

# Report

## on the Asset Quality Review and Stress Test of the Bulgarian Banking System



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of the Bulgarian Banking System

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## Abbreviations

AFS	Available for Sale
AQR	Asset Quality Review
BGN	Bulgarian Lev
BGNm	Million Bulgarian Levs
BNB	Bulgarian National Bank
bp/bps	Basis Points
CET1	Common Equity Tier 1
CFR	Credit File Review
CPMO	Central Project Management Office
CRD IV	Capital Requirements Directive
CRR/CRD IV	Capital Requirements Regulation and Directive
CVA	Credit Value Adjustment
DIV	Data Integrity Validation
DSCR	Debt Service Coverage Ratio
EBA	European Banking Authority
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization
EC	European Commission
ECB	European Central Bank
EU	European Union
FAQ	Frequently Asked Questions
GDP	Gross Domestic Product
HA	Held Assets
HICP	Harmonized Index of Consumer Prices
IAS	International Accounting Standards
IBNR	Incurred But Not Reported
IFRS	International Financial and Reporting Standards
IMF	International Monetary Fund
ISA	International Standards on Auditing
IT	Information Technology
LGD	Loss Given Default
NII	Net Interest Income
NPA	Net Potential Adjustment
NPE	Non-performing Exposure
NPV	Net Present Value
P&L	Profit and Loss
PD	Probability of Default
PMO	Project Management Office
PP&A	Processes, Policies and Accounting Review
pp/pps	Percentage Points
QA	Quality Assurance
RRE	Residential Real Estate
RWA	Risk-weighted Assets
SME	Small and Medium Enterprise
SREP	Supervisory Review and Evaluation Process
SSM	Single Supervisory Mechanism
ST	Stress Test
WB	Work-block
y/y	Year-over-year

## 1. Executive Summary

*The banking system remains well capitalized, after reflecting the results of the Asset Quality Review (AQR), with a CET1 capital ratio of 18.9%, well above the 4.5% regulatory minimum. Furthermore, the individual bank results indicate that the capital adequacy of all banks remains above the required regulatory minimum.*

*The results of the Stress Test (ST) confirm the strong capital position and resilience to shocks of the banking system. The individual bank results vary and are not intended to be compared against pre-set numerical thresholds, i.e. there is no 'passing' or 'failing'.*

*Some banks shall be required to maintain the existing capital buffers, while others shall aim to restore the coverage of their capital buffers, taking into account the AQR adjustments. Whereas the ST results are based on hypothetical scenarios and as such they do not imply direct capital adjustments, these results will feed into the supervisory review and evaluation process and the banks' capital planning.*

The Bulgarian National Bank (BNB) conducted an Asset Quality Review and Stress Test of the Bulgarian banking system on the basis of § 9 of the Transitional and Final Provisions of the 2015 Law on the Recovery and Resolution of Credit Institutions and Investment Firms<sup>1</sup> and in compliance with Article 80b of the Law on Credit Institutions<sup>2</sup>.

The BNB carried out the AQR and ST in collaboration with an independent external consultant, selected under a public procurement tender procedure, and independent consultants and appraisers employed by the banks after a uniform selection procedure approved by the BNB. Overall, more than 900 experts across the BNB and the external independent parties were involved in the AQR and ST.

The European Commission (EC) and the European Banking Authority (EBA) were regularly informed and asked for opinion at all stages of the process.

The AQR and ST covered all 22 banks licensed by the BNB excluding the six foreign bank branches operating in Bulgaria<sup>3</sup>. The AQR consisted of nine work blocks and was conducted between 15 February and 30 June 2016. Total assets of BGN 84.2 billion as at 31 December 2015, or 96% of the banking system were subject to asset quality review. Over 3,400 individual credit files were reviewed, equivalent to BGN 23.2 billion or 71% of the banks' corporate and large SME loan books.

The AQR resulted in aggregate adjustments of BGN 665 million, or 1.3% of risk-weighted assets, to be reflected in the banks' 2016 financial statements. The assessment of the accounting impact of these adjustments shall take into consideration the net income and impairments in the banks realized until 30 June 2016,

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<sup>1</sup> [http://www.bnb.bg/bnbweb/groups/public/documents/bnb\\_law/laws\\_bankrecovery\\_bg.pdf](http://www.bnb.bg/bnbweb/groups/public/documents/bnb_law/laws_bankrecovery_bg.pdf)

<sup>2</sup> [http://www.bnb.bg/bnbweb/groups/public/documents/bnb\\_law/laws\\_creditinstitutions\\_bg.pdf](http://www.bnb.bg/bnbweb/groups/public/documents/bnb_law/laws_creditinstitutions_bg.pdf)

<sup>3</sup> The business of the Bulgarian branch of Alpha Bank A.E. was transferred to Eurobank Bulgaria AD (Postbank) as at 1 March 2016.

as well as all capital-related developments and measures throughout the year, to the extent such adjustments are compliant with IFRS accounting principles and following an audit review.

The AQR-adjusted CET1 capital ratio for the banking system is 18.9% as at 31 December 2015. Although results vary across individual banks, after the AQR, the capital adequacy of all banks remains above the required regulatory minimum. Therefore, the expected capital adjustments across individual banks impact only the capital buffers above the regulatory capital adequacy minimum. The corresponding follow-up measures are defined in terms of either maintaining the existing buffers, or restoring their coverage.

The ST was conducted in July 2016 with a purpose to assess the resilience of the banks in Bulgaria to absorb shocks from hypothetical negative financial and macroeconomic developments.

The ST results, being based on hypothetical scenarios, do not have a direct quantitative impact on the banks' capital adequacy, *i.e.* they lead to no capital surplus or shortage. However, these results will feed into the supervisory review and evaluation process and the banks' capital planning. Furthermore, the sensitivities of the balance sheets to shocks may be a reason to re-evaluate the banks' business models which, in turn, will also be incorporated into the supervisory review and evaluation process.

In line with the approach in the latest EU-wide stress test conducted by the EBA, the ST on the Bulgarian banking system does not contain a pass/fail threshold.

The ST was based on the AQR-adjusted capital and risk-weighted assets. It applied two macroeconomic scenarios over a three-year horizon until 2018: i. a baseline scenario corresponding to the BNB forecast of March 2016 based on the then latest available data, and ii. an adverse scenario which represents a simulation of plausible but low-probability hypothetical developments.

The adverse scenario is more conservative than the one the EBA for Bulgaria in the recent EU-wide stress test.

Under the baseline scenario, considered as reflecting the most probable macroeconomic and financial developments, the banking system's CET1 capital ratio improves to 22.2% by the end of the forecast horizon.

Under the simulations of the adverse scenario, the banking system's CET1 capital ratio declines to 14.4% by the end of 2018.

Under both scenarios, banks' capital positions remain strong and indicate resilience to absorb the tested shocks, although results vary across individual banks.

## 2. Background

Pursuant to § 9 of the Transitional and Final Provisions of the Law on the Recovery and Resolution of Credit Institutions and Investment Firms<sup>4</sup> and Article 80b of the Law on Credit Institutions<sup>5</sup>, the BNB, in its supervisory capacity, conducted a review of the banking system with an aim to:

- ensure the quality and adequacy of the value of the assets and collateral;
- determine the ability of banks to absorb unexpected losses in extreme stress situations; and
- as a result, identify and implement any necessary remedial actions that are required to safeguard banks' solvency.

Pursuant to Article 16 and Article 8 of the Law on Public Procurement<sup>6</sup>, the BNB initiated a public tender for procurement of an external independent consultant on 30 July 2015, which is to provide support in organizing and coordinating the AQR and ST, as well as support in the quality assurance (QA) process<sup>7</sup>. The BNB appointed Deloitte on 28 October 2015, based on the assessment of proposals by all participating candidate entities<sup>8</sup>.

A procurement process for the selection of banks' independent external consultants was designed by the BNB with the support by Deloitte, in order to ensure an independent review of the quality of the assets. Guidelines for the procurement of AQR providers<sup>9</sup> (e.g. appraisal criteria; restrictions; qualification criteria, etc.) and their subcontracted collateral appraisers<sup>10</sup> were issued by the BNB on 28 December 2015. Tri-party contracts were signed between the BNB, the 22 banks and nine external independent consultants<sup>11</sup> ('AQR providers') and collateral appraisers upon a review and validation of banks' initial selection by the BNB.

The BNB held ongoing consultations with the European Commission (EC) and the European Banking Authority (EBA) over the course of the project in order to ensure adherence to relevant European practices.

The Bulgarian AQR followed a methodology developed and applied by the European Central Bank (ECB) in connection with the start of the Single Supervisory Mechanism (SSM) in 2014 and clarified by the initial guidance document<sup>12</sup>, circulars<sup>13</sup> and technical guidance documents. The adopted risk-based portfolio selection approach takes into account the fact that this is a country-specific review where the supervisory body based its bank-specific approach on an inherent

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<sup>4</sup> [http://www.bnb.bg/bnbweb/groups/public/documents/bnb\\_law/laws\\_bankrecovery\\_bg.pdf](http://www.bnb.bg/bnbweb/groups/public/documents/bnb_law/laws_bankrecovery_bg.pdf)

<sup>5</sup> [http://www.bnb.bg/bnbweb/groups/public/documents/bnb\\_law/laws\\_creditinstitutions\\_bg.pdf](http://www.bnb.bg/bnbweb/groups/public/documents/bnb_law/laws_creditinstitutions_bg.pdf)

<sup>6</sup> <https://www.mi.government.bg/en/library/public-procurement-act-357-c25-m258-1.html>

<sup>7</sup> [http://www.bnb.bg/PressOffice/POPressReleases/POPRDate/PR\\_20150730\\_1\\_EN](http://www.bnb.bg/PressOffice/POPressReleases/POPRDate/PR_20150730_1_EN)

<sup>8</sup> [http://bnb.bg/bnbweb/groups/public/documents/bnb\\_download/pp\\_01224-2015-0018\\_a11\\_bg.pdf](http://bnb.bg/bnbweb/groups/public/documents/bnb_download/pp_01224-2015-0018_a11_bg.pdf)

<sup>9</sup> [http://www.bnb.bg/bnbweb/groups/public/documents/bnb\\_pressrelease/pr\\_20151228\\_a1\\_en.pdf](http://www.bnb.bg/bnbweb/groups/public/documents/bnb_pressrelease/pr_20151228_a1_en.pdf)

<sup>10</sup> [http://www.bnb.bg/bnbweb/groups/public/documents/bnb\\_pressrelease/pr\\_20151228\\_a2\\_en.pdf](http://www.bnb.bg/bnbweb/groups/public/documents/bnb_pressrelease/pr_20151228_a2_en.pdf)

<sup>11</sup> [http://www.bnb.bg/bnbweb/groups/public/documents/bnb\\_pressrelease/pr\\_20160212\\_a1\\_bg.pdf](http://www.bnb.bg/bnbweb/groups/public/documents/bnb_pressrelease/pr_20160212_a1_bg.pdf)

<sup>12</sup> [http://www.bnb.bg/bnbweb/groups/public/documents/bnb\\_pressrelease/pr\\_20160212\\_a2\\_en.pdf](http://www.bnb.bg/bnbweb/groups/public/documents/bnb_pressrelease/pr_20160212_a2_en.pdf)

<sup>13</sup> [http://www.bnb.bg/bnbweb/groups/public/documents/bnb\\_pressrelease/pr\\_20160315\\_2\\_a1\\_en.pdf](http://www.bnb.bg/bnbweb/groups/public/documents/bnb_pressrelease/pr_20160315_2_a1_en.pdf);

[http://www.bnb.bg/bnbweb/groups/public/documents/bnb\\_pressrelease/pr\\_20160315\\_2\\_a2\\_en.pdf](http://www.bnb.bg/bnbweb/groups/public/documents/bnb_pressrelease/pr_20160315_2_a2_en.pdf)

knowledge of the banking sector, including its size, the risk-weighted assets (RWA) of the constituent banks, the existing risk management and lending practices, and supervisory reporting requirements, thereby ensuring the timely and effective execution of this project in adherence to relevant ECB practices.

More than 900 experts across the BNB, Deloitte and the external independent consultants were involved in the AQR and ST in order to ensure consistent application of the methodology. The BNB maintained continuous communication with the AQR providers and held meetings with them to address methodological and procedural issues. The frequently asked questions lists (AQR FAQ and ST FAQ) were updated and circulated to the parties involved on a weekly basis.

This report provides an overview of the approach and presents the results of the AQR and ST in relation to the 22 licensed banks with total assets of BGN 84.2 billion as at 31 December 2015. The AQR and ST do not cover the local branches of foreign banks. The exercise was comprised of two components:

- Asset quality review
  - The AQR is a point-in-time prudential and therefore conservative assessment of the accuracy of the carrying value of banks' assets as at 31 December 2015.
  - The AQR was conducted in accordance with prudential regulation, including the CRR/CRD IV<sup>14</sup> capital rules, BNB Ordinance No. 8 of 4 April 2014 on Bank's Capital Buffers<sup>15</sup> and BNB Ordinance No. 7 of 24 April 2014 on Organization and Risk Management of Banks<sup>16</sup>.
  - The AQR portfolios were selected based on their size and materiality with a detailed asset-level review (*i.e.* a credit file review, or CFR) performed on a sample from 65 portfolios across 22 banks.
  - The results of the AQR shall be taken into the 2016 year-end financial statements taking into account any events after 31 December 2015 based on an audit carried out in compliance with the specific application of International Accounting Standards (IAS) and International Financial and Reporting Standards (IFRS).
- Stress test
  - In line with latest EBA practices, the stress test does not contain a pass/fail threshold. The purpose of the stress test is to form the basis for the ongoing supervisory review of banks' ability to maintain capital in the system and supervisory guidance on capital planning processes. ST results have no direct quantitative effect on bank capital.
  - The stress test incorporates two macroeconomic scenarios: a baseline scenario which corresponds to the BNB macroeconomic forecast as of March 2016, and an adverse scenario based on hypothetical adverse economic and financial market conditions. The adverse scenario is not a forecast, but a forward-

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<sup>14</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013L0036&from=EN>

<sup>15</sup> [http://www.bnb.bg/bnbweb/groups/public/documents/bnb\\_law/regulations\\_capital\\_buffers\\_en.pdf](http://www.bnb.bg/bnbweb/groups/public/documents/bnb_law/regulations_capital_buffers_en.pdf)

<sup>16</sup> [http://www.bnb.bg/bnbweb/groups/public/documents/bnb\\_law/regulations\\_risk\\_management\\_en.pdf](http://www.bnb.bg/bnbweb/groups/public/documents/bnb_law/regulations_risk_management_en.pdf)

looking quantitative evaluation of the impact on banks' financial performance and capital with the objective to assess the resilience of banks' solvency.

- The stress test is based on the conservative *static balance sheet* assumption. Under this assumption, banks' total exposure volume, maturity, and product mix are kept constant, and, therefore, limit the banks' ability to manage their capital while the ST effect lasts. In essence, the *static balance sheet* assumption amplifies the impact of the deterioration in economic and financial indicators.

### **3. AQR/ST Process**

#### **3.1. Participating Banks**

For the purposes of the AQR and ST, the BNB has tiered the banks by size and specific risks, as follows:

- Group 1 (BGN 65.8 billion; 78% of total assets): UniCredit Bulbank AD, DSK Bank EAD, First Investment Bank AD, United Bulgarian Bank AD, Raiffeisenbank (Bulgaria) EAD, Societe Generale Expressbank AD, Eurobank Bulgaria AD, Central Cooperative Bank AD;
- Group 2 (BGN 15.5 billion; 18% of total assets): Piraeus Bank Bulgaria AD, CIBANK EAD, Allianz Bank Bulgaria AD, Investbank AD, Bulgarian Development Bank AD, ProCredit Bank (Bulgaria) AD, Municipal Bank AD, International Asset Bank AD;
- Group 3 (BGN 2.9 billion; 4% of total assets): Bulgarian-American Credit Bank AD, D Commerce Bank AD, TBI Bank EAD, Tokuda Bank AD, Victoria Commercial Bank EAD, Texim Bank AD.

To ensure an appropriate level of review, the calculation of the sample size was made by bank group.

#### **3.2. Assets under Review**

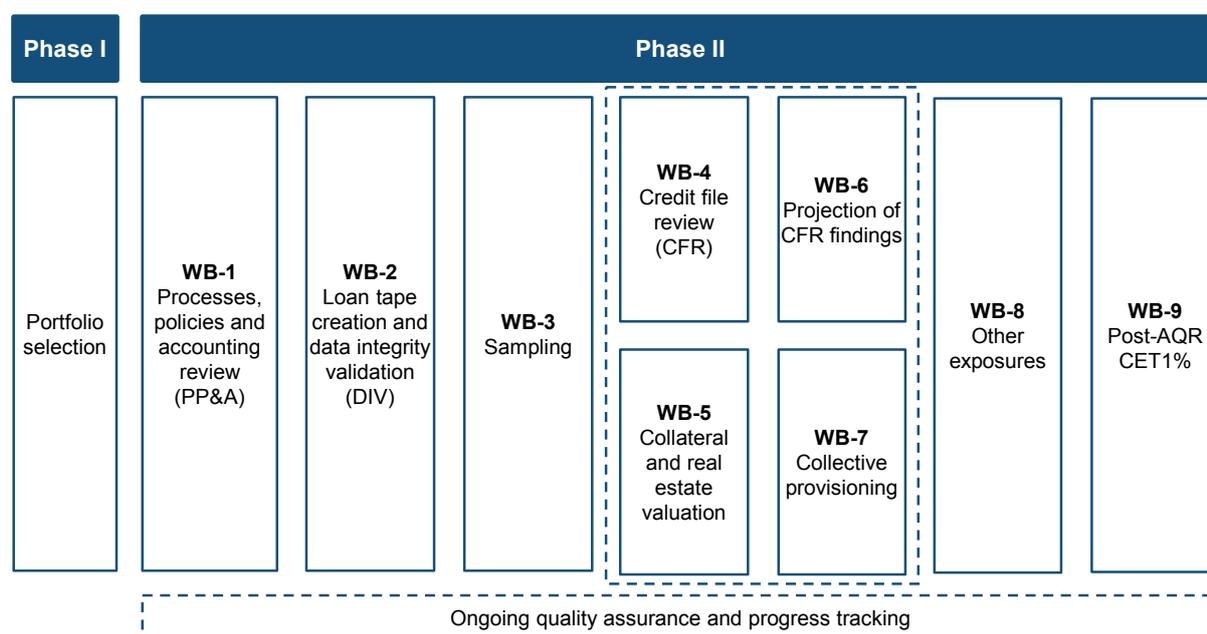
Total assets under review amounted to BGN 60.7 billion, comprising of the asset classes with a high risk of potential misstatement on the balance sheet.

The BGN 23.5 billion out of scope assets, consisting primarily of deposits at the BNB and interbank deposits, reflect the high liquidity of the Bulgarian banking system.

The portfolio selection was based on supervisory knowledge of the banking system. It covered all major AQR asset segments, where the most significant in terms of carrying values were corporates, large SME, RRE and other retail.

### 3.3. AQR Process

Figure 1. Schematic of AQR work-blocks



The AQR has nine interrelated work-blocks with the final output of an AQR-adjusted CET1 ratio. Each work-block is described below:

1. **Processes, policies and accounting review (PP&A):** the PP&A review has been carried out as per the ECB 2014 AQR Manual<sup>17</sup>, while taking into consideration compliance with local reporting guidelines for supervisory purposes (supervisory reporting as per Regulation No. 575/2013<sup>18</sup> and Regulation No. 680/2014<sup>19</sup>). The AQR providers reviewed banks' internal policies, processes and accounting practices, which may have an impact on the carrying values of assets on their balance sheet (*i.e.* NPE definition, forbearance and restructuring, provisioning, collateral valuation and disposal, definition of related and connected parties, *etc.*). A detailed review of the appropriateness of in-scope banks' CVA models has also been performed.
2. **Loan tape creation and data integrity validation (DIV):** The credit analysis (sample selection and collective provisioning challenger model creation) was based on a loan tape provided by the bank. This loan tape included basic account information, such as a segment classification, a missed payments status and identifiers of the loan/entity. The data was required to be of sufficient quality to perform the required analysis, which necessitated automated checks of the data set and a review of consistency across internal IT systems.

<sup>17</sup> <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/assetqualityreviewphase2manual201403en.pdf>

<sup>18</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R0575&qid=1470642666039&from=EN>

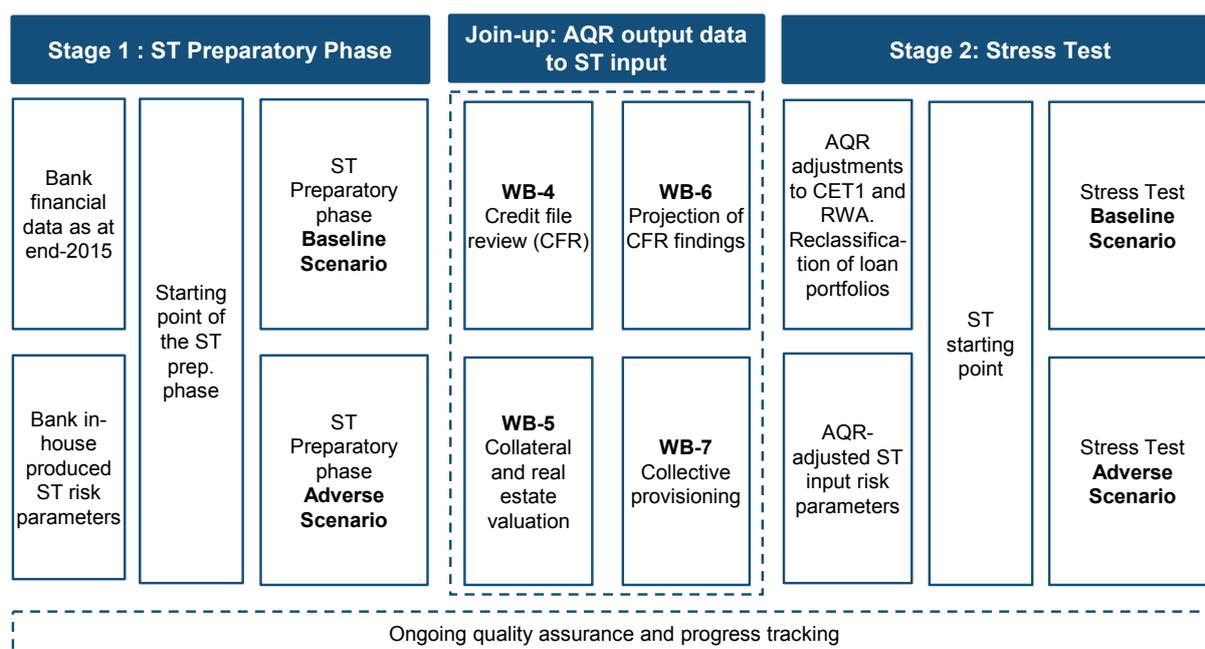
<sup>19</sup> <http://eur-lex.europa.eu/legal-content/en/TXT/PDF/?uri=OJ:L:2014:191:FULL&from=DE>

3. **Sampling:** It was appropriate to review a sample of exposures in every portfolio, given the large volume of the analysis involved. To come to statistically significant conclusions, a sufficiently large and representative sample through the risk-based sampling process was generated. The size of the sample depended on the homogeneity of the portfolio; the risk of the portfolio; the total number of debtors; and the level of debtor concentration. Portfolios were stratified based on the riskiness of debtors. The approach to sampling was consistent with the best practice as defined by adherence to International Standards on Auditing (ISA) 530. In addition to risk-based samples, additional targeted exposures based on supervisory information were included in the samples in order to facilitate the review of the reporting and assessment of large and connected exposures.
4. **Credit file review (CFR):** The CFR involved external AQR providers working on an exposure-by-exposure basis to verify that each credit exposure had been correctly classified in the bank's systems (*e.g.* a correct regulatory segment, NPE status, impairment status) and review if a specific provision was required as per the methodology. The CFR covered loans, advances and off-balance sheet items in the selected portfolios. The AQR providers ensured that information on companies and collateral reflected the current market conditions. In the case of large and connected exposures, reported or identified in the review process, subject to review was not only the classification and provisioning, but also compliance with the regulatory restrictions for this type of exposures.
5. **Collateral and real estate valuation:** A key input to determine appropriate carrying amounts was the appraisal of collateral. The results of these valuations were used as inputs to the credit file review and collective provisioning. For corporate and large SME portfolios, a review of banks' collateral valuation was performed to all sampled exposures with evidence for impairment, or conclusions that future losses were more likely than not. For RRE portfolios, a collateral valuation review was performed to all sampled exposures.
6. **Projection of findings of credit file review:** Findings from the CFR were then projected to the unsampled part of the portfolio. A projection of findings was applied to homogeneous exposure buckets within each portfolio called 'strata', in line with audit guidelines. A number of safeguards were implemented in the projection methodology, after the approval by the BNB (*e.g.* flagging of anomalies and overrides – in rare cases where results from the sample were felt to be unrepresentative). These were applied in order to prevent overstating the projection of single CFR findings.
7. **Collective provisioning analysis:** Smaller, homogeneous, impaired exposures were typically provisioned using a collective provisioning approach – that is, a point-in-time statistical model of incurred loss. Incurred but not reported and other general provisions were usually set using collective models. In order to validate the appropriateness of collective provisioning levels, the AQR providers checked whether the banks' provisioning models were fully aligned with the letter and spirit of accounting rules (IAS 39), comparing them to an independently developed challenger model as per the ECB Manual.

8. **Review of other exposures:** For banks with material other exposures (foreclosed assets, investment property), a review or revaluation of the most important exposures was carried out. A qualitative review of trading book core processes was carried out (model validation, credit valuation adjustment, other fair value adjustments, independent price verification, P&L analysis and new product approval). A review of the most important derivative pricing models, which price level 3 exposures (measured based on metrics such as level 3 gross mark-to-market), in banks with material trading books was carried out. Additionally, a credit valuation adjustment (CVA) challenger model was used to assess the banks' CVA calculation in detail.
9. **Determination of AQR-adjusted CET1 ratio:** The AQR-adjusted CET1 ratio was calculated for each bank according to the Single Rulebook, reflecting the implementation of the CRR/CRD IV rules and the ECB Manual (taking into account transitional arrangements) as at 31 December 2015.

### 3.4. Stress Test Process

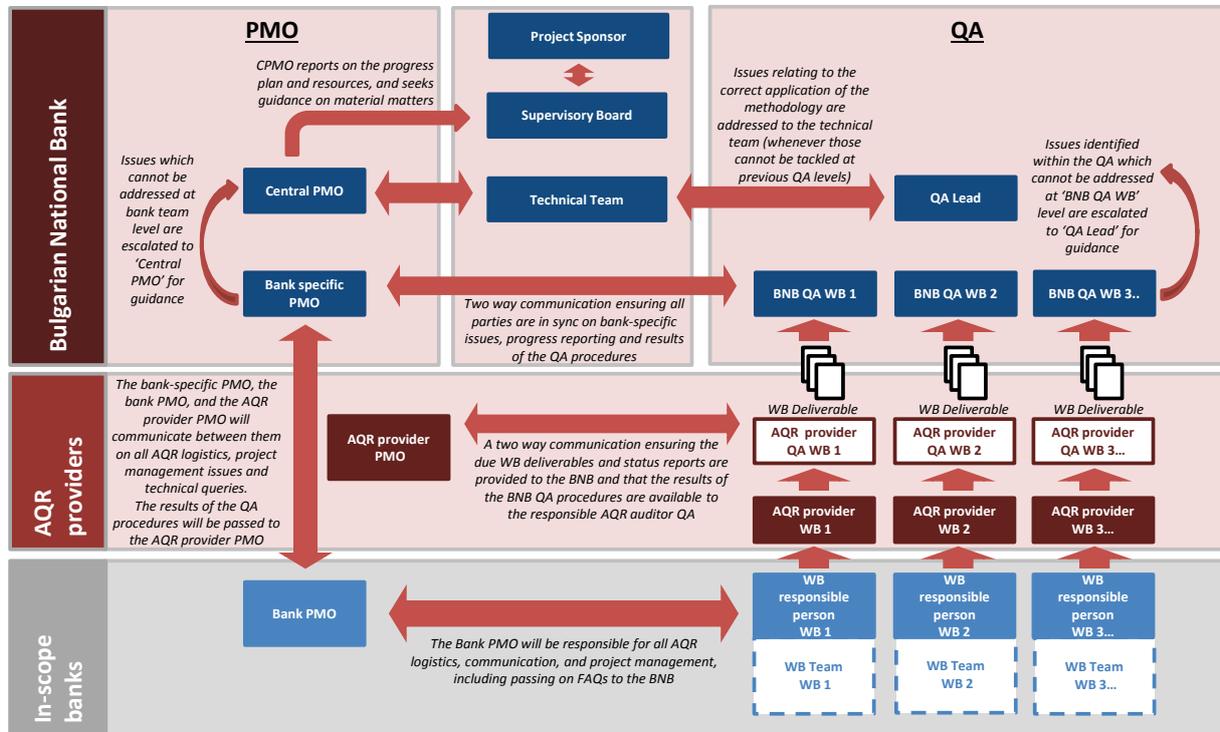
Figure 2. Schematic of stress test stages



The stress test simulation was performed in two main stages on an unconsolidated (solo) basis as a constrained bottom-up exercise. The first stage had a preparatory character (mock-up) and assures that banks understand and apply the guidelines in a consistent manner. Its purpose was also to facilitate the operational steps of the stress test process. In the first stage, the stress test is run with financial figures as at 31 December 2015. The second stage (actual) of the stress test simulation is based on entry-level financial figures coming from the findings of the AQR (risk parameters, loan portfolios reclassification, and adjusted CET1 and RWA).

### 3.5. Project Governance

Figure 3. Project governance schematic



The following parties were involved in the AQR and ST:

- The BNB has been the project sponsor in its role of the Bulgarian banking supervision authority. It provided a team of experts that has been closely involved in the process, including the quality assurance (QA) work stream, contributing with its expertise and supervisory knowledge on banks.
- The Supervisory Board was the main decision and steering body within the project.
- The Central Project Management Office (CPMO) performed project management on an operational level, was responsible for progress control and coordinated with the Supervisory Board.
- The BNB, supported by Deloitte:
  - provided methodological guidance to the AQR providers;
  - prepared templates used throughout the AQR and ST;
  - provided joint Technical teams, which performed quality assurance procedures on the information provided by the banks and AQR providers.
- The independent AQR providers' QA teams ensured consistent application of the methodology, while reporting to the CPMO on a regular basis.
- Banks' statutory auditors were excluded in the early stage of the procurement process.

- Banks performed the stress test, following an EBA simplified ST methodology and made the calculations in line with the baseline and adverse scenario, taking into account AQR findings.
- A number of regular and *ad-hoc* meetings took place:
  - Weekly CPMO meetings where issues were raised and the progress of the QA process was tracked within each of the work-blocks across all banks.
  - Meetings with EC and EBA representatives in line with their consultative role.
  - Meetings between QA teams, Bank-specific PMOs, Technical experts and AQR providers addressing the review of individual credit files and respective collateral assessment.

Isolated and secured communication channels for transfer of data with respective access rights granted to banks' and AQR providers' representatives were established.

A supervisory dialogue process was conducted between the banks and the BNB upon finalization of the review. Supervisory dialogue meetings were based on AQR findings from various work-blocks and preliminary results.

### 3.6. Quality Assurance

A robust quality assurance (QA) process involving independent QA teams by the AQR providers, and joint QA teams by the BNB and Deloitte has been put in place in order to ensure an accurate and timely delivery of the AQR and ST results. Teams reported to the CPMO on a weekly basis.

- The BNB QA team performed methodological oversight, cross-bank benchmarking and QA checks on the provided data.
- The BNB QA team supported by Deloitte performed a QA on a sample of credit files to ensure consistent application of approach and the robustness of the AQR process. The QA consisted, but was not limited to:
  - ensuring cross-sector consistency with methodology;
  - liaising with AQR providers to understand justification around classification, collateral valuation approach and assumptions as well as additional provisioning calculations;
  - obtaining reasonable assurance from AQR providers that findings from credit file and collateral review were reflected in other appropriate work streams;
  - escalating issues to the CPMO on more complex cases; and
  - analysing the actions recommended by AQR providers.
- The BNB teams contributed with their supervisory experience to help AQR providers and their independent teams ensure the quality of investigating specific issues.

The robustness of the AQR process was further supported by providing detailed feedback and methodological guidance on the population of data fields and adherence to the methodology and published circulars within the review, as well as reviewing issues escalated by AQR providers.

A frequently asked questions (FAQ) communication channel was implemented to provide clarifications on the application of the methodology. The AQR technical team responded to more than 240 bank-specific questions, summarizing and issuing further guidance to banks.

The granular analysis allowed the BNB to scrutinize the results of each work-block on a bank, portfolio, risk-segment and system level. The scrutiny included areas where an expert judgment was provided by the AQR providers, and matters requiring clarification on the implementation of the methodology were challenged on an item-by-item basis by the BNB. Areas in which calculated parameters were outside of expected ranges (*e.g.* probability of impairment and loss given impairment within collective provisioning) were identified and challenged by the BNB QA team.

The BNB presented recommendations based on its understanding of particular matters following a bilateral discussion; an additional analysis could then be presented by the AQR providers to support their findings.

The stress test technical team responded to more than 40 bank-specific questions. There were three critical elements to the QA of the stress test analysis:

- Data quality checks on all of the input data

This involved tests such as reconciliation checks for segment volumes with bank-reported data; reconciliation between data provided within different templates; data completeness checks, *etc.* Identified issues were discussed and resolved within the QA process.

- Comparison of BNB calculations with bank projections

The banks performed the stress test projections upon verification by the BNB. The output results were compared to BNB projections and data from the mock-up exercise to verify the proper transposition of input data.

- Sense-checks on projections based on a benchmarking analysis

A peer benchmarking was carried out across a wide range of inputs and where needed revisions were made.

### **3.7. Nature of the AQR and ST**

The AQR is a prudential rather than an accounting exercise, therefore the AQR results shall not be used to conclude on the consistency of application of accounting standards. A supervisory decision was taken to request that banks reflect in their 31 December 2016 financial statements AQR-related adjustments. The assessment of the accounting impact of these adjustments shall take into consideration events after 31 December 2015, following an audit compliant with IFRS accounting principles.

The prudential nature of the AQR can lead to cases where more than one approach can be deemed consistent with accounting principles. The stress test incorporates all prudential adjustments, including but not limited to the use of a conservative fallback assumption in cases where the quality of data was assessed to be insufficient. These adjustments in their entirety were used as input data in the stress test.

## 4. Outcome Summary

### 4.1. Asset Quality Review

Capital ratios of all individual banks remain above the minimum regulatory requirement following the results of the AQR.

The AQR resulted in aggregate adjustments of BGN 665 million, or 1.3% of risk-weighted assets (RWA) and 0.8% of total assets, to be reflected in the banks' financial statements as of 31 December 2016. The assessment of the accounting impact of these adjustments shall take into consideration events after 31 December 2015, following an audit carried out in compliance with IFRS accounting principles.

The AQR aggregate adjustments consisted of:

- BGN 474.9 million corporate adjustments stemming from 397 cases or BGN 3.7 billion of performing assets (7.14% of RWA) reclassified to non-performing exposures (NPEs);
- BGN 92.6 million related to the banks' residential real estate (RRE) portfolios;
- BGN 56.5 million in non-retail and other retail portfolio segments in cases where banks do not implement an incurred but not reported (IBNR) and collective provisioning models; and
- BGN 41.2 million from valuation of held assets (HA)

### 4.2. Stress Test

Banks' capital positions remain strong, indicating the resilience of the banking system to absorb shocks in adverse market conditions.

The results reflect the conservatism of the static balance sheet assumption under both scenarios.

Under the baseline scenario, the aggregate CET1 ratio of the banks improves by 3.2 pps from the AQR-adjusted CET1, with twelve banks projected to strengthen their capital base and ten reporting a decline in CET1 ratio at the end of the projection horizon.

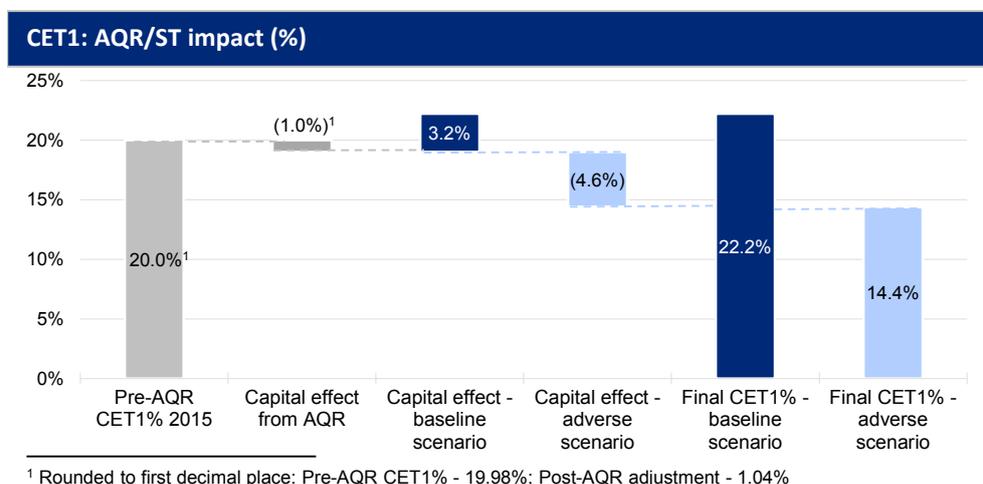
The adverse scenario results in a CET1 ratio slightly improve their decline of 4.6 pps. Three banks capital position and nineteen banks are projected to post a decline of CET1 ratio in 2018 between 19.9 pps and 0.7 pps from the AQR-adjusted CET1.

The results from the stress test should be interpreted on an individual bank level. The stress test outcome indicated that banks are well-capitalized to absorb losses from hypothetical adverse macroeconomic and financial shocks.

Given the dispersion of individual results, the supervisory dialogue will take into account the individual circumstances and will form the basis for individual discussions with the banks to assess the robustness and closely monitor the imple-

mentation of their forward-looking capital-planning processes in the context of banks' unique risks.

**Graph 1**



The aggregate outcome of the AQR and ST in the baseline scenario is an 8.1% increase of total pre-AQR CET1 capital to BGN 10.7 billion at the end of the projection horizon. The CET1 capital ratio improves by 2.2 pps to 22.2% at the end of 2018, further driven by a decrease in RWA of BGN 1.4 billion.

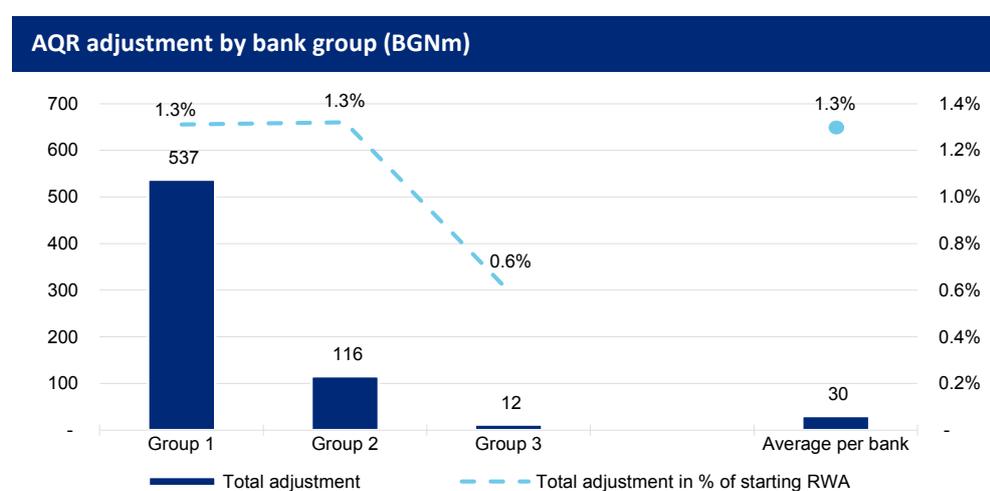
The aggregate outcome of the AQR and ST in the adverse scenario is a 28.4% decrease of total pre-AQR CET1 capital to BGN 7.1 billion at the end of the projection horizon. Taking into account the decrease in RWA, the CET1 capital ratio declines by 5.6 pps to 14.4%, indicating the resilience of the Bulgarian banking sector to adverse macroeconomic developments.

## 5. AQR Outcomes

The AQR included performing a detailed asset-level assessment of the portfolios under review, in line with current regulation set out in CRR/CRD IV capital rules. In some areas, the BNB’s methodology involved additional prudential prescription to accounting concepts in order to achieve consistency and adequate conservatism.

### 5.1. Total Adjustment and Capital Impact

Graph 2

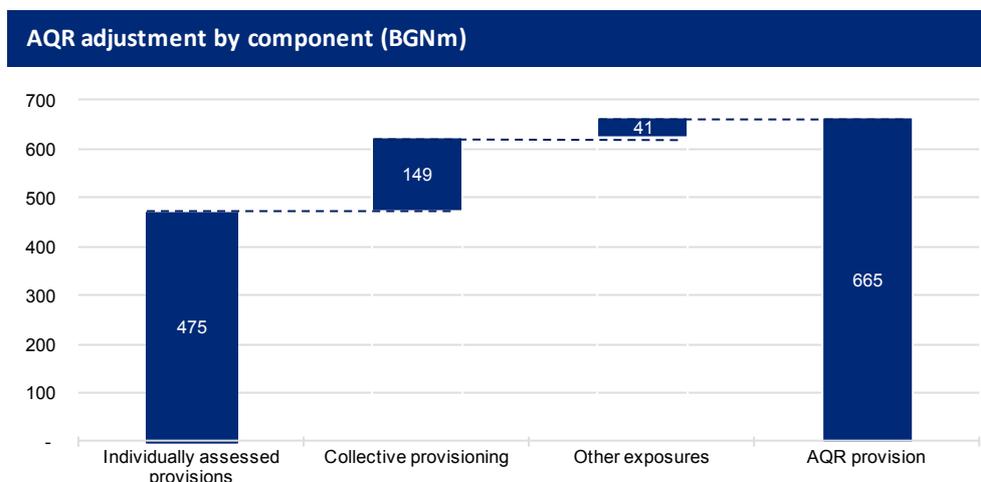


The total adjustment to the carrying amount of loan portfolios and value of other financial instruments and held assets is BGN 665 million.

AQR adjustments are disaggregated into its three major components:

- Additional provisions resulting from the non-performing non-retail debtors from the risk-based sample that were individually assessed.
- Additional provisions identified through the collective provisioning assessment of all performing exposures and non-performing retail exposures.
- Additional adjustments of CET1 capital through the review of valuations of held assets and financial instruments, different from loans and advances.

Graph 3



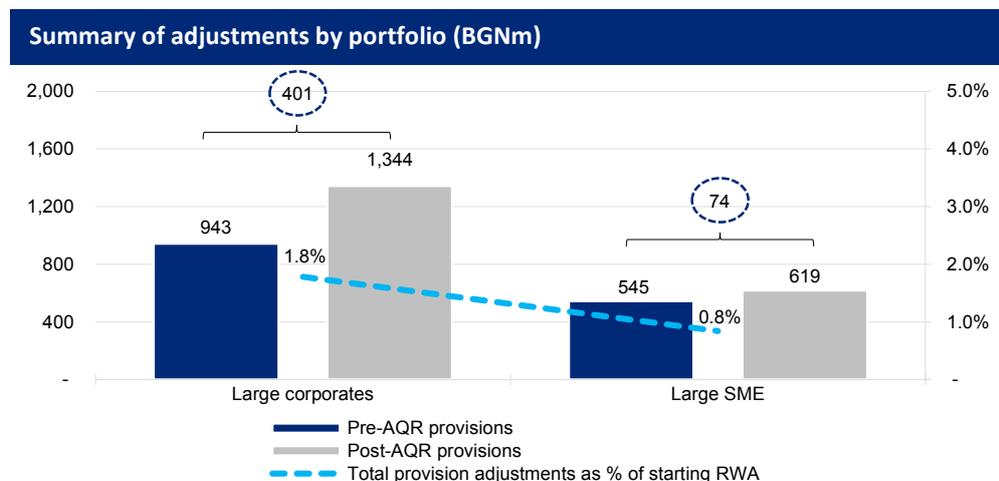
The credit file review adjustment to provisions for non-performing debtors was assessed under two approaches: going concern where operating cash flows were used to assess a prudent net present value (NPV) of future cash flows; and gone concern, which relies on a final sale value of collateral exposures.

The gone concern approach represents a view that the prudent provision is based on the realizable collateral values, but it may be that the bank's management continues to believe that better returns are available through restructuring and subsequent sale of the business or curing of the loan. The percentage of gone concern debtors should not therefore be seen as an estimate of the percentage of companies to be liquidated – but the percentage of borrowers who should be provisioned down to a level based on the available collateral.

## 5.2. Individually Assessed Provisions

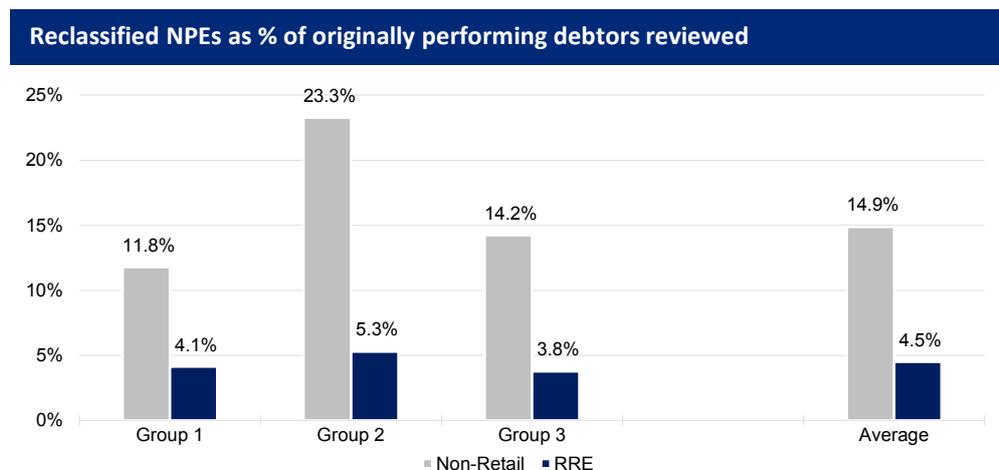
Additional individual provisions were identified based on individual assessment of non-retail debtors within the credit file review and the collateral valuation, as well as the subsequent projection of findings. The credit file review assessed the chosen samples of non-retail debtors in terms of the performing classification status and the need for additional provisions. Residential Real Estate (RRE) facilities were assessed for their performing classification status only as an input to collective provisioning.

Graph 4



Over 3,400 credit files were reviewed during the AQR, equivalent to BGN 21.6 billion or 75% of the banks' corporate and large SME loan book. The overall result of the credit file review was an increase in individual provisions in the non-retail sector from BGN 1.5 billion to BGN 2.0 billion.

Graph 5



The average proportion of non-retail reclassified debtors for the banking sector is 14.9%. For residential real estate (RRE), the proportion of reclassified debtors in the sample is 4.5%.

**Table 1**

<b>Distribution of impairment triggers for non-retail reclassified NPEs</b>		
<b>Trigger</b>	<b>Times hit</b>	<b>% of reclassified debtors</b>
Debt service coverage ratio	270	68%
Forbearance	160	40%
Change in EBITDA	148	37%
Impaired connected party	87	22%

A review of the impairment triggers hit for reclassified NPEs shows that for non-retail ones the most common triggers were debt service coverage ratio (hit in 68% of reclassified cases), forbore NPEs (hit in 40% of reclassified cases) and change in EBITDA (hit in 37% of reclassified cases).

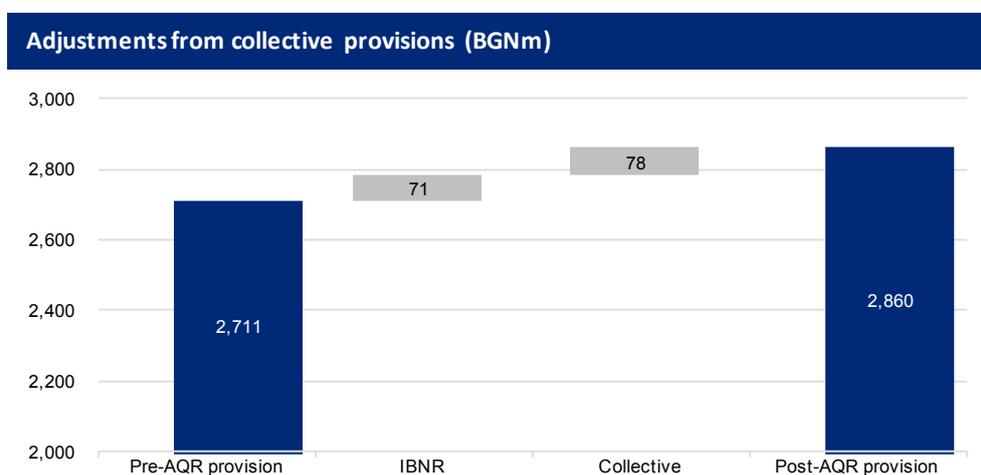
Within the non-retail reclassified debtors, 79% of the debtors were treated under the gone concern approach and 21% were assessed as going concern.

In the process of CFR individual exposures were reviewed against the regulatory constraints on large and connected exposures and no breaches were reported.

All identified exposures to bank related parties were also subject to individual review during the CFR and no major deviations from the applicable regulatory rules and limitations were identified by the AQR providers.

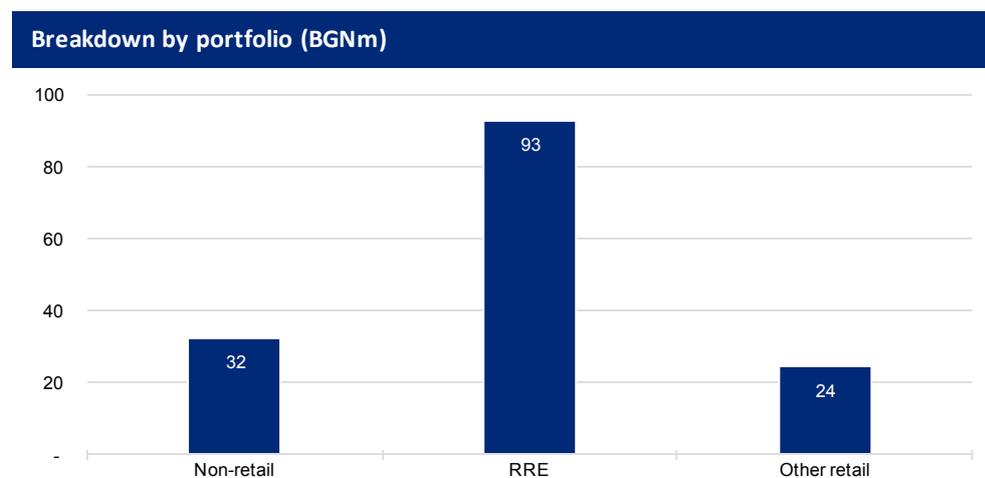
### 5.3. Collectively Assessed Provisions

**Graph 6**



Across all banks and portfolios, the collective provisioning analysis identified additional provisions of BGN 149 million, BGN 78 million of which represent additional specific provisions for retail debtors and BGN 71 million represent additional IBNR. In relative terms, across the banks, this translates into an increase in IBNR of circa 25% and an increase in specific provisions of circa 3%.

Graph 7



The AQR led to an aggregated increase in IBNR of BGN 71 million. The majority of the additional IBNR stems from non-retail portfolio with 45%, followed by RRE with 44% and other retail with 11%.

Specific provisions account for a significant part of banks' collectively assessed provisions. The majority of these additional provisions stemmed from RRE portfolio with 79%, followed by other retail with 21%.

#### 5.4. Review of Other Exposures

Banks whose carrying amount of foreclosed assets and investment property (held assets) was above 1% of total assets as at 31 December 2015 were in scope for review of valuation.

Valuation reviews were performed on a sample of held assets of each bank in scope. This sample consisted of respective bank's top 10 held assets and, if not part of top 10, the largest held asset (by carrying amount) of each of the categories:

- residential property;
- commercial, income-producing;
- commercial, in development;
- land.

A licensed independent appraiser revalued each asset in a sample. The aggregate effect of these revaluations was a decrease in the carrying amount of held assets in the banking system by BGN 41.2 million.

### **5.5. Follow-up Measures**

Based on the results of the AQR for all banks the necessary immediate actions were identified. Depending on the banks' specific results, these actions vary from recommendations to improve certain policies, procedures and operational rules, to requirements to take specific actions to reduce RWA, and implement capital plans to rebuild buffers to their appropriate level. In defining the necessary actions the results achieved for the first half of the year were taken into account in terms of profit and impairments already reflected on the financial statements of the banks. The actions related to the improvements of policies, procedures and operational rules are required to take place by 31 December 2016. The actions leading to a reduction of RWA and the implementation of capital plans are required to take place by 30 June 2017.

When specific actions on reductions of RWA and capital plans are required as a follow-up of the AQR, these banks will be defined as subject to intensive supervision according Article 80a of the Law on Credit Institutions.

## 6. Stress Test

### 6.1. Overview

The 2016 stress test is an analytical supervisory assessment, designed to evaluate the capacity of the banking system to absorb unexpected losses amid prolonged periods of adverse economic activity. The BNB evaluates the soundness of banks' capital-planning processes that account for specific risks.

The stress test does not provide a pass/fail threshold. It serves to inform the BNB and the public of how banks' capital adequacy might change under a hypothetical set of economic conditions. The stress test is designed to ensure prudent assessment of the capital adequacy and support the ongoing strengthening of the banks' balance sheets.

The stress test incorporated all prudential findings from the AQR as a starting point. The guidelines were based on the 2016 EBA EU-wide stress test methodology, adapted to reflect the characteristics of financial intermediation in Bulgaria and the domestic economic environment.

The guidelines imposed a number of restrictions on the banks, among which the static balance sheet approach. This approach additionally worsens the projected stress test outcomes as it assumes that banks do not undertake a number of actions to optimize their activities that they would normally implement under adverse economic developments. Such actions may include reduction of administrative expenses; restructuring of the business model; sale or reallocation of assets and securities; support based on different types of eligible capital instruments as an early reaction of symptoms of treats for the financial stability of the institutions. Under the static balance sheet assumption, no credit growth is allowed and the amount of gross loans remains constant – the increase of non-working exposures decreases the amount of working exposures. In addition, no recognition of interest income from non-working loans is allowed in the adverse scenario.

### 6.2. Join-up of AQR Output Data into Stress Test Input

The key objective of the join-up computational process summarized below was to adjust the starting point values, which form the basis for conducting the stress test.

The adjustment procedures covered the following areas:

- alignment of the AQR portfolio segmentation with the stress test asset segmentation;
- adjustments to starting balances on the basis of the AQR findings;
- adjustments to the point-in-time risk parameters, reflecting all prudential AQR findings;
- adjustments to individual banks' CET1 ratios and risk-weighted assets (RWA).

### 6.3. Methodology

The stress test was carried out based on predefined by the BNB stress test guidelines<sup>20</sup>, in line with the 2016 EBA EU-wide stress test methodology. These guidelines were restrictive in nature but ensure appropriate level of conservatism, consistency and comparability.

The stress test was performed on an unconsolidated level of the financial statements of the banks, and followed a constrained bottom-up approach. Banks were required to stress test credit risk under the baseline and credit risk, market risk, interest rate risk (related to increase of the funding costs) under the adverse scenario.

### 6.4. Macroeconomic Scenarios<sup>21</sup>

#### 6.4.1. Baseline Macroeconomic Scenario

The potential macroeconomic effects on the quality of banks' loan portfolios were assessed by a model, capturing the relation between the probability of default (PD) of banks' debtors and four main macroeconomic indicators – real gross domestic product (GDP) growth, inflation (measured by the harmonized index of consumer prices (HICP)), unemployment rate, residential property prices.

The baseline scenario corresponds to the BNB macroeconomic forecast prepared as at 15 March 2016<sup>22</sup>. The forecast takes into account the latest available data of the economic developments in Bulgaria as well as the projections of the ECB, the IMF and the EC regarding the dynamics of the global economy and international prices.

#### 6.4.2. Adverse Macroeconomic Scenario

The adverse macroeconomic scenario was based on the identification of two main sources of risks related to the macroeconomic environment that might affect the quality of the loan portfolio of the banking system in extreme situations:

- unfavorable external environment; and
- subdued domestic economic activity.

This is a hypothetical but plausible scenario, under which the dynamics of macroeconomic indicators are assessed under the assumption of a series of simultaneous adverse shocks. The magnitude of the shocks is estimated from the volatility of the selected quarterly time series data over the period 2000–2015, capturing their possible development based on historical dynamics.

The baseline and adverse scenario assumptions are summarized in the table and graph below:

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<sup>20</sup> [http://www.bnb.bg/bnbweb/groups/public/documents/bnb\\_pressrelease/pr\\_20160428\\_1\\_a1\\_en.pdf](http://www.bnb.bg/bnbweb/groups/public/documents/bnb_pressrelease/pr_20160428_1_a1_en.pdf)

<sup>21</sup> [http://www.bnb.bg/bnbweb/groups/public/documents/bnb\\_pressrelease/pr\\_20160428\\_1\\_a2\\_en.pdf](http://www.bnb.bg/bnbweb/groups/public/documents/bnb_pressrelease/pr_20160428_1_a2_en.pdf)

<sup>22</sup> [http://www.bnb.bg/bnbweb/groups/public/documents/bnb\\_publication/pub\\_ec\\_r\\_2015\\_04\\_en.pdf](http://www.bnb.bg/bnbweb/groups/public/documents/bnb_publication/pub_ec_r_2015_04_en.pdf)

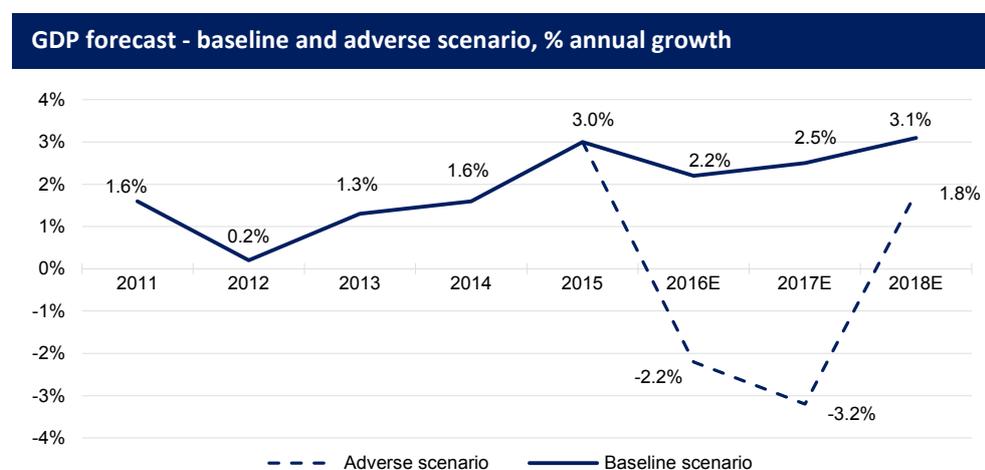
**Table 2**

Macroeconomic Assumptions												
Indicator	Baseline scenario <sup>1</sup>			Adverse scenario			Deviation in adverse scenario (pps) <sup>2</sup>			Cumulative deviation in adverse scenario (pps)		
	2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018
HICP inflation, y/y %	(0.8)	1.1	1.6	(2.6)	(0.9)	0.5	(1.8)	(2.0)	(1.1)	(1.8)	(3.8)	(4.8)
Real GDP growth, y/y %	2.2	2.5	3.1	(2.2)	(3.2)	1.8	(4.4)	(5.7)	(1.3)	(4.4)	(9.6)	(10.7)
Residential property prices, y/y %	1.2	1.2	2.5	(9.3)	(0.5)	0.3	(10.5)	(1.6)	(2.2)	(10.5)	(11.8)	(13.7)
Unemployment rate, %	8.0	7.5	7.0	8.4	9.3	9.6	0.5	1.9	2.6			

1 The baseline scenario is the BNB macroeconomic forecast as of 15 March 2016.

2 The deviation in adverse scenario represents the difference between the baseline scenario and the adverse scenario, measured in pps for the respective year.

**Graph 8**



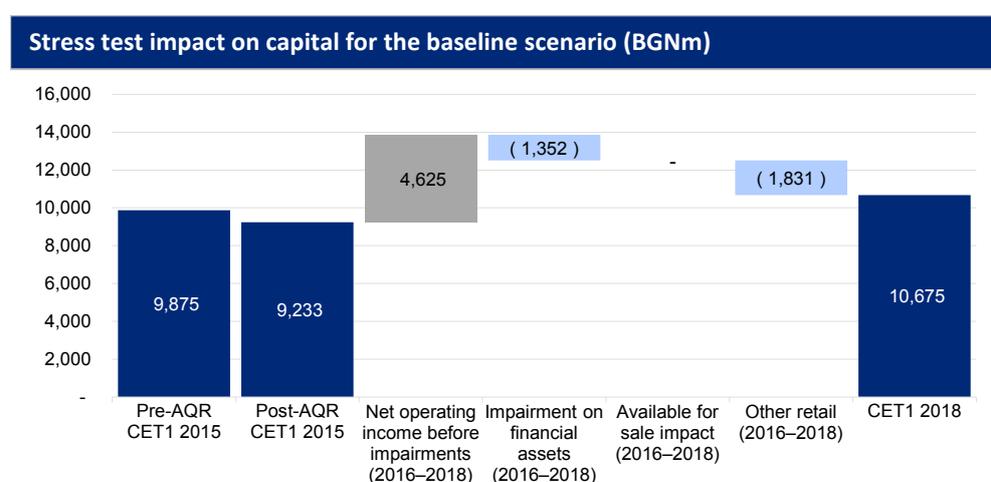
## 7. Stress Test Outcomes

This section describes projections of capital positions, RWAs, and income statement items for the banks under the baseline and adverse scenarios. Presented are the aggregate results from the exercise as well as results on individual bank level.

The overall outcome from the stress test indicates individual banks' resilience to hypothetical adverse macroeconomic and financial developments.

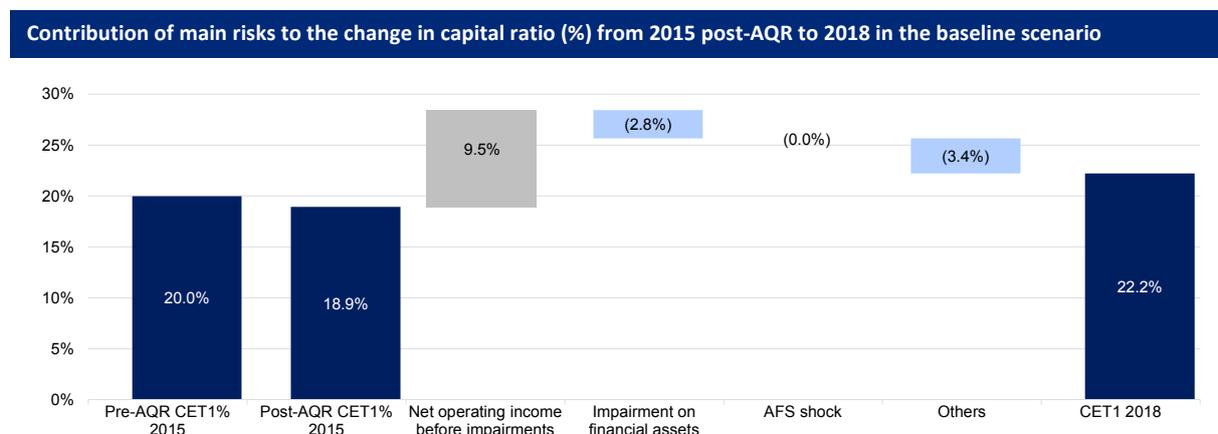
### 7.1. Baseline Scenario

Graph 9



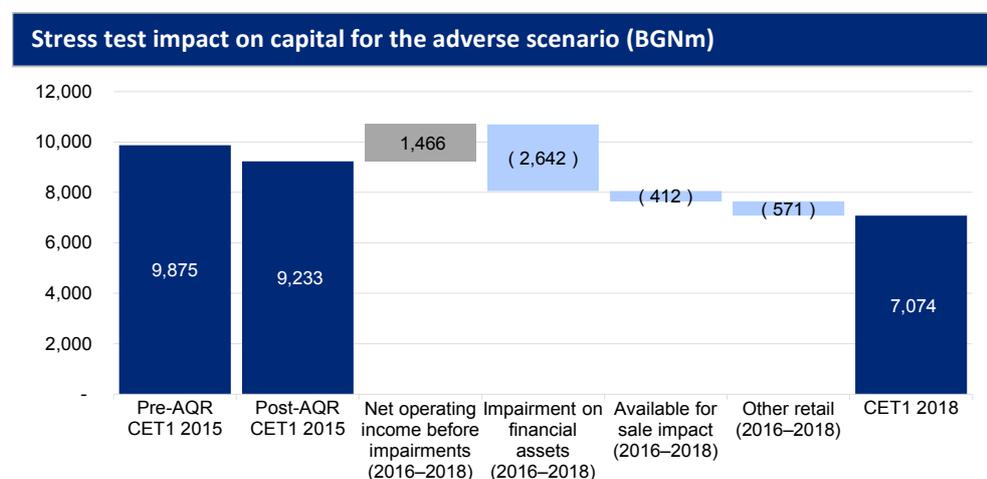
CET1 capital increases by BGN 1.4 billion, representing 15.6% of total post-AQR CET1 capital at 31 December 2015. The increase is driven by improved financial performance and partly offset by impairment on financial and non-financial assets as well as distribution of dividends.

Graph 10



## 7.2. Adverse Scenario

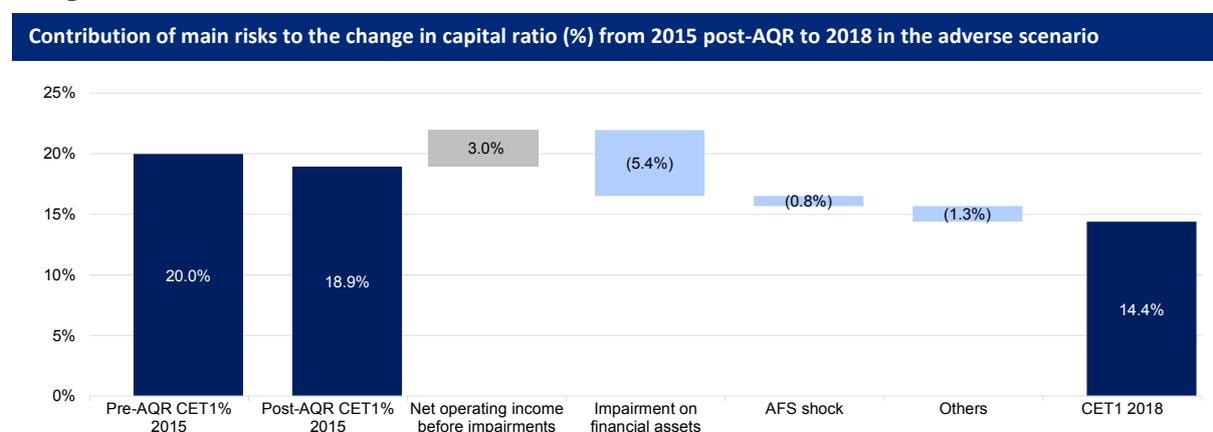
Graph 11



The projected decline in the CET1 ratio results from capital decrease, whereas RWAs are estimated to increase but remain close to 31 December 2015 levels. The falling capital adequacy ratio stems mainly from losses across loan portfolios. The stress test projects that the banks would experience an aggregate net loss of BGN 1.4 billion in 2016–2018 under the adverse scenario. The drivers of CET1 adjustment during 2016–2018 include:

- BGN 2.6 billion (-5.4 pps impact on capital) impairment of financial assets due to credit risk impact;
- BGN 412 million (-0.8 pps) of revaluation of AFS securities due to market risk;
- other adjustments of -1.3 pps (*e.g.* impairments of non-financial assets; changes in RWA; deductions in capital from IRB banks); and
- BGN 1.5 billion (+3 pps) positive contribution from net operating income before impairments, mostly from net interest income.

Graph 12



From a starting point of 18.9% CET1, the stress test demonstrated the resilience of the Bulgarian banking sector to an adverse scenario with an impact of 4.6 pps CET1. The changes in the CET1 ratios across banks fall in the range of -19.9 pps to +1.6 pps.

The assumed credit shock triggers impairment on financial assets not measured at fair value across banks, varying from -2.0 pps to -9.4 pps due to the specifics of the respective credit portfolios. The credit shock is calibrated based on loss rate estimated with the projections of two risk parameters: PD and LGD, taking into account prudential AQR-related findings. The banks record different loan loss rates, reflecting the varying portfolio risk characteristics across banks as the projected loan loss rates vary across loan types. Loss rates doubled for credits to non-financial corporations, while for households the shock was more than 50%.

Under the adverse scenario, the gross working loans to the private sector decline by 17% to BGN 29 billion during the stress test horizon. Loans to corporates account for 64% of the decline, affected by the conservative assumption of 5.7 pps deterioration in real GDP growth.

Accumulated provisions are estimated to increase by 50%, to BGN 8.2 billion as at 31 December 2018. The coverage of non-working loans improves by 1.8 pps to 39.8% as at 31 December 2018.

Net interest income drops by 52% from BGN 2.7 billion in 2015 to 1.3 billion in 2018 and the decline rate across banks falls in the range of 21% to 78%. The static balance sheet assumption holds fixed administrative and depreciation expenses, which results in a hypothetical cost-to-income ratio of 78% in 2018 compared to 47% in 2015.

### **7.3. Follow-up Measures**

The stress test results will be incorporated in the annual Supervisory Review and Evaluation Process (SREP) according to the provisions of Article 79c of the Law on Credit Institutions. In this process, a supervisory assessment will be derived on the adequacy of the assessment of the risks to which a bank is exposed, as well as the appropriateness of the strategies, rules, procedures and mechanisms the bank applies, and the available capital and liquid buffers to manage the risks. Based on this assessment changes in capital plans might be required, including restrictions on dividends, or recommendations for additional capital buffers might be defined. The implementation of revised capital plans will start from 1 January 2017, and in case of conclusions that profits and dividend restrictions are not sufficient to achieve the recommended capital buffers in the near term, additional measures will be implemented by 31 December 2017. If necessary, changes in already developed banks' business plans will be required.

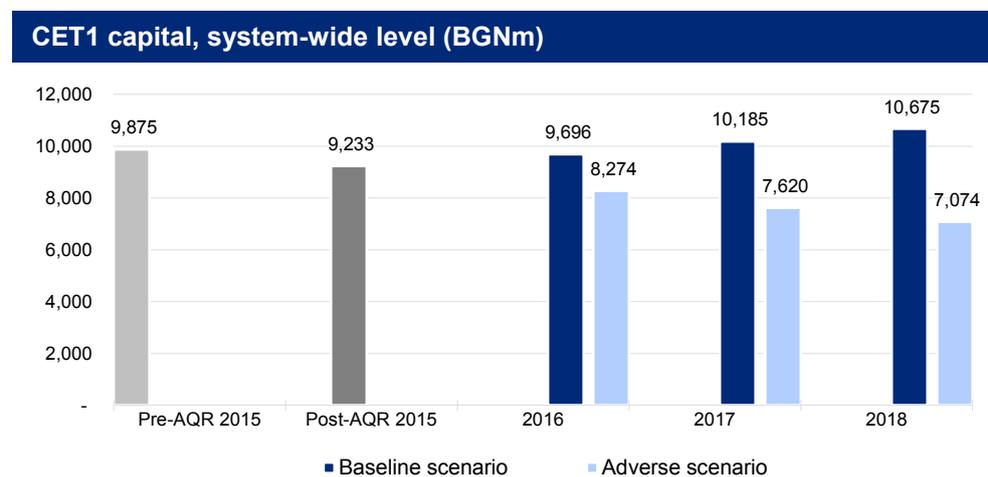
In cases when the specific actions on reductions of RWA and the implementation of capital plans are required as a follow-up of the AQR, intensive supervision information according Article 80a of the Law on Credit Institutions will be incorporated in addition to the stress test results in the SREP review and in the consequent definition of required and recommended measures.

The Supervisory Review and Evaluation Process in 2017 will incorporate not only the results of the measures recommended or required as a follow-up of the AQR/ST but also the preparations of the banking system for implementation of IFRS 9 from 1 January 2018 and preliminary estimates of its impact.

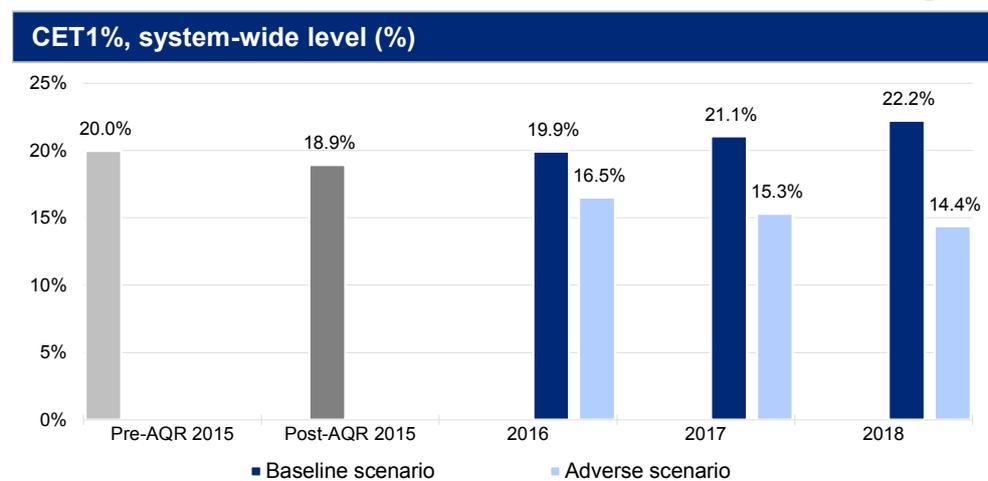
## 8. Appendices

### 8.1. AQR/ST Results on Bank System Level

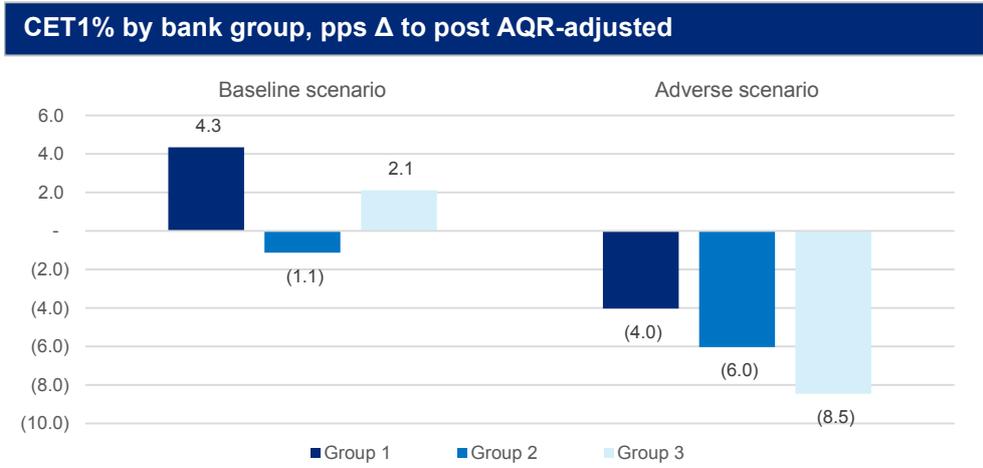
Graph 13



Graph 14



Graph 15



## 8.2. AQR/ST Results on Individual Level

Table 3

CET1 capital %, individual level		
Bank	CET1% 2015 <sup>1</sup>	
	Pre-AQR	Post-AQR
UniCredit Bulbank AD	24.4%	24.3%
DSK Bank EAD	17.2%	16.8%
First Investment Bank AD	11.5%	5.2%
United Bulgarian Bank AD	26.1%	25.6%
Raiffeisenbank (Bulgaria) EAD	25.4%	25.4%
Eurobank Bulgaria AD	22.2%	21.0%
Societe Generale Expressbank AD	14.0%	13.9%
Central Cooperative Bank AD	12.7%	12.8%
Piraeus Bank Bulgaria AD	23.2%	22.7%
CIBANK EAD	17.5%	17.5%
Allianz Bank Bulgaria AD	16.9%	16.9%
Investbank AD	14.6%	6.3%
Bulgarian Development Bank AD	53.2%	53.9%
ProCredit Bank (Bulgaria) AD	17.1%	17.1%
Municipal Bank AD	16.1%	16.0%
International Asset Bank AD	14.8%	14.5%
Bulgarian-American Credit Bank AD	21.4%	20.9%
D Commerce Bank AD	20.1%	19.9%
TBI Bank EAD	20.5%	20.5%
Tokuda Bank AD	20.8%	19.4%
Victoria Commercial Bank EAD <sup>2</sup>	7.4%	24.5%
Texim Bank AD	19.6%	19.6%

<sup>1</sup> CET1% are presented on individual bank level. Required CET1% ratio under CRR minimum capital is 4.5%

<sup>2</sup> Results for Victoria reflect capital increase as of Q1'16 of BGN 30 million.

Table 4

Deviation from AQR adjusted CET1% (pps) <sup>1</sup>						
Bank	Baseline ( $\Delta$ pps)			Adverse ( $\Delta$ pps)		
	2016	2017	2018	2016	2017	2018
UniCredit Bulbank AD	1.9	4.5	7.3	-5.4	-6.2	-6.0
DSK Bank EAD	-0.3	-0.3	-0.1	-1.3	-1.3	-1.4
First Investment Bank AD	1.5	3.1	4.7	-4.3	-8.3	-12.1
United Bulgarian Bank AD	1.1	4.8	8.4	-0.1	0.1	0.2
Raiffeisenbank (Bulgaria) EAD	1.5	0.7	-0.3	-2.3	-3.1	-3.0
Eurobank Bulgaria AD	1.8	3.7	6.1	-0.5	-0.8	-1.3
Societe Generale Expressbank AD	2.2	4.1	5.9	0.1	0.3	0.4
Central Cooperative Bank AD	0.3	0.7	1.1	-2.4	-4.5	-6.3
Piraeus Bank Bulgaria AD	-1.2	-2.3	-3.5	-3.2	-6.7	-9.9
CIBANK EAD	1.1	1.9	2.7	-1.7	-2.4	-2.6
Allianz Bank Bulgaria AD	-0.5	0.1	-0.8	-1.2	-1.4	-1.7
Investbank AD	-2.5	-5.2	-7.9	-4.9	-9.8	-14.0
Bulgarian Development Bank AD	0.7	1.5	2.1	-1.3	-0.7	-0.7
ProCredit Bank (Bulgaria) AD	3.1	3.0	2.8	-0.3	-0.5	-0.7
Municipal Bank AD	1.2	1.0	1.0	-3.6	-6.8	-9.5
International Asset Bank AD	-1.3	-3.4	-5.5	-3.5	-7.4	-10.8
Bulgarian-American Credit Bank AD	0.6	-0.3	-1.4	-3.0	-6.2	-8.9
D Commerce Bank AD	-0.6	-0.5	0.5	-3.9	-5.0	-6.2
TBI Bank EAD	8.7	15.8	23.1	0.8	1.3	1.6
Tokuda Bank AD	-0.3	-0.5	-0.6	-7.3	-13.2	-18.5
Victoria Commercial Bank EAD <sup>2</sup>	-5.9	-11.9	-18.0	-6.8	-13.4	-19.9
Texim Bank AD	-1.5	-3.0	-4.5	-5.3	-9.1	-12.8

<sup>1</sup> CET1% are presented on individual bank level.

<sup>2</sup> Results for Victoria reflect capital increase as of Q1'16 of BGN 30 million.

<sup>3</sup> The cases of positive deviation under the adverse scenario reflect the static balance sheet hypothesis and net interest income above the impairment costs.

**Table 5**

**Assessment of available capital buffers as per Article 17 of Ordinance No. 8 and the need for follow-up plans to restore required minimum buffers (BGN thousand)<sup>1</sup>**

Bank	Excess of CET1 after		Net adjustments	Additional capital buffers <sup>4</sup>	Excess of available capital	Necessary capital build-up
	Excess of CET1 <sup>1</sup>	T1/T2 adjustments				
	1	2	3	4	5	6
1 UniCredit Bulbank AD	1 803 437	1 471 397	-	558 638	912 760	-
2 DSK Bank EAD	821 540	607 810	-	360 096	247 713	-
3 First Investment Bank AD <sup>2</sup>	430 823	427 391	283 513	349 579	-	205 701
4 United Bulgarian Bank AD	951 900	885 853	-	242 170	643 683	-
5 Raiffeisenbank (Bulgaria) EAD	684 518	636 019	-	177 828	458 191	-
6 Eurobank Bulgaria AD	615 287	563 070	-	191 463	371 607	-
7 Societe Generale Expressbank AD	327 423	217 711	-	209 285	8 426	-
8 Central Cooperative Bank AD	215 351	169 821	-	166 942	2 879	-
9 Piraeus Bank Bulgaria AD	315 301	286 434	4 784	105 846	175 804	-
10 Cibank EAD	189 037	138 206	-	79 877	58 330	-
11 AllianzBank Bulgaria AD	131 183	94 021	-	58 397	35 624	-
12 Investbank AD <sup>2</sup>	122 141	122 141	89 164	66 252	-	33 275
13 Bulgarian Development Bank AD	623 991	581 767	-	66 352	515 414	-
14 ProCredit Bank (Bulgaria) AD	107 517	77 077	-	47 834	29 243	-
15 Municipal Bank AD	54 732	47 631	-	26 036	21 595	-
16 International Asset Bank AD	59 136	58 582	-	31 459	27 122	-
17 Bulgarian-American Credit Bank AD	121 413	96 326	-	39 422	56 904	-
18 D Commerce Bank AD	70 001	54 269	-	24 722	29 548	-
19 TBI Bank EAD	58 473	45 224	-	21 661	23 563	-
20 Tokuda Bank AD	33 520	26 319	1 698	11 315	13 306	-
21 Victoria Commercial Bank EAD <sup>3</sup>	3 689	3 689	-	6 806	-	3 117
22 Texim Bank AD	18 984	17 474	-	7 192	10 282	-

**Footnotes**

- 1 Under Regulation (EU) No. 575/2013. The figures presented in the table reflect the information from the individual banks' public disclosure forms.
- 2 Banks which need to build up capital after net AQR effect have submitted capital conservation plans according to Article 17 from BNB Ordinance No. 8.
- 3 Victoria Commercial Bank EAD have restored coverage of additional buffers following capital increase of BGN30 million in February 2016.
- 4 A 2.5% capital conservation buffer and 3% systemic risk buffer.

**Notes to regulatory requirements**

- Column 1 figures represent the excess of banks' core capital (common shares and retained earnings) above the 4.5% minimum.
- Column 2 figures reflect adjustments to cover other capital requirements stemming from the banks' capital structure and the usage of other eligible instruments.
- Column 3 figures represent the net amount of the assessed AQR adjustments and the accumulated profit and impairment charges as per banks' financial statements as at 30 June 2016.
- Column 4 figures represent national requirements for additional capital buffers.
- Column 5 figures represent available capital in excess of the requirements.
- Column 6 figures represent measures to restore coverage of the buffers.