10. Market risks (trading book)

The Trading Book is composed of positions held with the purpose of obtaining short-term gains, via sales or revaluations. These positions are actively managed and rigorously and frequently evaluated.

In a letter dated 30 April 2009, Banco de Portugal authorised the Group to use the internal models approach to compute own funds requirements in terms of generic market risk of the Trading Book.

This authorisation encompassed all the sub-portfolios of the Trading Book that are part of the perimeter that is centrally managed from Portugal, which includes all the trading operations related with financial markets and products, namely those carried out by Banco Comercial Português, S.A.

Thus, as at 31 December 2020 and 2019, own funds requirements for generic market risks of the Trading Book were calculated in accordance with the internal models approach for generic risk, within the universe of entities centrally managed from Portugal. For the remaining entities, the own funds requirements were calculated in accordance with the standardised approach.

MARKET RISKS	
Generic risk over debt instruments and equity securities	Internal Model
FX risk	Internal Model
Commodities risk and specific risk over debt instruments and equity securities	Standardised Approach

The Bank uses a standardised approach for specific risk and does not have a correlation trading portfolio (CPT). Hence, incremental risk capital charges, migration risk or specific risk measurement for the CTP do not apply.

The RWA and own funds requirements for market risks, as at 31/12/2020 and 30/06/2020 and calculated through the Standardised Approach are shown in the following tables.

TABLE 72 – TEMPLATE 34 / MR1 - MARKET RISK UNDER THE STANDARDISED APPROACH

31/12/2020 (Thousand euros)

	RWA	Capital requirements
OUTRIGHT PRODUCTS		
Interest rate risk (general and specific)	45,444	3,636
Equity risk (general and specific)	325	26
Foreign exchange risk	1,594,595	127,568
Commodity risk		
OPTIONS		
Simplified approach		
Delta-plus method		
Scenario approach		
SECURITISATION (SPECIFIC RISK)		
TOTAL	**1,640,364**	**131,229**

30/06/2020 (Thousand euros)

	RWA	Capital requirements
OUTRIGHT PRODUCTS		
Interest rate risk (general and specific)	44,880	3,590
Equity risk (general and specific)	1,617	129
Foreign exchange risk	939,248	75,140
Commodity risk		
OPTIONS		
Simplified approach		
Delta-plus method		
Scenario approach		
SECURITISATION (SPECIFIC RISK)		
TOTAL	**985,744**	**78,860**

10.1. Calculation methodologies

The calculation of own funds requirements for generic market risk, via the standardised approach, was based on the following methodologies, according to the specific type of financial instrument:

- Debt instruments: in this portfolio, capital requirements for generic market risk were calculated according to the maturity-based method - in accordance with Article 339 of Section 2 of Chapter 2, Title IV, Part III CRR and the treatment of positions referred to in Section 1 of the same chapter.
- Capital instruments: for this portfolio, own funds requirements for generic market risk were calculated in accordance with the methodology described in Section 3, Chapter 2, Title IV, Part III of the CRR.

In addition, for the application purposes of the internal models approach, the Group applies a VaR methodology to measure generic market risk – including interest rate risk, foreign exchange risk and equity risk – for all sub-portfolios covered by the previously mentioned authorisation for internal modelling.

The valuation procedures are established in terms of the potential negative impact of market conditions, in both normal and stressful circumstances, on the Trading Book of the Group's business units.

As already mentioned, with respect to risk measurement models used in the Group, the Bank is authorized to use the internal models approach in assessing the generic market risk capital requirements of the trading sub-portfolios that are part of Portugal's centrally managed perimeter (by Banco Comercial Português, SA). With reference to December 31, 2020, the capital requirements calculated by internal model corresponded to 29% of the total requirements of the Group for market risk.

The methodology used to measure market risk is the Value-at-Risk (VaR), which indicates the maximum losses that can occur in the portfolios, with a certain level of confidence and time horizon. The VaR calculation considers a time horizon of ten business days and a significance level of 99%.

This methodology is widely used in the market and has the advantage of summarizing, in a single metric, the inherent risks of the trading activity, considering the relationships between all of them, providing an estimate of the Trading Book losses as a result of changes in the stock markets' prices, interest rates, FX rates and commodities' prices. In addition, for some positions, other risks are considered, such as credit spreads' risk, base risk, volatility risk and correlation risk.

The daily VaR is determined by calculating the impact, on the current value of the portfolio, of the historical changes of last years' risk factors, with a daily update of the observation window. As of December 31, 2020, the Bank did not apply any weighting system to the seniority of historical variations. The holding period is modelled through multiplying the 1-day VaR by the square root of 10.

In accordance with the implemented methodology, the Bank carries out a total revaluation, using the logarithmic returns of the risk factors; for interest rates, the logarithmic returns of the discount factors are used.

As a complement, other metrics are used for the remaining types of risk, namely, a non-linear risk measure that incorporates the options' risk not covered in the VaR model, with a confidence interval of 99%, and a measure defined by the standard methodology in the VaR model for commodities' risk. These measures are integrated into the market risk indicator with the conservative assumption of perfect correlation between the different types of risk (worst-case scenario).

In what concerns the capital requirements calculation, the VaR amount measured is increased by the amount measured for SVaR (stressed VaR). For both the VaR and the SVaR, pursuant to Article 366 of the CRR, a regulatory multiplier is additionally applied.

The SVaR calculation process consists of calculating historical VaR, with a confidence interval of 99%, based on the daily variations of market prices during a stress period of 12 consecutive months. The analysis to define the stress period is carried out weekly and may lead to a review of the period to be considered as the one that maximizes the VaR of the portfolio at the time of analysis. As of December 31, 2020, the stress period considered was a year ending on 25/06/2012.

The SVaR calculation is based on the same methodology and structure used for the VaR, the only difference being the historical period used. Regarding the process of determining the holding period, this also results from multiplying the 1-day VaR by the square root of 10.

Table 73 shows the main VaR and SVaR statistics, calculated in accordance to the approved internal model methods, exclusively for the universe of entities managed centrally from Portugal, on 31/12/2020 and 30/06/2020:

TABLE 73 – TEMPLATE 37 / EU MR3 – IMA VALUES FOR TRADING PORTFOLIOS

31/12/2020	(Thousand euros)
VaR (10 day 99%)	
Maximum value	3,899
Average value	2,232
Minimum value	885
Period end	3,899
SVaR (10 day 99%)	
Maximum value	16,363
Average value	11,054
Minimum value	3,779
Period end	6,665
IRC (99.9%)	
Maximum value	
Average value	
Minimum value	
Period end	
COMPREHENSIVE RISK CAPITAL CHARGE (99.9%)	
Maximum value	
Average value	
Minimum value	
Period end	

30/06/2020	(Thousand euros)
VaR (10 day 99%)	
Maximum value	5,056
Average value	2,407
Minimum value	717
Period end	2,406
SVaR (10 day 99%)	
Maximum value	20,110
Average value	12,194
Minimum value	9,251
Period end	11,062
IRC (99.9%)	
Maximum value	
Average value	
Minimum value	
Period end	
COMPREHENSIVE RISK CAPITAL CHARGE (99.9%)	
Maximum value	
Average value	
Minimum value	
Period end	

Own funds requirements for specific market risk are calculated in accordance with the standardised approach, including those of the sub-Trading Books regarding which Banco de Portugal authorised the use of the internal models approach to calculate the generic market risk, as previously mentioned.

These requirements were determined, for all the positions of the Group's Trading Book, pursuant to Sub-Section 1, Section 2, Chapter 2, Title IV, Part III and article 342 of Section 3, Chapter 2, Title IV, Part III of the CRR, according to the type of financial instruments at stake (debt instruments or capital instruments, respectively).

In 2020, the average value of stressed VaR, for the Trading Portfolio, was EUR 11,54 million. Regarding the value of this metric on 31 December 2020, the amount determined was EUR 6,66 million.

10.2. Stress tests on the trading book

Besides calculating the VaR and aiming at identifying the concentration of risks not captured by that metric and to assess other possible losses, the Group continually tests a wide set of stress scenarios on the Trading Book, including all portfolios, analysing the results of those stress tests.

Table 74 summarises the results of these tests on the Group's global Trading Book on 31 December 2020, indicating that the exposure to the various risk factors is limited and that the main risk to take into account, under the standard scenarios tested, is a decrease in interest rates, especially when accompanied by an decrease in the slope of the yield curve.

TABLE 74 - STRESS TESTS OVER THE TRADING BOOK

(Thousand euros)

31/12/2020

	Negative impact scenario	Impact
STANDARD SCENARIOS		
Parallel shift of the yield curve by +/- 100 bps	- 100 b.p.	-10 495
Change in the slope of the yield curve (for maturities from 2 to 10 years) up to +/- 25 bps	- 25 b.p.	-2 321
4 combinations of the previous 2 scenarios	- 100 b.p. & + 25 b.p.	-7 995
	- 100 b.p. & - 25 b.p.	-13 049
Variation in the main stock market indices by +/- 30%	-30%	-380
Variation in foreign exchange rates (against the euro) by +/- 10% for the main currencies and by +/- 25% for other currencies	-10%, -25%	-316
Variation in swap spreads by +/- 20 bps	- 20 b.p.	-315
NON-STANDARD SCENARIOS		
Widening/narrowing of the bid-ask spread	Narrowing	-2 497
Significant vertices[1]	Undiversified VaR	982
	Diversified VaR	323
Historical scenarios[2]	May 7th, 2010	-5 298
	July 18th, 2011	-6 803

(1) Scenarios in which the more adverse variations of the last seven years, relative to the portfolio's five most significant risk factors for VaR, are applied to the current portfolio.

(2) Scenarios in which past extreme markets variations are applied to the current portfolio; in this case, the significant dates refer to the Eurozone Sovereign Debt crisis from 2010 onwards.

10.3. Valuation of financial instruments

The valuation of financial instruments is based on market prices, whenever these are available, or estimated through internal models based on cash-flow discounting techniques. The fair value obtained is influenced by the cash flow characteristics and parameters such as discount rates used in the valuation models that may have some degree of judgment.

The valuation of the financial assets and liabilities is subject to controls by an unit independent from its negotiation, as described in the Group's internal regulations, and the valuation models are reviewed by the Office for the Validation and Monitoring of Models (GAVM), an independent model validation within the second line of defense. The segregation between position-taking and position-valuation is also contemplated at the level of information technology systems that intervene in the global process involving the management, valuation, settlement and accounting of those transactions.

10.4. Backtesting of the internal models approach

The Group carries out backtests of the internal models' approach results, in relation to the theoretical results obtained by the target portfolio of the calculation, unchanged between two consecutive working days and revaluated at market prices of the second day. In parallel, the Group has a complementary process to verify the results of the model in relation to the actual results obtained, excluding the effects of operations carried out via intermediation.

In what concerns the ex-post verification of the model's results, the number of excesses registered in 2020 and 2019, relative to the global Trading Book of companies centrally managed from Portugal, for which Banco de Portugal has approved the use of the internal models approach to compute generic risk capital requirements, is shown in Table 75.

TABLE 75 - BACKTESTING OF THE VAR APPROACH APPLIED IN MARKET RISK CALCULATION

Year	Result	
	Positive	Negative
2019 (*)	5	7
2020 (**)	3	6

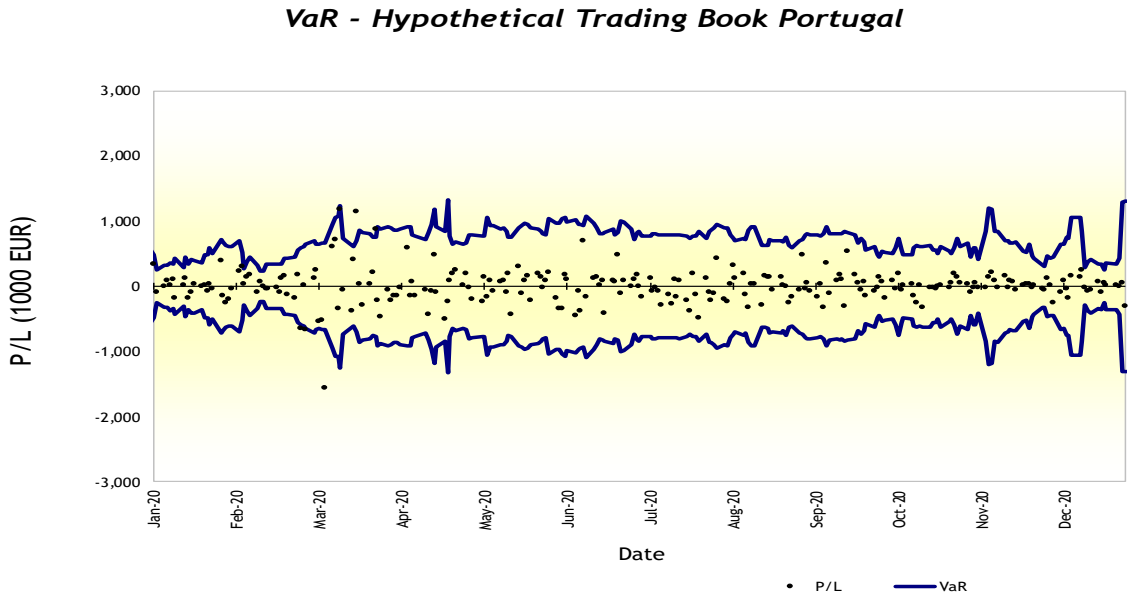
(*) In 2019, one of the hypothetical excesses and two of the real excesses were the result of unavailability of data to determine the model's results
(**) In 2020, one of the hypothetical excesses resulted from the unavailability of data to determine the model's results

Note: The model used for the purpose of a posteriori verification is focused on the excesses occurred in both sides of the distribution and the expected number of excesses, according to the significance level applied, is 5 per year (2% x 250 annual observations).

The accuracy of the model used to estimate generic risk is monitored on a daily basis by the backtesting process that compares the risk values computed on a given day (VaR) with the (theoretical) result of applying the following day's market rates to those exposures.

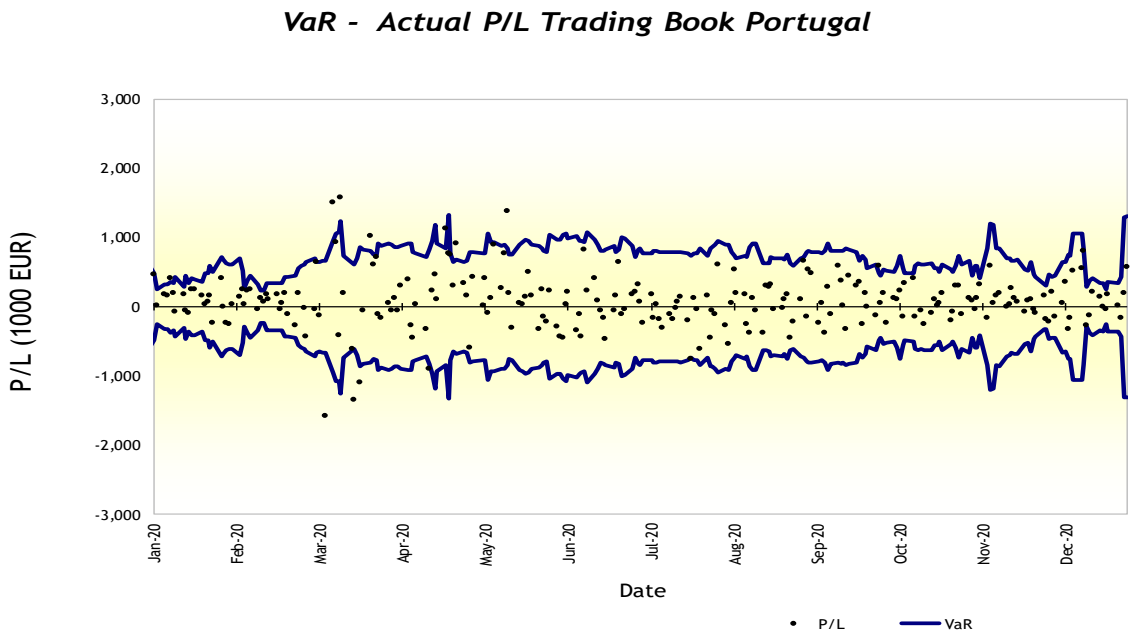
The following charts show the results of the hypothetical and real backtesting, for the Trading Book centrally managed from Portugal, in 2020.

GRAPH 1 – HYOPOTHETICAL VAR BACKTESTING (TRADING BOOK)



In 2020, three excesses of value (negative) were observed over the hypothetical results predicted by the model, which represents a frequency of 1% in 258 days of observations. This result is in line with the theoretical value of expected bilateral excesses, so the model is considered adequate.

GRAPH 2 – REAL VaR BACKTESTING (TRADING BOOK)



In 2020, six excesses of value (negative) were observed over the hypothetical results predicted by the model, which represents a frequency of 2% in 258 days of observations. This result is in line with the theoretical value of expected bilateral excesses, so the model is considered adequate.

Table 76 A presents the detailed results of the daily hypothetical backtesting of the Trading Book centrally managed from Portugal in 2020. An excess occurs when the return registered for the portfolio is higher (in absolute value) than the theoretical result of the VaR model.

Table 76 B presents the detailed results of the daily real backtesting of the Trading Book centrally managed from Portugal in 2020. An excess occurs when the real return registered for the portfolio is higher (in absolute value) than the theoretical result of the VaR model.

TABLE 76 A – TEMPLATE 38 / EU MR4 (I) - HYPOTHETICAL BACKTEST OF THE TRADING BOOK (PORTUGAL) – 2020

(Thousand euros)

Date	VaR	Hypothetical result	
2020-1-2	477	337	
2020-1-3	248	-92	
2020-1-6	325	4	
2020-1-7	324	86	
2020-1-8	368	23	
2020-1-9	342	104	
2020-1-10	424	-169	
2020-1-13	296	23	
2020-1-14	457	126	
2020-1-15	348	-175	
2020-1-16	409	-91	
2020-1-17	403	35	
2020-1-20	352	4	
2020-1-21	477	20	
2020-1-22	483	-79	
2020-1-23	594	35	
2020-1-24	501	-25	
2020-1-27	721	398	
2020-1-28	686	-136	
2020-1-29	623	-246	
2020-1-30	608	-197	
2020-1-31	605	-40	
2020-2-3	698	234	
2020-2-4	524	309	
2020-2-5	277	35	
2020-2-6	371	143	
2020-2-7	443	174	
2020-2-10	333	-91	
2020-2-11	231	67	
2020-2-12	227	9	
2020-2-13	338	-40	
2020-2-14	339	-25	
2020-2-17	335	-23	
2020-2-18	334	-94	
2020-2-19	336	126	
2020-2-20	431	171	
2020-2-21	430	-126	
2020-2-24	443	-174	
2020-2-25	557	184	
2020-2-26	590	-648	(1)
2020-2-27	607	14	
2020-2-28	639	N/A	(2)
2020-3-2	707	133	
2020-3-3	653	250	
2020-3-4	648	-532	
2020-3-5	664	-519	
2020-3-6	668	-1 557	(3)
2020-3-9	953	613	
2020-3-10	1 066	726	
2020-3-11	1 073	-336	
2020-3-12	1 244	1 189	
2020-3-13	740	-54	
2020-3-16	625	-379	
2020-3-17	610	418	
2020-3-18	696	1 153	
2020-3-19	861	30	
2020-3-20	821	-276	
2020-3-23	807	42	
2020-3-24	757	223	
2020-3-25	761	875	
2020-3-26	909	-212	
2020-3-27	872	-465	
2020-3-30	913	-47	
2020-3-31	897	-210	
2020-4-1	861	-145	
2020-4-2	855	-140	
2020-4-3	888	-16	
2020-4-6	918	596	
2020-4-7	915	-137	
2020-4-8	783	67	
2020-4-9	770	-146	
2020-4-13	712	-49	
2020-4-14	827	-423	
2020-4-15	958	-61	
2020-4-16	1 187	480	
2020-4-17	924	-87	
2020-4-20	841	-493	
2020-4-21	1 321	-226	
2020-4-22	770	84	
2020-4-23	647	204	
2020-4-24	679	249	
2020-4-27	641	21	
2020-4-28	666	195	
2020-4-29	797	-11	
2020-4-30	787	-192	
2020-5-4	771	-231	
2020-5-5	771	149	
2020-5-6	1 053	-156	
2020-5-7	934	85	
2020-5-8	928	-66	
2020-5-11	887	65	
2020-5-12	896	95	
2020-5-13	846	-93	
2020-5-14	759	198	
2020-5-15	763	-427	
2020-5-18	906	312	
2020-5-19	934	-100	
2020-5-20	966	96	
2020-5-21	949	172	
2020-5-22	892	-205	
2020-5-25	874	194	
2020-5-26	840	148	
2020-5-27	802	-10	
2020-5-28	794	85	
2020-5-29	1 043	216	
2020-6-1	962	-174	
2020-6-2	964	-347	
2020-6-3	1 035	-346	
2020-6-4	1 067	173	
2020-6-5	988	111	
2020-6-8	1 016	-447	
2020-6-9	958	-75	
2020-6-10	955	-371	
2020-6-11	934	703	
2020-6-12	1 085	-168	
2020-6-15	961	129	
2020-6-16	902	140	
2020-6-17	804	12	
2020-6-18	816	83	
2020-6-19	834	-415	
2020-6-22	878	96	
2020-6-23	796	82	
2020-6-24	822	483	
2020-6-25	1 010	-101	
2020-6-26	988	89	
2020-6-29	887	4	
2020-6-30	726	102	
2020-7-1	829	178	
2020-7-2	842	-5	
2020-7-3	772	-166	
2020-7-6	773	135	
2020-7-7	809	-70	
2020-7-8	803	-23	
2020-7-9	795	-76	
2020-7-10	795	-288	
2020-7-13	784	-129	
2020-7-14	791	-260	
2020-7-15	796	103	
2020-7-16	791	-153	
2020-7-17	798	95	
2020-7-20	768	-210	
2020-7-21	729	-376	
2020-7-22	772	202	
2020-7-23	773	-132	
2020-7-24	838	-487	
2020-7-27	740	130	
2020-7-28	852	-90	
2020-7-29	855	-214	
2020-7-30	895	-106	
2020-7-31	944	436	
2020-8-3	897	-188	
2020-8-4	906	-230	
2020-8-5	784	39	
2020-8-6	740	330	
2020-8-7	696	125	
2020-8-10	746	192	
2020-8-11	717	-115	
2020-8-12	857	-327	
2020-8-13	910	32	
2020-8-14	910	33	
2020-8-17	628	-283	
2020-8-18	623	171	
2020-8-19	635	138	
2020-8-20	713	137	
2020-8-21	706	-51	
2020-8-24	709	153	
2020-8-25	686	23	
2020-8-26	752	0	
2020-8-27	633	-254	
2020-8-28	600	-158	
2020-8-31	706	-57	
2020-9-1	725	493	
2020-9-2	782	-25	
2020-9-3	802	61	
2020-9-4	798	-78	
2020-9-7	795	-154	
2020-9-8	768	38	
2020-9-9	806	-329	
2020-9-10	916	359	
2020-9-11	816	-109	
2020-9-14	811	87	
2020-9-15	817	175	
2020-9-16	807	103	
2020-9-17	837	-298	
2020-9-18	823	539	
2020-9-21	796	185	
2020-9-22	672	60	
2020-9-23	741	-46	
2020-9-24	682	76	
2020-9-25	565	-147	
2020-9-28	617	-67	
2020-9-29	490	-12	
2020-9-30	454	152	
2020-10-1	534	81	
2020-10-2	521	-184	
2020-10-5	505	97	
2020-10-6	598	-34	
2020-10-7	742	194	
2020-10-8	552	-56	
2020-10-9	488	19	
2020-10-12	492	30	
2020-10-13	601	-146	
2020-10-14	628	-244	
2020-10-15	608	13	
2020-10-16	620	-315	
2020-10-19	622	-10	
2020-10-20	553	-10	
2020-10-21	557	-25	
2020-10-22	495	-1	
2020-10-23	619	27	
2020-10-26	532	-14	
2020-10-27	495	48	
2020-10-28	585	206	
2020-10-29	734	139	
2020-10-30	616	48	
2020-11-2	660	37	
2020-11-3	455	-86	
2020-11-4	590	-15	
2020-11-5	585	49	
2020-11-6	411	-14	
2020-11-9	848	-25	
2020-11-10	1 206	140	
2020-11-11	1 189	219	
2020-11-12	847	96	
2020-11-13	851	-25	
2020-11-16	706	163	
2020-11-17	705	-10	
2020-11-18	664	84	
2020-11-19	673	75	
2020-11-20	684	-46	
2020-11-23	537	12	
2020-11-24	520	41	
2020-11-25	647	43	
2020-11-26	467	-9	
2020-11-27	430	13	
2020-11-30	318	-43	
2020-12-1	313	-47	
2020-12-2	468	132	
2020-12-3	438	17	
2020-12-4	443	-244	
2020-12-7	655	-88	
2020-12-8	648	100	
2020-12-9	749	-42	
2020-12-10	742	-179	
2020-12-11	1 051	155	
2020-12-14	1 059	139	
2020-12-15	842	258	
2020-12-16	283	-13	
2020-12-17	370	-62	
2020-12-18	413	-48	
2020-12-21	343	69	
2020-12-22	351	-88	
2020-12-23	244	49	
2020-12-24	363	18	
2020-12-28	350	26	
2020-12-29	425	4	
2020-12-30	1 301	52	
2020-12-31	1 311	-300	

(1) Decrease of 6bp of 9 and 10 year German Bond rates, decrease of 10 bp of Portuguese Bond rates, 7 through 20 years
(2) IT systems failure prevented the correct calculation of NPV preventing the correct comparison with next day's NPV
(3) Decrease of 12bp of 9 and 10 year German Bond rates, increase of between 7 bp and 10 bp of Portuguese Bond rates on terms between 7 and 15 years and 1% devaluation of USD against EUR

Note: VaR for 10 days with 99% unilateral confidence level; hypothetical result obtained by an ex-post validation procedure over the VaR model (daily result scaled for 10 days divided by the square root of time).

TABLE 76 B - TEMPLATE 38 / EU MR4 (II) - REAL BACKTEST OF THE TRADING BOOK (PORTUGAL) – 2020

(Thousand euros)

Date	VaR	Actual result
2020-1-2	477	467
2020-1-3	248	26
2020-1-6	325	184
2020-1-7	324	158
2020-1-8	368	415
2020-1-9	342	196
2020-1-10	424	-68
2020-1-13	296	177
2020-1-14	457	-47
2020-1-15	348	-88
2020-1-16	409	260
2020-1-17	403	252
2020-1-20	352	155
2020-1-21	477	38
2020-1-22	483	81
2020-1-23	594	164
2020-1-24	501	-239
2020-1-27	721	417
2020-1-28	686	-7
2020-1-29	623	-238
2020-1-30	608	-252
2020-1-31	605	37
2020-2-3	698	150
2020-2-4	524	246
2020-2-5	277	47
2020-2-6	371	229
2020-2-7	443	259
2020-2-10	333	-40
2020-2-11	231	131
2020-2-12	227	75
2020-2-13	338	187
2020-2-14	339	106
2020-2-17	335	183
2020-2-18	334	-38
2020-2-19	336	47
2020-2-20	431	203
2020-2-21	430	-106
2020-2-24	443	-274
2020-2-25	557	193
2020-2-26	590	3 513
2020-2-27	607	-16
2020-2-28	639	-430
2020-3-2	707	-39
2020-3-3	653	652
2020-3-4	648	-118
2020-3-5	664	-4 145 (1)
2020-3-6	668	-1 583 (2)
2020-3-9	953	1 512
2020-3-10	1 066	935
2020-3-11	1 073	-418
2020-3-12	1 244	1 574
2020-3-13	740	204
2020-3-16	625	-602
2020-3-17	610	-1 348 (3)
2020-3-18	696	4 652
2020-3-19	861	-1 088 (4)
2020-3-20	821	-47
2020-3-23	807	1 015
2020-3-24	757	613
2020-3-25	761	718
2020-3-26	909	-101
2020-3-27	872	-165
2020-3-30	913	47
2020-3-31	897	-51
2020-4-1	861	132
2020-4-2	855	-54
2020-4-3	888	308
2020-4-6	918	398
2020-4-7	915	-270
2020-4-8	783	-443
2020-4-9	770	37
2020-4-13	712	-319
2020-4-14	827	-891 (5)
2020-4-15	958	239
2020-4-16	1 187	469
2020-4-17	924	115
2020-4-20	841	1 128
2020-4-21	1 321	775
2020-4-22	770	760
2020-4-23	647	310
2020-4-24	679	911
2020-4-27	641	335
2020-4-28	666	162
2020-4-29	797	-595
2020-4-30	787	433
2020-5-4	771	18
2020-5-5	771	413
2020-5-6	1 053	-82
2020-5-7	934	119
2020-5-8	928	890
2020-5-11	887	264
2020-5-12	896	770
2020-5-13	846	1 388
2020-5-14	759	193
2020-5-15	763	-312
2020-5-18	906	55
2020-5-19	934	36
2020-5-20	966	140
2020-5-21	949	506
2020-5-22	892	157
2020-5-25	874	-322
2020-5-26	840	257
2020-5-27	802	-146
2020-5-28	794	-220
2020-5-29	1 043	229
2020-6-1	962	-285
2020-6-2	964	-434
2020-6-3	1 035	-450
2020-6-4	1 067	31
2020-6-5	988	219
2020-6-8	1 016	-346
2020-6-9	958	-103
2020-6-10	955	-434
2020-6-11	934	835
2020-6-12	1 085	229
2020-6-15	961	419
2020-6-16	902	83
2020-6-17	804	-45
2020-6-18	816	-158
2020-6-19	834	-466
2020-6-22	878	-48
2020-6-23	796	170
2020-6-24	822	640
2020-6-25	1 010	-108
2020-6-26	988	-27
2020-6-29	887	173
2020-6-30	726	212
2020-7-1	829	318
2020-7-2	842	76
2020-7-3	772	-236
2020-7-6	773	177
2020-7-7	809	-157
2020-7-8	803	30
2020-7-9	795	-183
2020-7-10	795	-305
2020-7-13	784	-97
2020-7-14	791	-177
2020-7-15	796	-24
2020-7-16	791	82
2020-7-17	798	145
2020-7-20	768	-189
2020-7-21	729	-743 (6)
2020-7-22	772	129
2020-7-23	773	-26
2020-7-24	838	-616
2020-7-27	740	171
2020-7-28	852	-450
2020-7-29	855	-47
2020-7-30	895	-113
2020-7-31	944	615
2020-8-3	897	-263
2020-8-4	906	-540
2020-8-5	784	56
2020-8-6	740	544
2020-8-7	696	193
2020-8-10	746	190
2020-8-11	717	-257
2020-8-12	857	-378
2020-8-13	910	120
2020-8-14	910	-47
2020-8-17	628	-372
2020-8-18	623	306
2020-8-19	635	287
2020-8-20	713	326
2020-8-21	706	-26
2020-8-24	709	-15
2020-8-25	686	116
2020-8-26	752	183
2020-8-27	633	-451
2020-8-28	600	-221
2020-8-31	706	116
2020-9-1	725	661
2020-9-2	782	-134
2020-9-3	802	545
2020-9-4	798	494
2020-9-7	795	-224
2020-9-8	768	58
2020-9-9	806	-383
2020-9-10	916	287
2020-9-11	816	-100
2020-9-14	811	598
2020-9-15	817	370
2020-9-16	807	25
2020-9-17	837	-313
2020-9-18	823	444
2020-9-21	796	306
2020-9-22	672	364
2020-9-23	741	-246
2020-9-24	682	196
2020-9-25	565	10
2020-9-28	617	-122
2020-9-29	490	586
2020-9-30	454	58
2020-10-1	534	206
2020-10-2	521	-240
2020-10-5	505	119
2020-10-6	598	108
2020-10-7	742	236
2020-10-8	552	-137
2020-10-9	488	346
2020-10-12	492	407
2020-10-13	601	-133
2020-10-14	628	5 872
2020-10-15	608	-46
2020-10-16	620	-245
2020-10-19	622	-86
2020-10-20	553	102
2020-10-21	557	23
2020-10-22	495	59
2020-10-23	619	208
2020-10-26	532	-202
2020-10-27	495	-74
2020-10-28	585	315
2020-10-29	734	306
2020-10-30	616	-99
2020-11-2	660	133
2020-11-3	455	88
2020-11-4	590	-42
2020-11-5	585	122
2020-11-6	411	317
2020-11-9	848	-167
2020-11-10	1 206	587
2020-11-11	1 189	62
2020-11-12	847	168
2020-11-13	851	195
2020-11-16	706	11
2020-11-17	705	33
2020-11-18	664	267
2020-11-19	673	119
2020-11-20	684	69
2020-11-23	537	-68
2020-11-24	520	97
2020-11-25	647	106
2020-11-26	467	-31
2020-11-27	430	-87
2020-11-30	318	155
2020-12-1	313	-178
2020-12-2	468	-212
2020-12-3	438	209
2020-12-4	443	-139
2020-12-7	655	50
2020-12-8	648	359
2020-12-9	749	-327
2020-12-10	742	-160
2020-12-11	1 051	529
2020-12-14	1 059	561
2020-12-15	842	817
2020-12-16	283	-269
2020-12-17	370	-115
2020-12-18	413	213
2020-12-21	343	151
2020-12-22	351	-7
2020-12-23	244	-35
2020-12-24	363	183
2020-12-28	350	25
2020-12-29	425	-160
2020-12-30	1 301	213
2020-12-31	1 311	568

(1) Losses in FX positions, Treasury Dep Futures and in certificates short position of the Equity Divison that although hedged by futures do have basis risk

(2) Losses in German IR Futures and Portuguese Public Debt

(3) Losses in Portuguese Public Debt

(4) Losses in Portuguese Treasury Bills

(5) Losses in Portuguese Treasury Bills

(6) 1% devaluation of USD and MZN against EUR

The following tables provide quantitative data on the market risk measurement of the Trading Book using the internal model used (Table 77, with positions at the beginning and end of the last half of 2020) and on the evolution of the respective RWA and capital requirements (Table 74, with positions at the beginning and end of the last quarter).

TABLE 77 – TEMPLATE 35 / EU MR2-A – MARKET RISK UNDER THE IMA

31/12/2020

(Thousand euros)

	RWA	Capital requirements
	124,848	9,988
a) Previous day's VaR (Article 365(1) of the CRR (VaRt-1))		4,432
b) Average of the daily VaR (Article 365(1)) of the CRR on each of the preceding 60 business days (VaRavg) x multiplication factor (mc) in accordance with Article 366 of the CRR		9,988
SVaR (higher of values a) and b))	556,846	44,548
a) Latest SVaR (Article 365(2) of the CRR (SVaRt-1))		5,066
b) Average of the SVaR (Article 365(2) of the CRR) during the preceding 60 business days (SVaRavg) x multiplication factor (ms) (Article 366of the CRR)		44,548
IRC (higher of values a) and b))		
a) Most recent IRC value (incremental default and migration risks) calculated in accordance with Articles 370º and 371º of the CRR		
b) Average of the number over the preceding 12 weeks		
COMPREHENSVE RISK MEASURE (higher of values a), b) and c))		
a) Most recent risk number for the correlation trading portfolio (Article 377º do CRR)		
b) Average of the risk number for the correlation trading portfolio over the preceding 12 weeks		
c) 8% of the own funds requirement in the standardised approach on the most recent risk number for the correlation trading portfolio (Article 338º, nº4 of the CRR)		
OTHER		
TOTAL	**681,694**	**54,536**

30/06/2020

(Thousand euros)

	RWA	Capital requirements
VaR (higher of values a) and b))	183,499	14,680
a) Previous day's VaR (Article 365(1) of the CRR (VaRt-1))		3,250
b) Average of the daily VaR (Article 365(1)) of the CRR on each of the preceding 60 business days (VaRavg) x multiplication factor (mc) in accordance with Article 366 of the CRR		14,680
SVaR (higher of values a) and b))	661,170	52,894
a) Latest SVaR (Article 365(2) of the CRR (SVaRt-1))		12,169
b) Average of the SVaR (Article 365(2) of the CRR) during the preceding 60 business days (SVaRavg) x multiplication factor (ms) (Article 366of the CRR)		52,894
IRC (higher of values a) and b))		
a) Most recent IRC value (incremental default and migration risks) calculated in accordance with Articles 370º and 371º of the CRR		
b) Average of the number over the preceding 12 weeks		
COMPREHENSVE RISK MEASURE (higher of values a), b) and c))		
a) Most recent risk number for the correlation trading portfolio (Article 377º do CRR)		
b) Average of the risk number for the correlation trading portfolio over the preceding 12 weeks		
c) 8% of the own funds' requirement in the standardised approach on the most recent risk number for the correlation trading portfolio (Article 338º, nº4 of the CRR)		
OTHER		
TOTAL	**844,670**	**67,574**

TABLE 78 – TEMPLATE 36 / EU MR2-B – RWA FLOW STATEMENTS OF MARKET RISK EXPOSURES UNDER THE IMA

31/12/2020 (Thousand euros)

	VaR	SVaR	IRC	Comprehensive risk measure	Other	Total RWA	Total capital requirements
RWA AT PREVIOUS QUARTER END	**157,561**	**781,099**				**938,660**	**75,093**
Regulatory adjustment	134,931	581,447				716,378	57,310
RWA at the previous quarter-end (end of the day)	22,630	199,652				222,282	17,783
Movement in risk levels	32,764	-136,331				-103,567	-8,285
Model updates/changes							
Methodology and policy							
Acquisitions and disposals							
Foreign exchange movements							
Other							
RWA at the previous quarter-end (end of the day)	55,394	63,321				118,715	9,497
Regulatory adjustment	69,454	493,524				562,979	45,038
RWA AT THE END OF THE REPORTING PERIOD	**124,848**	**556,846**				**681,694**	**54,536**

30/09/2020 (Thousand euros)

	VaR	SVaR	IRC	Comprehensive risk measure	Other	Total RWA	Total capital requirements
RWA AT PREVIOUS QUARTER END	**183,499**	**661,170**				**844,670**	**67,574**
Regulatory adjustment	142,878	509,062				651,940	52,155
RWA at the previous quarter-end (end of the day)	40,621	152,108				192,730	15,418
Movement in risk levels	-17,991	47,544				29,552	2,364
Model updates/changes							
Methodology and policy							
Acquisitions and disposals							
Foreign exchange movements							
Other							
RWA at the previous quarter-end (end of the day)	22,630	199,652				222,282	17,783
Regulatory adjustment	134,931	581,447				716,378	57,310
RWA AT THE END OF THE REPORTING PERIOD	**157,561**	**781,099**				**938,660**	**75,093**