CENTRAL BANK OF MONTENEGRO

Supervision Department

ASSET QUALITY REVIEW OF BANKS IN MONTENGERO

2020-2021

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Introduction

The Asset Quality Review (AQR) of banks in Montenegro, was carried out in line with the recommendations of International Monetary Fund (IMF) and European Commission.

AQR exercise was carried out with an intention to give the following positive effects:

- Higher confidence in the financial system
- Enhanced transparency of asset quality
- More robust risk management and better risk bearing capacities of tested banks for upcoming challenges in the future
- All the aforementioned should support the future growth of the entire economy

Project was carried out from March 2020 to September 2021, while AQR reference date was defined as 31.12.2019. This was the period of the COVID-19 pandemic, as well as the integration of CKB and Podgorička banka, that being the largest integration in the Montenegrin banking market.

The project consisted of several preparatory activities. Firstly, in February 2020, Central Bank of Montenegro hired auditing and consulting company EY Serbia, BIH & Montenegro as a lead consultant to support CBCG in project management of the AQR. Additionally, in order to provide external, independent quality review of banking system, Central Bank of Montenegro adopted and delivered to all banks Guidelines for selection of AQR auditors and appraisers. In line with mentioned Guidelines, in September 2020, Central Bank of Montenegro gave approval for selection of the nominated auditors and appraisers.

Each AQR auditor's portfolio of banks is given in the table below, while appraisers were selected by AQR auditors, with approval of Central Bank of Montenegro:

KPMG	PWC	TPA
CKB ERSTE banka Podgorička banka	Addiko bank Hipotekarna banka Komercijalna banka Lovćen banka NLB Banka Zapad banka	Adriatic bank Prva banka Crne Gore UCB ZIRAAT bank

Importance of the AQR process is given in line with ECB methodology, as quoted in foreword of Aggregate Report on the Comprehensive Assessment, October 2014 (V. Constancio, D. Nouy)

„It constitutes an exercise of unprecedented scope, and the publication of its outcomes provides a significant improvement in the depth and comparability of the information available on the condition of the participating banks.“

Central bank of Montenegro was the first central bank outside the EU that had conducted AQR exercise in line with the ECB methodology.

The entire process consisted of three phases:

- Phase 1: Portfolio Selection
- Phase 2: AQR execution
- Phase 3: Quality assurance and final reports and disclosures provision

Starting point was to defining scope of the AQR exercise. AQR exercise was carried out on the entire banking system of Montenegro, comprised of 13 banks[1] that operated on AQR reference date. Focus of the AQR exercise was established through the process of Portfolio Selection, following the Guidelines for portfolio selection that are mainly aligned with ECB methodology, adopted by Central bank of Montenegro in August 2020. Portfolio Selection was carried out by following the criteria from the mentioned Guidelines on data that banks delivered to CBCG:

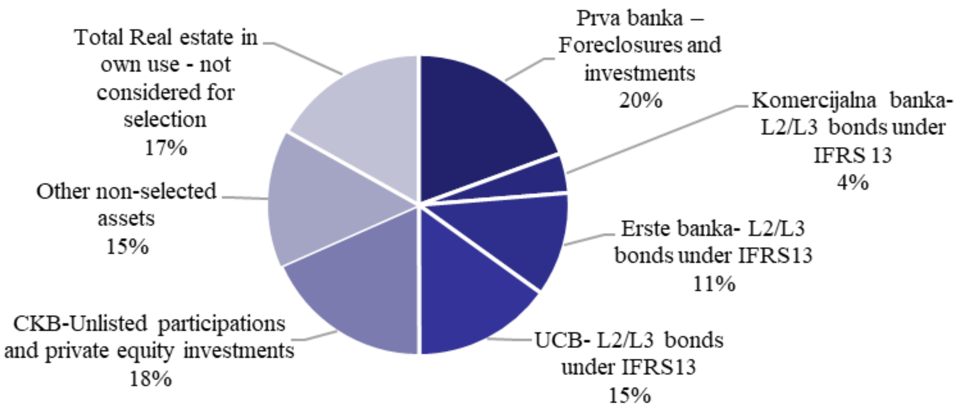
Credit exposures: Portfolio Selection provided high coverage (as high as 84.43%) of banking sector cRWA (Credit Risk Weighted Assets). For comparison purposes, AQR carried out by ECB and national competence authorities in EU during 2014, encompassed 57%[2]. The following table represents the scope of AQR exercise for credit exposures:

Bank	Total number of selected portfolios	Selected cRWA (in thousands of €)	Book value of selected portfolios (in thousands of €)	Selected cRWA as a percentage of total bank's cRWA
Addiko Bank	6	140,664	198,994	92.85%
Adriatic Bank	7	9,836	21,408	87.63%
CKB	5	293,385	634,134	84.76%
ERSTE Banka	6	258,876	501,087	87.31%
Hipotekarna banka	7	205,116	421,806	80.76%
Komercijalna banka	8	80,188	132,480	78.99%
Lovćen banka	7	109,470	184,971	97.01%
NLB Banka	6	228,914	434,134	87.05%
Podgorička banka	6	273,610	496,362	89.77%
Prva banka Crne Gore	7	152,997	284,450	71.06%
UCB	9	32,300	235,621	64.13%
Zapad banka	11	33,902	113,290	82.33%
ZIRAAT Bank Montenegro	7	54,035	77,928	95.10%
TOTAL	**92**	**1,873,293**	**3,736,664**	**84.43%**

[1] CKB and Podgorička banka were assessed as separate entities

[2] Aggregate Report on the comprehensive assessment, October 2014

Specialized assets: (Fair value Level 2 and 3 non-derivative exposures): Selected portfolios cumulatively sum up to EUR 154,6 mil, which represents 82,27% of total on-balance selected assets exposures. The following graph represents scope of the AQR exercise for specialized assets:



In order to conduct Phase 2, **AQR Manual** was created based on the ECB "Asset Quality Review Phase 2 Manual" from 2018. However, necessary adjustments have been made in order to properly reflect characteristics of the local financial markets, economy, banking activities, as well as the current banking regulation. The following table represents overview of AQR Phase 2 workblocks:

Here are some important points about certain workblocks:

- Stage 3 exposures from portfolios **Large Corporate, Large SME, Project finance, Real Estate Related, Institutions, Sovereigns,** are predominantly reviewed within workblocks 4 and 6, while Stage 1 and 2 exposures of the mentioned portfolios are reviewed within the workblock 7
- Retail portfolios (**SME, Residential Real Estate and Other retail**) are mainly reviewed within the workblock 7
- **Specialized assets (L2/3 fair value assets)** are reviewed within the workblock 8

Workblock 1

Scope of work

This workblock is centered on ensuring that the bank has a robust set of clearly defined policies and processes for correctly interpreting accounting rules or other applicable industry standards in areas where any issues identified would be very likely to result in misstatement of the balance sheet value or to have a material impact on AQR results.

Areas of assessment were:

- Classification of financial instruments
- Application of fair value hierarchy
- Provisioning processes and policies
- Impairment staging criteria
- NPL definitions
- Restructuring
- Collateral valuation and disposal processes
- CBCG classification and required reserves
- Groups of connected clients and country of the ultimate borrower
- Deconsolidation processes
- Reserves for legal costs

Results:

After carrying out the analysis for each area of assessment, AQR auditors have identified conclusions and appropriate measures for banks. Based on the results of this workblocks, AQR auditors did not identify deviations from accounting principles in reviewed areas for any bank. Given table represents the most common corrective measures that are part of workblock 1:

No.	Most common corrective measures that are part of workblock 1:
1	Additional triggers for staging classification under IFRS 9
2	Improvements in determining PD and LGD parameters for ECL calculation
3	First adoption or amendment of definition for Fair Value under IFRS 13 and active markets
4	Improvements of definition and treatment of restructured exposures
5	Introduction of early warning system (EWS) and client’s watch list
6	Adoption of internal deconsolidation acts if bank consolidates entities
7	Changes in business model definition under IFRS 9
8	Improvements in a manner of defining connected clients
9	Defining the frequency of collateral revaluation
10	Improvements in valuation under IAS 28
11	Changes in NPL definition
12	Aligning with the Decision on Minimum Standards for Credit Risk Management in Banks
13	Application of the time value of money under IFRS 9
14	Interest on impaired exposures should be calculated by applying effective interest rate
15	Introducing an adequate definition of individual and group provisions calculation

Workblock 2

Scope of work

Data collection for loan data tape creation is the first step to perform at the beginning of the AQR Phase 2, in order to enable finishing of Data Integrity Validation (DIV), Sampling (workblock 3) and challenger model for collective provisions (workblock 7).

Here is listed the scope of workblock 2:

1. All portfolios selected in Phase 1 of the AQR exercise (Portfolio Selection)
2. Loans, advances and debt securities (excluding securitization) valued at amortized cost
3. Off-balance sheet exposures
4. The loan portfolio includes facilities with sum of on-balance and off-balance exposures above € 100 for Retail and € 1,000 for non-retail portfolios
5. Creation of a credit file for all non-retail portfolios was performed at the debtor level, while for retail portfolios the creation of a credit file was performed at the facility level

Workblock 3

Scope of work

There were several steps in carrying out workblock 3. Firstly, files from the in-scope portfolios for Phase 2 are sampled in order to carry out the credit file review, while the sampling approach was based on statistical techniques and is compliant with international audit standards. The sample obtained using the prescribed AQR methodology is statistically representative, which is important as the error at the portfolio level after the projection of the findings within working block 6 is within the allowed limits.

Number of files that are sampled from each loan portfolio depended on following characteristic:

- Portfolio concertation
- Number of observations
- Riskiness
- Adequacy and availability of SICR triggers and PD parameters

Here are the overall results of the sampling process:

- Over 2,700 debtors and over 2,800 accompanying collaterals were individually reviewed within work block 4, as a result of the sampling process
- Namely, c. 56% is average sampling rate in total (Retail and Corporate portfolios combined) at the aggregated level, while c. 80% only in Corporate segment

Given table represents results of the workblock 3:

Portfolio	Number of debtors in a portfolio after exclusion	Number of sampled debtors	Sampling rate
Large SME (BF)	2,461	1004	40.8%
Large corporates (BE)	65	63	96.9%
Real estate related (AZ)	141	136	96.5%
Residential real estate (AJ)	5,099	900	17.7%
Other*	30	30	100%
Total	7,796	2,133	

*This category consists of the following portfolios: Sovereigns (AC), Institutions (AG) and Project finance (AV)

Workblock 4

Scope of work

1. Credit file review data preparation

- Collecting the information necessary to complete the classification review and the individual impairment and provisioning review
- Verifying the completeness of this information (info for credit-impaired exposures are passed to appraisers as soon as possible)

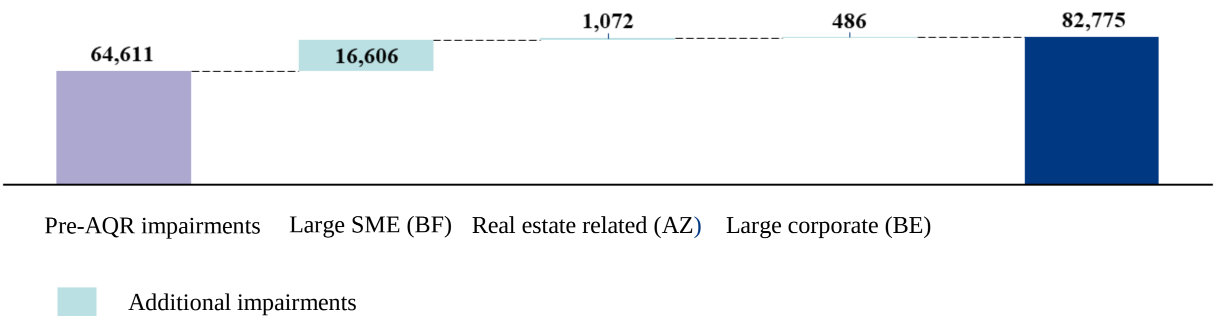
2. Exposure classification review

- Covers: RRE, sovereign, institutional and corporate exposure
- Five perspective assessing (Impairment classification, NPE classification, Regulatory exposure class, AQR segment and Related party classification)

3. Review of individual impairment and provisioning:

- Credit-impaired sovereign, institutional and corporate exposures (stage 3 or POCI)
- RRE undergoes the collective provision analysis and involves analyzing the appropriate provision given the status of the debtor
- Approach:
  - Standard present value of cash flows approach
  - Probabilities for going and gone concern under scenarios (baseline, adverse and potential additional scenario)

Workblock 4 effects represented in thousand EUR:



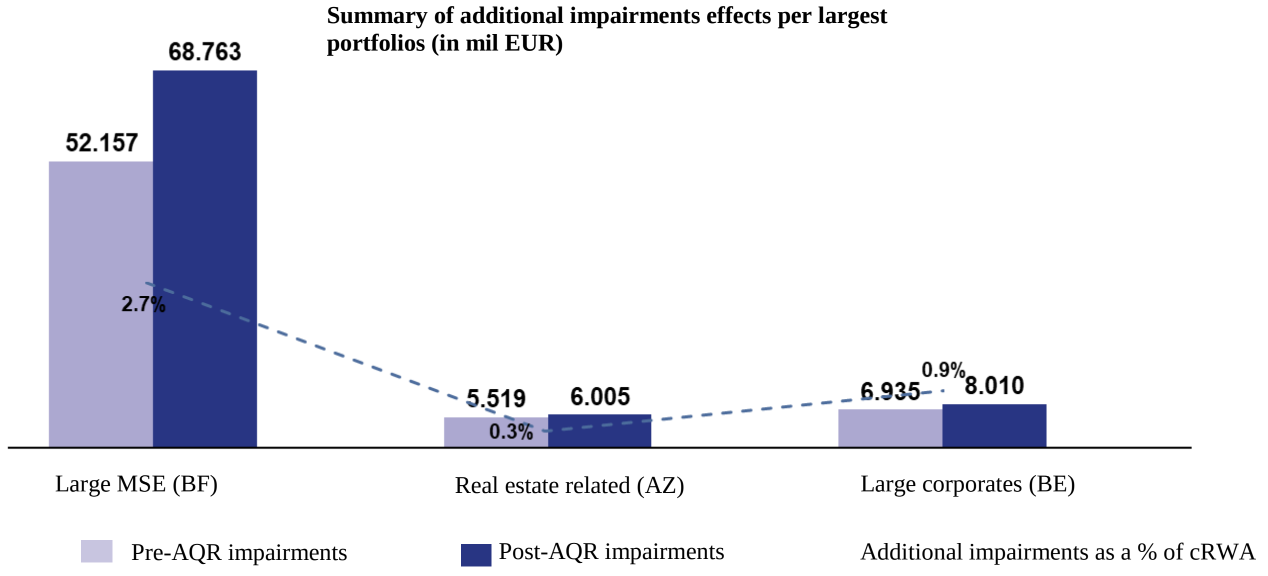
Summary results:

- The largest effect on banks’ capital adequacy, in AQR exercise, comes from corrections made as a part of analysis of individual credit files of legal entities (workblock 4). Apart from direct provisioning impact on capital adequacy, results coming from workblock 4 are also affecting certain parameters in workblocks 7 and 6 which are highly correlated.

- As a part of this workblock, the assessment of debtor classification adequacy was carried out, as well as the assessment of existence of under/over provisioning of impairments for legal entities from samples, that are being part of individual provisioning approach in line with AQR methodology.

- Credit impairments during workblock 4 is calculated in accordance with predefined AQR methodology. In cases where the bank`s pre-AQR credit impairments are lower than AQR bank team results, more conservative approach is implemented and higher, between bank and AQR bank team credit impairments are used in calculating results from workblock 4.

Additional IFRS 9 impairments effects per largest portfolios



Main subject of an analysis in workblock 4 were eight portfolios of legal entities, where three out of the largest by exposures (Large SME, Large corporates, and Real estate related) were detected with additional provisions in the total amount of EUR 18.2 million. For the remaining five portfolios that were subject of the analysis of workblock 4, there wasn’t found any additional impairment during the AQR exercise.

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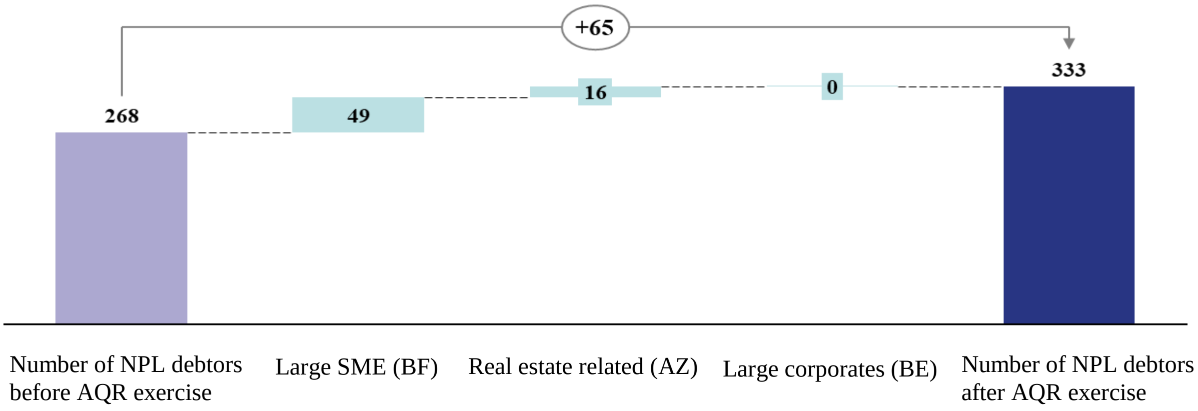
***NPL Reclassifications**

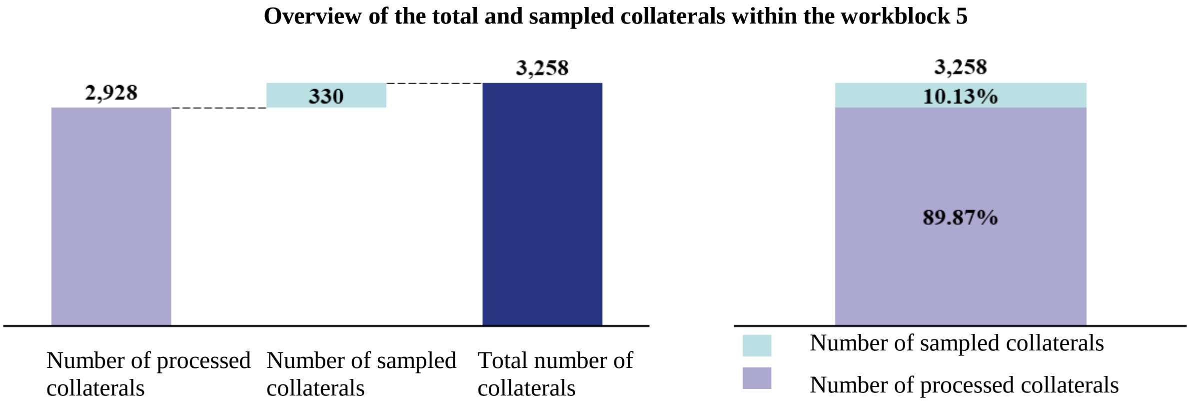


*NPL definition in accordance with local legislation (Decision on Minimum Credit Risk Management Standards)

During the analysis of individual credit files, particular debtors were reclassified from performing to non-performing status, based on well-established AQR methodology. The most frequent impairment triggers activated during AQR exercise that showed existence of evidence-based proofs of impairments for reclassified NPL debtors were debt service coverage ratio (DCSR<1.1x) below pre-defined threshold, as well as significant deterioration of financial performances (reduction of EBITDA and/or operating cash flow).

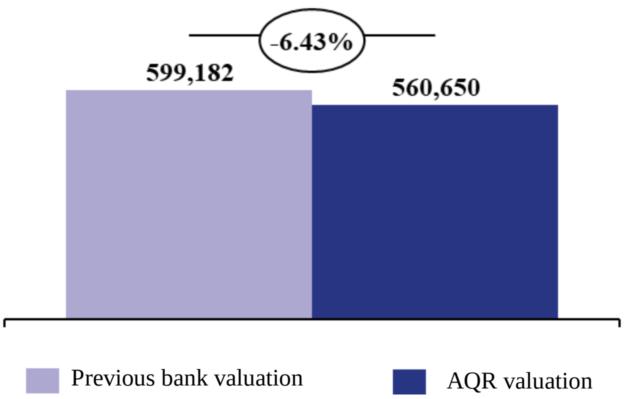
Workblock 5

Scope of work



As part of the workblock 5 of the AQR exercise, a total of 3,258 collaterals were reviewed, out of which cc. 97.0% represent real estate collaterals. In addition, for the purpose of quality control assessment of the appraisals, 330 collaterals, which represent 10.13% of total collaterals, were sampled. Quality control assessment of appraisals was conducted in direct communication with the AQR bank team and the AQR Appraisers for each of the submissions, whereby review of each sampled collateral was focused on the methodology approach and assumptions used in collateral valuation, as well as final adopted value of the collateral. Furthermore, in instances where valuation methodology was not adequate, the quality control team communicated to the AQR bank team and AQR Appraisers the necessary technical and methodological changes.

Results

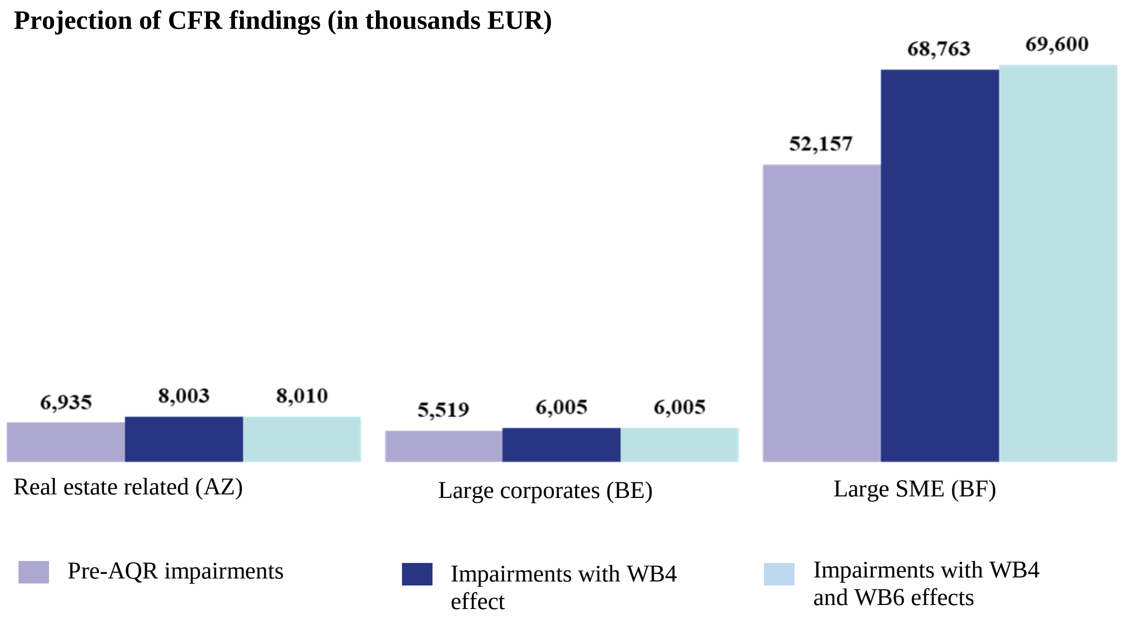


During the workblock 5, AQR collateral valuations were performed for subject collaterals and indexation of the previous bank valuations was done according to AQR Manual. Most significant effects are coming from time distance between dates of previous bank valuations and the date of the AQR exercise, as well as from changes in collaterals' characteristics between two dates. In certain cases differences in value arise from inadequate application of the valuation methodology. Effects dominantly arise from BF portfolios, which account for around 56% of the total collateral portfolio value, while AJ portfolios recorded least change in value with the effect of –0.46%.

Workblock 6

Projection of CFR findings

Workblock 6 represents projections of findings from workblock 4. Projections are made from sampled part of a portfolio, on the part that was not sampled. Having in mind that sampling rate in workblock 4 was extremely high, final effects of mentioned projections are only EUR 844 thousand of additional credit impairment. Total effect of workblock 4 and 6 is shown on graph below:



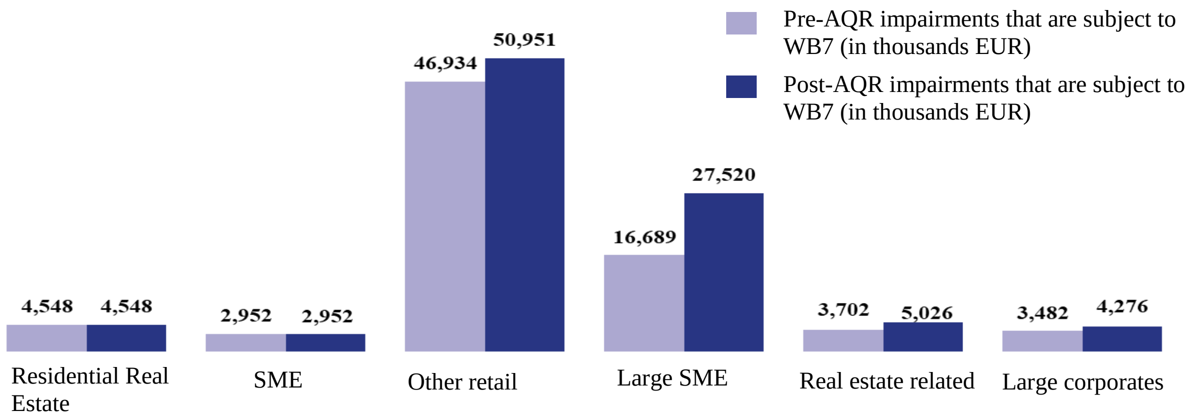
Workblock 7

The main purpose of workblock 7 is to assess the adequacy of credit impairments in all retail exposures and all non-retail exposures classified as stage 1 or stage 2. Total banks' impairments that are subject of an analysis as a part of workblock 7 are EUR 77 mil. Total effect of workblock 7 is EUR 16.9 mil which represents 22% of total bank's impairments. Significantly higher effect was recorded on non-retail portfolios. Primary reason is high proportions of exposures reclassifications in higher credit risk groups (Stage 2 and 3) that were part of workblock 4. Additionally, significant effects come from usage of alternative parameters in legal entities segment, due to lack of data which is the consequence of low number of borrowers in this segment.

Segment level results

Segment	Total banks' impairment (in thousands EUR)	Additional impairments (in thousands EUR)	Growth rate (as %)
Non-retail	22,644	12,949	57.19%
Retail	54,434	3,906	7.18%
Total	77,078	16,856	21.87%

Workblock 7 - Portfolio level results:



The largest share in total effects refers on Large SME portfolio (64% of the total effects). The main reason for ECL adjustments in these portfolios is the implementation of the findings from workblock 4. These findings are mainly related to reclassifications into riskier risk groups. On the other hand, there are no effects in the portfolio of Residential Real Estate due to good collateralization of these loans. Also, there are no effects in SME portfolio due to the low probabilities of default obtained from 2019 year migration matrices. Measure of mandatory validations of the ECL models will be imposed to all banks with recorded effects in this workblock.

Workblock 8

Scope of work and results

Main purpose of workblock 8 was to assure that bank can adequately estimate assets accounted for at fair-value through profit and loss (FVTPL) and fair-value through other comprehensive income (FVTOCI). Preliminary Portfolio Selection was conducted in line with Guidelines for portfolio selection, but during AQR exercise necessary adjustments were identified in line with AQR Manual, hence final scope for assessment was defined throughout the workblock.

Asset class	**Fair value – bank** (in thousands EUR)	**Fair value - AQR auditor** (in thousands EUR)	**Negative differences of FV** (in thousands EUR)
Acquired assets	1,369	0	-1,369
Government notes	53,989	53,963	-26
Bonds	9,648	9,645	-3

In comparison to AQR effects from credit exposures, effects from reduction in FV after AQR are negligible. The largest effect comes from effects calculated for portfolio Acquired assets. Additionally, Fair value correction was conducted for portfolios of Government notes and Bonds.

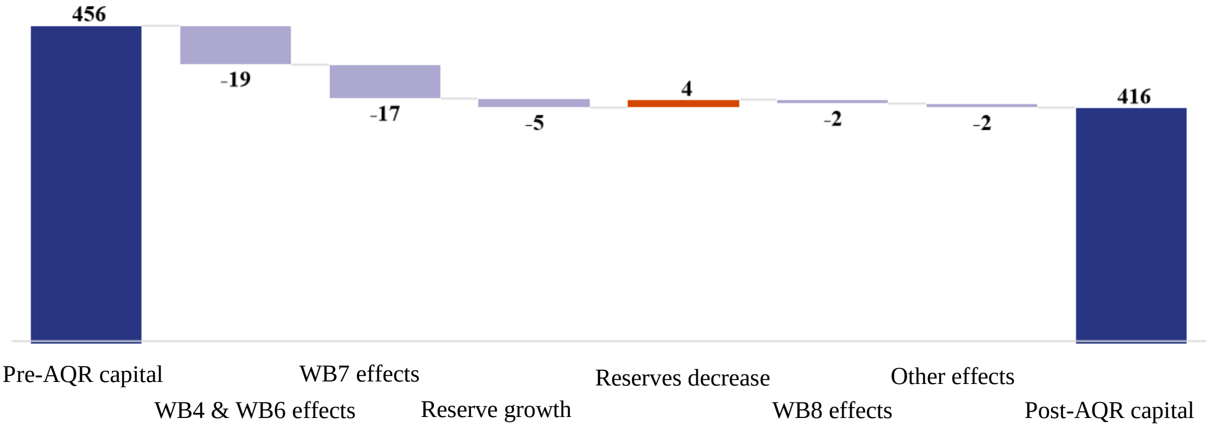
Corrective measures

Corrective measures proposed by the AQR auditor apply to the post-AQR period and represent suggestions that banks should consider adjustments of their own methodology of fair-value measurement, to the methodology used by AQR auditor, meaning that banks, in all situations where there is a difference, should use the same revaluation approach, technique, and level of input as AQR auditors. The table below shoes the list of corrective measures:

No.	**Corrective measures that are part of workblock 8**
1	A recommendation was given in relation to revision of valuation approach under IFRS 13
2	A recommendation was given, related to discount rate revision during similar valuation processes in the future
3	A recommendation was given, related to the revision of input categorization under IFRS 13, as well as for criteria for input selection
4	A recommendation was given, for the revision of an approach of valuation and categorization of inputs under IFRS 13
5	A recommendation was given, for revision of input categorization under IFRS 13, as well as minor corrections in present value application techniques

Workblock 9

AQR Impact on capital adequacy



The biggest effects were derived from credit files reviews (workblock 4). Slightly lower effects were derived from the analysis of collective impairments (workblock 7). Other effects relate primarily to an increase in deductions from equity due to a decrease in own funds. The total effects of AQR on the market level are EUR 40 million, which lead to the average capital solvency ratio decrease of -1.6%. The average solvency ratio at the market level after AQR adjustments is 16.2% which is significantly above the regulatory minimum of 10%. The need for capital conservation measures has been identified only for one bank.

Workblock 10

QA process was conducted through a three lines of defense model, with all lines jointly responsible for ensuring the quality of the overall AQR outcomes:

- 1st line **- AQR bank teams**
- 2nd line **- CBCG CTUPB teams** (Centralni timovi za upravljanje projektom po pojedinačnim bankama Centralne banke Crne Gore)
- 3rd line **- CBCG TQ teams** (Timovi Centralne banke Crne Gore zaduženi za kontrolu i osiguranje kvaliteta) and **EY TQ teams**

In addition to the three lines of defense model, CBCG SRT (Strateško Radno Tijelo Centralne banke Crne Gore) and CBCG CTUP represent strategic AQR project related bodies in charge of overall oversight and supervision of the AQR exercise. As stated before, the audit and consulting company **EY Serbia, Bosnia and Herzegovina and Montenegro** provided support to the CBCG throughout the entire AQR project and QA process. Within QA process additional support and control was provided by **EY teams from Germany, the Czech Republic and Croatia.**