheet; use of that limit has never exceeded 5 million euros, i.e. 0.03% of the balance sheet.

This conservative attitude to risk has meant that, in the adverse conditions that have characterised the stock market in the recent past, there have been no significant negative impacts on profitability or prudential ratios.

#### 10.2 Accounting techniques and assessment methods used

Capital losses on equity exposures have been accounted for according to the portfolios in which these securities are classified, the cumulative value of those losses and how long the losses have existed for. Thus capital losses on equity belonging to the trading book are recognised in results immediately. Falls in the value of shares categorised as available for sale are classified as impairment and recognised in results if greater than 30% or if the situation has persisted for a period of more than 12 months. In the remaining cases, capital losses are recorded in revaluation reserves, affecting equity.

#### 10.3 Quantitative information

Table 21 - Equity exposure

	Listed	shares	Unlisted	shares	TOTAL	
	31-12-08	31-12-07	31-12-08	31-12-07	31-12-08	31-12-07
Acquisition cost	4.170	211	34.739	37.535	38.909	37.746
Fair value	2.644	182	34.638	37.433	37.282	37.615
Market price	2.644	182			2.644	182
Result for the year arising from sales and settlements					2.099	8.546
Total unrealised gains and losses					1.604	30
Total gains and losses inherent in latent revaluations					23	101

Unit: Eur 1000

#### 11. Operational risk

Operational risk consists of the risk of losses as a result of shortcomings or failures in internal processes, human resources or systems or external factors.

An operational risk management system is in place that is based on identifying, assessing, monitoring, measuring, mitigating and reporting this type of risk. At the level of organisational structure, there is a body solely dedicated to the management of operational risk, backed up by operational risk representatives in the various organisational units.

The main management tools are periodical self-assessment of risks and controls, capture of loss events stemming from operational risk, supervision and carrying out actions to mitigate



operational risk, specifically at the level of business continuity, and production of periodical (quarterly and annual) reports on CEMG's operational risk profile.

Regulatory capital requirements to cover operational risk are calculated in accordance with the basic indicator method and amounted to 59 million euros in 2008.

The accounting information taken into consideration in calculating the relevant indicator is aligned with the provisions of Bank of Portugal Instruction no. 23/2007, with the exception of accounts that do not stem from CEMG's current activity, pursuant to the provisions of article 5, subparagraph d) of Annex I to Bank of Portugal Notice no. 9 /2007.

Table 22 - Operational risk (Basic indicator method)

	Rele	vant indic	Regulatory capital	
Activity	2006	2007	2008	requirement (consolidated)
Basic indicator method	370	396	415	59
				Unit: Million Eur

#### 12. Analysis of sensitivity to interest rate risk

#### 12.1 Interest rate risk on the banking book

Identifying, measuring and controlling interest rate risk on CEMG's banking book are among the tasks of the Risk Analysis and Management Department (DAGR). Management of interest rate risk by CEMG takes as reference the principles recommended by the *Bank for International Settlements*.

Measurement and assessment of the interest rate risk on CEMG's banking book is based essentially on two methods:

- Repricing gap (most used);
- Market value/duration.

These methods use the following simulation components:

- Remunerated assets and liabilities that make up CEMG's balance sheet (balance, currency, repricing date, maturity date, contract interest rate, type of indexing rate, interest rate renewal period and type of repayment);
- Off-balance sheet accounts (in particular interest rate swaps);
- Contracting strategies (amounts, pricing and repricing);
- Projection of interest and exchange rates;
- Coefficients of early settlement and mobilisation.

The repricing gap method calculates the value of assets and liabilities that renew interest rate within a certain period ("time bucket"), normally one month. The difference between the value of assets and liabilities that renew interest rate within a certain period represents a gap, which will be positive (negative) if the total value of assets is higher (lower) than the total value of liabilities.

The repricing models can be:



- Static: concerned only with the balance sheet and off-balance sheet position at the end of each month:
- Dynamic: concerned with the balance sheet and off-balance sheet position forecast for subsequent months, on the basis of the initial situation and the expected development of the various business variables, in particular amounts, interest rate renewal periods, early settlements and mobilisations.

The models are based on the following methodological approaches:

- Remunerated assets and liabilities are grouped according to repricing period, type of reference rate and purpose of operation;
- Fixed-rate remunerated assets and liabilities are regarded as undergoing repricing on their maturity date;
- Coefficients of early mobilisation (of deposits and credit) are calculated on the basis of historical information.

Remunerated assets and liabilities that are not directly indexed to a market rate and do not renew interest rate automatically are treated according to their specific nature. The following are of particular note:

- Overdrafts on demand deposits: 30% of their balance falling due undergoes repricing in the first three months of simulation;
- Non-indexed credit to customers: this is credit of residual magnitude. Contracts that establish quarterly and half-yearly repricing are considered, for purposes of repricing, with reference to the contractual interest rate revision date. Other contracts are treated as being subject to rate revision between 1 and 2 years; these are essentially long-standing non-indexed mortgage loan contracts not usually subject to rate revision. It should also be mentioned that the value of contracts under which capital regularly falls due or is repaid impacts on the gaps in the months in which the event is expected to occur;
- <u>Demand deposits</u>: on the basis of statistical analysis of the historical behaviour of their balances and degree of permanence, these deposits have been divided into volatile and core. Volatile deposits have rates of remuneration higher than those of the tariff and are regarded as undergoing repricing in the first month of simulation. Core deposits are treated as undergoing repricing between one and two years; it should be noted that the remuneration on these deposits is altered only by administrative means.
- <u>Term deposits</u>: the repricing date coincides with the deposit's maturity date. CEMG has
  deposits remunerated at the tariff rate and deposits remunerated at differentiated rates,
  higher than those on the tariff, granted to some customers. In producing the repricing
  model, term deposits as a whole are treated as liable to renegotiation of their interest rate
  on the maturity date, thus affecting the value of gaps.
- <u>Structured deposits</u>: the maturity and remuneration rate of these products are established when they are launched; the value of repricing gaps is therefore not affected.
- Deposit bonds issued at a fixed rate: issues of fixed-rate deposit bonds by CEMG have associated interest rate swaps; therefore they affect repricing gaps on the dates the pay leg of the swap is refixed.

#### 12.2 Stress tests

The stress tests carried out most frequently are interest rate shocks. However CEMG regularly conducts other tests, prompted by both external (Bank of Portugal) and internal requests. In this context, scenario tests and sensitivity analyses covering a larger number of risk factors and simulation assumptions have been conducted.



The stress tests carried out are designed essentially to evaluate the impact of changes in simulation assumptions on results, market value and capital and liquidity levels.

Some examples of shocks assumed and/or to be assumed: shocks on the yield curve, significant changes in credit spreads on new debt taken, changes in business growth rates and in the financing structure.

#### 12.3 Quantitative information - interest rate risk

Shown below is the form for regular reporting to the Bank of Portugal of "Interest rate risk (banking book)" on a consolidated basis, which considers the impact of a rate shock of (+-) 200 b.p.:

Table 23 – Interest rate risk (banking book) as at 31-12-2008

Cumulative impact of interest rate-sensitive instruments	18.413.008€
Own funds	1.202.345.289 €
Impact on net assets/Own funds	2%
Cumulative impact of instruments sensitive to the interest rate up to one year	28.899.488 €
Interest margin	334.496.374 €
Cumulative impact of instruments sensitive to the interest rate up to one year as a percentage of the interest margin	9%

In accordance with the methodology laid down in Instruction 19/2005, the impact on net assets and interest margin of a parallel shift of + 200 b.p. in the yield curve is 2% and 9% respectively. The sensitivity of the banking book to interest rate risk is thus within the guideline limits defined by the BIS in "Principles for the Management and Supervision of Interest Rate Risk".