EUROBANK ERGASIAS S.A.

CONSOLIDATED PILLAR 3 REPORT

FOR THE YEAR ENDED

31 DECEMBER 2016

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1. **Introduction – General Information** **4**
1.1 Regulatory framework 4
1.2 Implementation of Capital Adequacy framework at Eurobank Group 8
1.3 Scope of Pillar 3 9
1.4 Regulatory versus accounting consolidation 9
1.5 Impediments to the prompt transfer of capital 11
1.6 Compliance with Basel III Pillar 3 disclosures 11
2. **Capital Management** **12**
2.1 Regulatory capital – definition 12
2.2 Preferred securities 13
2.3 Greek sovereign exposure 13
2.4. Restructuring plan 13
2.5 Reconciliation of Balance Sheets - financial accounting to regulatory scope of consolidation 14
2.6 Regulatory capital 15
2.7 Supervisory Review and Evaluation Process (SREP) capital requirements 16
2.8 Capital requirement under Pillar 1 17
2.9 Internal Capital Adequacy Assessment Process (ICAAP) 18
2.10 Internal Liquidity Adequacy Assessment Process (ILAAP) 19
3. **Risk management overview** **20**
3.1 Risk management objectives and policies 20
3.2 Risk appetite framework 21
3.3 Types of risk 21
3.4 Organization 22
4. **Credit Risk** **23**
4.1 Definition of credit risk 23
4.2 Credit risk organization and processes 23
4.3 Credit risk reporting 28
4.4 Credit exposures 30
4.5 Past due and impaired loans 34
4.6 Impairment losses on loans and advances 37

4.7 Standardised approach.......38

4.8 Internal Ratings Based (IRB) approach.......41

4.9 Credit risk mitigation.......49

4.10 Asset Backed Securities.......53

5. Market Risk.......55

5.1 Definition and policies.......55

5.2 Internal model - Value at Risk (VaR) model & Credit Risk (IRC).......55

5.3 Standardised approach for market risk.......58

5.4 Equity exposures not included in the trading book.......58

5.5 Interest rate risk not included in the trading book.......59

5.6 Counterparty risk.......61

6. Operational Risk.......63

6.1 Governance.......63

6.2 Operational risk management framework.......63

6.3 Operational risk capital requirements calculation.......65

7. Asset Encumbrance.......66

7.1 Information on importance of encumbrance.......66

7.2 Assets.......67

7.3 Collateral received.......67

7.4 Encumbered assets/collateral received and associated liabilities.......67

8. Leverage Ratio.......68

9. Liquidity Risk.......71

Appendix 1: Transitional own funds disclosure.......73

Appendix 2: Capital instruments' main features disclosure.......75

1. Introduction – General Information

Eurobank Ergasias S.A. (the "Bank" or the "Group") is a credit institution based in Greece and is supervised on a stand alone and consolidated basis by the European Central Bank (ECB) and the Bank of Greece (BoG). The Group is one of the four systemic banks in Greece, operating in key banking product and service markets. The Group offers a wide range of financial services to the retail and corporate clients. It has a strategic focus in Greece in fee-generating activities, such as asset management, private banking, equity brokerage, treasury sales, investment banking, leasing, factoring, real estate and trade finance. The Group is also among the leading providers of banking services and credit to SMEs, small businesses and professionals, large corporates and households.

Eurobank has an international presence in six countries outside of Greece, with operations in Romania, Bulgaria, Serbia, Cyprus, Luxembourg and the United Kingdom.

In 2013, the Group expanded its operations through the acquisitions of New TT Hellenic Postbank S.A. (New TT HPB) and New Proton Bank S.A. (New Proton Bank), which occurred in the context of the consolidation of the Greek banking sector. The Group acquired full ownership of New TT HPB and New Proton Bank on 30 August 2013.

On 1 March 2016 Eurobank's subsidiary in Bulgaria, Eurobank Bulgaria A.D acquired the entirety of the operations of Alpha Bank's Bulgarian Branch. The acquisition of the Branch constitutes a step forward for Eurobank Bulgaria A.D to further strengthen its position in the Bulgarian banking sector.

1.1 Regulatory framework

CRD IV - Basel III framework

In June 2013 the European Parliament and the Council, published the Directive 2013/36/EU (known as CRD IV), effective from 1 January 2014, regarding the access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC. It was subsequently transposed into Greek law by L.4261/2014 "Access to the activity of credit institutions and prudential supervision of credit institutions and investment firms", repealing Law 3601/2007, and other provisions.

In addition, on the same date, the European Parliament and the Council, published the Regulation 2013/575/EU (known as CRR), which lays down uniform rules concerning general prudential requirements that institutions supervised under Directive 2013/36/EU shall comply with in relation to the following items:

- Own funds requirements relating to quantifiable, uniform and standardised elements of credit risk, market risk, operational risk and settlement risk
- Requirements limiting large exposures
- Liquidity requirements relating to quantifiable, uniform and standardised elements of liquidity risk
- Reporting requirements related to above and to leverage;
- Public disclosure requirements.

In June 2014, the European Commission published Regulation (EU) No 680/2014 of 16 April 2014, laying down implementing technical standards with regard to supervisory reporting of institutions according to Regulation (EU) No 575/2013 of the European Parliament and the Council. This Regulation lays down uniform requirements in relation to supervisory reporting to competent authorities for own funds requirements, losses stemming from lending collateralized by immovable property, large exposures, leverage ratio, Liquidity Coverage requirements and Net Stable Funding requirements.

Introduction – General Information

The general Basel III framework is structured around three mutually reinforcing pillars:

- Pillar 1 defines the minimum regulatory capital requirements, based on principles, rules and methods specifying and measuring credit, market and operational risk. These requirements are covered by regulatory own funds, according to the rules and specifications of CRR.
- Pillar 2 addresses the internal processes for assessing overall capital adequacy in relation to risks (Internal Capital Adequacy Assessment Process - ICAAP and Internal Liquidity Assessment Process - ILAAP). Pillar 2 also introduces the Supervisory Review & Evaluation Process (SREP), which assesses the internal capital adequacy of credit institutions.
- Pillar 3 deals with market discipline by developing a set of quantitative and qualitative disclosure requirements, which allow market participants to assess key pieces of information on the scope of application, capital, risk exposures, risk assessment processes and hence the capital adequacy and the internal liquidity adequacy of credit institutions.

According to the new provisions (with gradual implementation until 2019):

- Minimum Common Equity Tier 1 (CET1) ratio will gradually increase to 4.5% from 1 January 2015;
- Minimum Tier 1 ratio will gradually increase to 6% from 1 January 2015;
- Furthermore, banks will be required to gradually create a capital conservation buffer of 2.5% from 1 January 2019 (0.625% on 1 January 2016, 1.25% on 1 January 2017 and 1.875% on 1 January 2018) beyond the existing minimum capital. Conservation buffer is a capital buffer of 2.5% of total risk exposures of a bank that needs to be met with an additional amount of CET1 capital.

As a result the minimum ratios which must be met, including the capital conservation buffer, and which shall apply from 1 January 2019 are:

a) Minimum CET1 capital ratio 7%; and
b) Total capital adequacy ratio 10.5%.

Additional capital buffers that CRD IV introduces are the following:

a) Countercyclical buffer. The purpose of this buffer is to counteract the effects of the economic cycle on banks' lending activity, thus making the supply of credit less volatile and possibly even reduce the probability of credit bubbles or crunches. Credit institutions are required under the CRD IV to build up an additional buffer of 0 - 2.5% of CET1 during periods of excess credit growth, according to national circumstances. According to BoG Executive Committee Acts, issued during 2016, the countercyclical buffer was set at 0%. On 19.12.2016 BoG issued the Executive Committee Act No. 107, where the countercyclical buffer is also set as 0% for the first quarter of 2017.
b) Global systemic institution buffer (G-SIIs). CRD IV includes a mandatory systemic risk buffer of CET1 for banks that are identified by the relevant authority as globally systemically important.
c) Other systemically important institutions buffer. On 25.4.2016, European Banking Authority (EBA) published the first list of Other Systematically Important Institutions (O-SIIs) in the EU. O-SIIs are those institutions which are deemed systematically relevant in addition to G-SIIs, already identified. This list reflects also the additional capital buffers that the relevant authorities have set for the O-SIIs. The identification of institutions as O-SIIs is based on 2015 data and going forward updated lists of O-SIIs will be disclosed on an annual basis, along with the definition of any CET1 capital buffer requirements which may need to be set.

The EBA methodology has been applied to compute the scores for all the institutions operating in Greece using consolidated data. Based on the above scoring system, all Greek O-SIIs are classified in bucket 4 which corresponds to a capital buffer of 1% which will be phased in until 2022. The date of activation was 1 January 2016 and BoG's Executive Committee Act 104/18.11.2016 set the O-SII buffer for Greek Institutions for the year 2017 at 0%.

Single Supervisory Mechanism (SSM)

Pursuant to the proposal of the EU Commission dated 12 September 2012 as regards a Single Supervisory Mechanism (SSM), Council Regulation No 1024/2013 of 15 October 2013 was issued, which conferred specific tasks on the European

Central Bank (ECB) concerning policies relating to the prudential supervision of credit institutions. Furthermore, Regulation No 1022/2013 of the European Parliament and of the Council of 22 October 2013 was also issued, amending Regulation No 1093/2010 establishing the EBA as regards the conferral of specific tasks on the ECB pursuant to Council Regulation No 1024/2013.

As of November 2014, the ECB directly supervises the largest banks, while the national supervisors continue to monitor the remaining banks. The main task of the ECB and the national supervisors, working closely together within an integrated system, is to check that banks comply with the EU banking rules and tackle problems early on.

The SSM is one of the two pillars of the EU banking union, along with the Single Resolution Mechanism.

Single Rulebook

The Single Rulebook is the foundation of the banking union. It aims to provide a single set of harmonized prudential rules which institutions throughout the EU must comply with. These rules, among other things, lay down capital requirements for banks, ensure better protection for depositors, and regulate the prevention and management of bank failures.

Supervisory Review and Evaluation Process (SREP)

Based on Council Regulation 1024/2013, the ECB conducts annually a Supervisory Review and Evaluation Process (SREP), in order to define the prudential requirements of the institutions under its supervision, by defining a total SREP capital requirement.

The key purpose of SREP is to ensure that institutions have adequate arrangements, strategies, processes and mechanisms as well as capital and liquidity to ensure a sound management and coverage of their risks, to which they are or might be exposed, including those revealed by stress testing and risks the institution may pose to the financial system.

The common SREP framework introduced is built around:

a) business model analysis;
b) assessment of internal governance and institution-wide control arrangements;
c) assessment of risks to capital and adequacy of capital to cover these risks; and
d) assessment of risks to liquidity and adequacy of liquidity resources to cover these risks.

The minimum capital adequacy requirements are determined by the ECB following the assessment of the bank's risk profile (through SREP). For 2017, the SREP requirements consist of:

- The minimum required CET1 ratio and the minimum required Total capital adequacy ratio, which in case they are breached, can lead to the trigger of the Maximum Distributable Amount (MDA).
- The Pillar 2 Guidance (P2G), which is an additional capital buffer recommended by the ECB to be kept over and above the minimum required CET1.

Recovery and Resolution of Credit Institutions

On 15 May 2014 the European Parliament and the Council of the European Union adopted the Directive 2014/59 EU establishing a framework for the recovery and resolution of credit institutions and investment firms (the Bank Recovery and Resolution Directive (BRRD)) which entered into force on 2 July 2014. The European Council has recognised that in the Banking Union, bank supervision and resolution need to be exercised uniformly, thus making obvious the need for the establishment of the Single Resolution Mechanism (SRM), a Single Resolution Board (SRB) and a Single Resolution

Fund, (SRF) and in this context, the European Parliament and Council adopted Regulation No 806/2014 (the "SRM Regulation").

The BRRD was transposed into Greek law by virtue of Law 4335/2015, which came into force on 23 July 2015, with the exception of its provisions on the bail-in tool which were initially applicable as at 1 January 2016. Further to the enactment of Law 4340/2015, the bail-in tool came into force as of 1 November 2015, except for the provisions relating to the loss absorption requirements which came into force on 1 January 2016.

The BRRD relies on a network of national authorities and resolution funds to resolve banks. Pursuant to Law 4335/2015, with respect to Greek credit institutions, the BoG has been designated as the national resolution authority and the Resolution Branch of the Hellenic Deposit and Investment Guarantee Fund (HDIGF) as the national resolution fund.

Single Resolution Mechanism

The SRM Regulation builds on the rulebook on bank resolution set out in the BRRD and establishes the SRM, which complements the SSM and centralizes key competences and resources for managing the failure of any bank in the Euro zone and in other Member States participating in the Banking Union. The SRM Regulation also established the SRB, vested with centralized power for the application of the uniform resolution rules and procedures, and the SRF, supporting the SRM. The main objective of the SRM is to ensure that potential future bank failures in the banking union are managed efficiently, with minimal costs to taxpayers and the real economy. The SRB started its work as an independent EU agency on 1 January 2015 and is fully operational since January 2016.

Other Regulatory Developments

European Commission published regulations and set out actions and initiatives so as to reinforce the resilience of the banking system.
The major reforms which took place throughout 2016 were the following:

- Legislative proposal (23.11.2016) for the review of the Capital Requirement Regulation and Directive (CRR/CRD IV) which resulted in the so-called "CRR2CRD V Package";
- Proposal for a Directive of the European Parliament and the Council on amending Directive 2014/59/EU of the European Parliament and of the Council as regards the loss absorbing and recapitalization of credit institutions and investment firms (COM/2016/0852);
- Proposal for a Directive of the European Parliament and the Council on amending Directive 2014/59/EU of the European Parliament and of the Council as regards the ranking of unsecured debt instruments in insolvency hierarchy (COM/2016/0853);
- Proposal for a Regulation of the European Parliament and the Council amending Regulation (EU) No 806/2014 as regards loss-absorbing and Recapitalization Capacity for credit institutions and investment firms;
- Regulation 2016/445 of the ECB on the exercise of options and discretions available in Union law in relation to CRR 575/2013.

The Basel Committee Banking Supervision (BCBS) is currently developing significant revisions to the calculation of credit, and operational risk and is proposing a new 'capital floor' to limit the extent to which a bank's internal models based approaches can drive its calculations below those under the standardised approaches. All these revisions are part of 'finalizing Basel III '.

During 2016, BCBS published the following:

- Reducing variation in credit risk weighted assets (RWAs) - constraints on the use of internal model approaches;
- Standards for Interest rate risk in the trading book;
- Revisions to the Basel III leverage ratio framework - Consultative document;
- Pillar III disclosure requirements - consolidated and enhanced framework - Consultative document;
- Standardised Measurement Approach for Operational Risk - Consultative document.

Following the release by the BCBS of a revised version of the Pillar 3 framework (RPF) in January 2015, the EBA published on 14.12.2016 its own initiative Guidelines to ensure the harmonized and timely implementation of the RPF in the EU. These Guidelines while not changing the requirements of the regulatory disclosures defined in Part Eight of the CRR, provide further guidance and support to institutions in complying with both the CRR and the RPF requirements.

Given the adoption of International Financial Reporting Standard 9 (IFRS 9) which replaces the International Accounting Standard 39 (IAS 39), EBA published its Opinion on 6 March 2017 supporting the change from an incurred loss model under IAS39 to an expected credit losses (ECL) model under IFRS9. EBA supports the view that a phased-in transitional period of four years would be appropriate (80% in 2018, 60% in 2019, 40% in 2020, 20% in 2021 and 0% beyond that), but on the other hand allows the option for institutions to recognize, if they so wish, the full impact of IFRS 9 on own funds on 1 January 2018 (without transitional arrangements).

1.2 Implementation of Capital Adequacy framework at Eurobank Group

1.2.1 Credit risk

Eurobank Group (the "Bank" or the "Group") first applied the Basel II framework under the Standardised approach in January 2007 and included the respective risk asset ratio figures in its published financial statements. Until that date the Group had been applying the Basel I rules.

In June 2008, the Group received the approval of BoG to use the Internal Ratings Based (IRB) approach to calculate the capital requirement for credit risk. Therefore, with effect from 1 January 2008 the Group applies:

- The Foundation IRB approach to calculate risk weighted assets for the corporate loans' portfolio of Eurobank Ergasias S.A. in Greece
- The Advanced IRB for the majority of the retail loans' portfolio of the Bank, i.e. mortgages, small business lending, credit cards and revolving credits in consumer lending.
- From September 2009 the Foundation IRB approach was applied for the corporate loans' portfolio of Eurobank Ergasias Leasing S.A. in Greece.
- From March 2010 the Advanced IRB approach was applied for the Bank's portfolio of personal and car loans.

The implementation of IRB covers 74.0% of the Group's lending portfolio excluding portfolio segments which are immaterial in terms of size and risk profile as well as, permanent exemptions. The Bank is in the process of reviewing the IRB roll out plan taking into account the recently issued draft guidelines, the effect of restructuring plan commitments and its business plan. The updated roll out plan will be subject to ECB approval.

There is a permanent exemption from the IRB approach, up to 10% of risk weighted assets, for which the Standardised approach is applied. In addition to the exemption of up to 10% of risk weighted assets, permanent exemption has been granted for the following exposure classes as prescribed in the CRD:

- exposures to/or guaranteed by central governments and central banks;
- exposures to/or guaranteed by credit and financial institutions; and
- exposures to administrative bodies and non-commercial undertakings.

The Standardised approach is applied for these exposures.

1.2.2 Market risk

The Bank uses its own internal Value at Risk (VaR) model to calculate capital requirements for market risk in its trading book, for the Bank's activities in Greece. The Bank received the official validation of its model for market risk by the BoG in July 2005. The model is subject to periodic review by the regulator.

In 2011, the Bank updated its models and systems in order to fully comply with the BoG Governor's Act 2646/2011 for the trading book capital. The Bank calculates the capital for stressed VaR and IRC (incremental risk capital charge) since 31.12.2011.

For the measurement of market risk exposure and the calculation of capital requirements for the Bank's subsidiaries in Greece and in International operations, the Standardised approach is applied.

Furthermore, the Bank calculates and monitors the market risk of the banking book for its operations in Greece on a daily basis using the internal VaR model. For its operations abroad, Eurobank applies sensitivity analysis, whereas the VaR methodology is applied on a monthly basis.

1.2.3 Operational risk

Capitalizing on the provisions of Regulation (EU) No 575/2013, the Group uses the Standardised Approach to calculate the Pillar 1 regulatory capital requirements for operational risk for its consolidated operations.

1.3 Scope of Pillar 3

The purpose of Pillar 3 report is to provide updated information the Group's risk management practices, risk assessment processes and regulatory capital adequacy ratios.

Pillar 3 disclosures consist of both qualitative and quantitative information and are provided on a consolidated basis. They have been prepared in accordance with Part 8 of the Capital Requirements Regulation within CRD IV (Regulation 2013/575/EU) and according to the regulatory consolidation framework, which is described in the following section.

The information contained in the Pillar 3 Disclosures has been verified by the Audit Committee.

1.4 Regulatory versus accounting consolidation

1.4.1 Accounting consolidation

The accounting consolidation of the Group is based on the International Financial Reporting Standards (IFRS) and more specifically IFRS 10 Consolidated Financial Statements, IAS 28 Investments in Associates and Joint Ventures and IFRS 11 Joint Arrangements.

Subsidiaries are all entities controlled by the Group. The Group controls an entity when it is exposed, or has rights to, variable returns from its involvement with the entity, and has the ability to affect those returns through its power over the entity. The Group consolidates an entity only when all the above three elements of control are present.

Power is considered to exist when the Group’s existing rights give it the current ability to direct the relevant activities of the entity, i.e. the activities that significantly affect the entity’s returns and the Group has the practical ability to exercise those rights. Power over the entity may arise from voting rights granted by equity instruments such as shares or, in other cases, may result from contractual arrangements.

Where voting rights are relevant, the Group is deemed to have control where it holds, directly or indirectly, more than half of the voting rights over an entity, unless there is evidence that another investor has the practical ability to unilaterally direct the relevant activities.

The Group may have power even when it holds less than a majority of the voting rights of the entity through a contractual arrangement with other vote holders, rights arising from other contractual arrangements, substantive potential voting rights, ownership of the largest block of voting rights in a situation where the remaining rights are

widely dispersed ('de facto power'), or a combination of the above. In assessing whether the Group has de facto power, it considers all relevant facts and circumstances including the relative size of the Group's holding of voting rights and dispersions of holdings of other vote holders to determine whether the Group has the practical ability to direct the relevant activities.

The Group is exposed or has rights to variable returns from its involvement with an entity when these returns have the potential to vary as a result of the entity's performance.

In assessing whether the Group has the ability to use its power to affect the amount of returns from its involvement with an entity, the Group determines whether in exercising its decision-making rights it is acting as an agent or as a principal. The Group acts as an agent when it is engaged to act on behalf and for the benefit of another party, and as a result does not control an entity. Therefore, in such cases, the Group does not consolidate the entity. In making the above assessment, the Group considers the scope of its decision-making authority over the entity, the rights held by other parties, the remuneration to which the Group is entitled from its involvement, and its exposure to variability of returns from other interests in that entity.

The Group has interests in certain entities which are structured so that voting rights are not the dominant factor in deciding who controls the entity, such as when any voting rights relate to administrative tasks only and the relevant activities are directed by means of contractual rights. In determining whether the Group has control over such structured entities, it considers the following factors:

- The purpose and design of the entity;
- Whether the Group has certain rights that give it the ability to direct the activities of the entity unilaterally;
- The existence of any special relationships with the entity; and
- The extent of the Group's exposure to variability of returns from its involvement with the entity and if the Group has the power to affect such variability.

The Group reassesses whether or not it controls an entity if facts and circumstances indicate that there are changes to one or more elements of control. This includes circumstances in which the rights held by the Group and intended to be protective in nature become substantive upon a breach of a covenant or default on payments in a borrowing arrangement, and lead to the Group having power over the investee.

Subsidiaries are fully consolidated from the date on which control is transferred to the Group and are no longer consolidated from the date that control ceases.

Investments in joint ventures (the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control and, under which, the parties have rights to the net assets of the arrangement) and investments in associates (investments in which the Group has a significant influence, but which it does not control, generally holding between 20% and 50% of the voting rights) are also part of the accounting consolidation scope, but are accounted for using the equity method.

1.4.2 Regulatory consolidation

In 2015 the regulatory consolidation, applied for reporting to the regulatory authorities, followed the principles used for the accounting consolidation with the exception of the participations in insurance companies which were excluded from regulatory consolidation, were accounted for using the equity method and were deducted from regulatory capital subject to thresholds (refer to paragraph 2.1).
According to CRD IV, holdings in insurance companies and financial institutions that the Bank has a significant investment, must be deducted from Common Equity Tier 1 (CET1) in case the total investment exceeds 10% of the aggregate amount of CET1 before certain deductions. Amount which is not deducted, is risk weighted by 250%.

On 4 August 2016, the Group completed the sale of 80% of Eurolife ERB Insurance Group Holdings S.A. Hence, as of that date, the company and its subsidiaries (ERB Insurance Services S.A., Eurolife ERB General Insurance S.A., Eurolife ERB Life Insurance S.A., Diethnis Ktimatiki S.A., Eurolife ERB Asigurari De Viata S.A. and Eurolife ERB Asigurari Generale S.A.) are not consolidated in the Bank's Consolidated Financial Statements (note 27 Consolidated Financial Statements). Consequently, there is no difference between regulatory and accounting consolidation.

ERB Hellas Funding Ltd and ERB Hellas Plc are included in the calculation of the non-consolidated capital requirements and regulatory own funds of the Bank (solo consolidation).

List of all subsidiary undertakings can be found in the Consolidated Financial Statements Note 27.

1.5 Impediments to the prompt transfer of capital

Subordinated loans given by the Bank to its subsidiaries, financial institutions operating outside Greece, are subject to local regulations and subsequently restrictions set by local laws and supervisory authorities. The most common of all restrictions is minimum duration (5 to 7 years in most cases) with no possibility of prepayment without prior permission by the respective supervisory authority.

1.6 Compliance with Basel III Pillar 3 disclosures

The Bank has issued an internal "Policy on compliance with Pillar 3 Disclosures" in order to ensure consistent and continuous compliance with the Pillar 3 disclosures requirements, as these have been specified in the existing regulatory framework. Within this framework the Bank operates as follows:

- Pillar 3 disclosures are provided on a consolidated basis.
- The Bank includes in its disclosures all information deemed necessary to provide users with a clear, complete and accurate view of the Group's structure, capital management, risk management system, unencumbered assets and remuneration policy. During this procedure the Bank also identifies information that is material, confidential and proprietary.
- The Bank has opted to present the full set of Pillar 3 disclosures in a separate document "Consolidated Pillar 3 Report", which is published annually on the Bank's website, in conjunction with the date of publication of its financial statements. The Remuneration disclosures are published in a separate document.
- The Bank re-examines the extent and type of information provided at each disclosure date and revises its policy as necessary.
- The Bank assesses the need to publish some or all disclosures more frequently than annually, taking into consideration factors such as scale of operations, range of activities, presence in different countries, involvement in different financial sectors, participation in international financial markets and payment, settlement and clearing systems and paying particular attention to information on own funds, capital requirements, risk exposure and other items prone to rapid change.
- The Audit Committee of the Bank is responsible to review and assess the process for the preparation of the Pillar 3 report, while the Board of Directors (BoD) of the Bank is responsible to approve it.

The aforementioned responsibilities are equivalent to those in respect of the Bank's Consolidated Financial Statements.

2. Capital Management

The amount and quality of the capital held by the Group is subject to certain rules and guidelines. The composition of the Group's available regulatory capital under Pillar 1 is as follows:

2.1 Regulatory capital – definition

The Pillar 1 regulatory capital of the Group at consolidated level is calculated on the basis of IFRS figures and according to the rules set by Regulation (EU) No 575/2013.

The available regulatory capital is classified under two main categories: Tier 1 and Tier 2 capital. Tier 1 consists of Common Equity (CET1) and Additional Tier 1 capital.

CET1 capital is composed of ordinary shareholders' equity, preference shares issued under Law 3723/2008 "Greek Economy Liquidity Support Program" and minority interest allowed in consolidated CET1, after deduction of:

a) Fair value reserves related to gains or losses of cash flow hedges;
b) Gains and losses on market valuation of liabilities designated as fair-value-through-profit-or-loss attributable to own credit risk;
c) 60% phased-in deduction of goodwill and intangible assets;
d) 60% phased-in deduction of deferred tax assets that rely on future profitability excluding those arising from temporary differences (unused tax losses);
e) Participating interests and subordinated loans (and other capital instruments qualifying as own funds) of more than 10% in not fully consolidated credit or other financial institutions, including insurance companies;
f) 60% phased-in deduction of loan impairment allowances' shortage compared to IRB measurement of Expected Loss;
g) Deferred tax assets arising from temporary differences, which exceed 10% threshold of CET1 capital before certain deductions and
h) The sum of e and g above that is less than 10% of CET 1 capital and exceeds 15% threshold of CET1 capital before certain deductions.

Expected Losses (EL) derived under Basel III rules represent losses that would be expected in a downturn scenario over a 12 month period. This definition differs from loan impairment allowances, which only address losses incurred within the lending portfolios at the balance sheet date and are not permitted to recognize the additional level of conservatism that the regulatory measure requires by the adoption of through-the-cycle, downturn conditions that may not exist at the balance sheet date.

Additional Tier 1 capital consists of Preferred shareholders' equity that is subject to phase-out, 40% deduction of goodwill and intangible assets and 20% of loan impairment allowances' shortage, (that will be deducted from CET1 once Basel III is fully implemented).

In case deductions of Tier 1 capital exceed positive amounts of Tier 1 capital, then the difference is deducted from CET1 capital.

Tier 2 capital is composed of the following items:

- Long term subordinated liabilities that meet certain regulatory specified criteria, that are subject to phase-out and the deduction of 20% of loan impairment allowances' shortage, that will be deducted from CET1 once Basel III is fully implemented;
- Fixed assets' revaluation reserve formed after 31 December 2003 (transition to IFRS), which is subject to phase out from Tier 2 and phase-in to CET1;
- General credit risk provisions up to 1.25% of risk weighted assets calculated under standardised approach;
- Positive difference between the sum of loan impairment allowances over the IRB measurement of Expected Losses, up to 0.6% of risk weighted assets calculated under the IRB approach.

In case deductions of Tier 2 capital exceed positive amounts of Tier 2 capital, then the difference is deducted from Tier 1 capital.

2.2 Preferred securities

As at 31 December 2016, the outstanding amount of preferred securities was € 43 million, 60% of which is classified as Additional Tier 1 capital. Under Basel III they qualify as grandfathered instruments and will gradually phase out until 2022.

A list of the features of Bank's capital instruments in accordance with Annex III of the Commission Implementing Regulation (EU) No 1423/2013 is found in Appendix 2.

Detailed information regarding Preferred securities can be found in the Consolidated Financial Statements Note 41.

2.3 Greek sovereign exposure

As at 31 December 2016, the total carrying value of Greek sovereign major exposures is as follows:

	2016	2015
	€ million	€ million
Treasury bills	1,289	2,157
Greek government bonds	1,970	1,677
Derivatives with the Greek State	1,070	992
Exposure relating with Greek sovereign risk financial guarantee	194	208
Loans guaranteed by the Greek State	140	176
Loans to Greek local authorities and public organizations	75	86
Other receivables	19	17
Total	**4,757**	5,313

For more information please refer to Consolidated Financial Statements Note 5.

2.4. Restructuring plan

On 29 April 2014, the European Commission approved the Bank's restructuring plan, as it was submitted through the Greek Ministry of Finance on 16 April 2014. In addition, on 26 November 2015, the EC approved the Bank's revised restructuring plan in the context of the recapitalization process in 2015. The Hellenic Republic committed that the Bank would implement specific measures and actions and achieve objectives which formed integral part of the said restructuring plan

For further information please refer to Consolidated Financial Statements Note 6.

Monitoring Trustee

The Memorandum of Economic and Financial Policies (MEFP) of the Second Adjustment Program for Greece between the Hellenic Republic, the European Commission, the International Monetary Fund (IMF) and the European Central Bank (ECB) provides for the appointment of a monitoring trustee in all banks under State Aid.

Grant Thornton S.A. was appointed as the Bank's Monitoring Trustee (MT) on 22 February 2013, with the mandate of the MT been subsequently amended and extended on 29 May 2014. The MT monitors the compliance with the commitments on corporate governance and commercial operational practices, and the implementation of the restructuring plan and report to the European Commission.

2.5 Reconciliation of Balance Sheets - financial accounting to regulatory scope of consolidation

	Ref.	31 December 2016			31 December 2015		
		Balance sheet per published financial statements € million	Deconsolidation of insurance and consolidation by the equity method € million	Balance sheet per regulatory scope of consolidation € million	Balance sheet per published financial statements € million	Deconsolidation of insurance and consolidation by the equity method € million	Balance sheet per regulatory scope of consolidation € million
Assets							
Cash and Balances with central banks		1,477	-	1,477	1,798	-	1,798
Due from credit institutions		2,759	-	2,759	2,808	-	2,808
Financial instruments at fair value through profit or loss		71	-	71	100	-	100
Derivative financial instruments		1,980	-	1,980	1,884	-	1,884
Loans and advances to customers		39,058	-	39,058	39,893	-	39,893
Investment securities		12,463	-	12,463	16,291	-	16,291
Investments in associated undertakings		98	-	98	10	384	394
Property, plant and equipment		638	-	638	666	-	666
Investment property		905	-	905	925	-	925
Intangible assets	*a*	145	-	145	127	-	127
Deferred tax asset		4,945	-	4,945	4,859	-	4,859
of which deferred tax assets that rely on future profitability excluding those arising from temporary differences	*b*	*54*	-	*54*	*319*	-	*319*
of which deferred tax credit		*4,015*	-	*4,015*	*4,066*	-	*4,066*
of which deferred tax assets arising from temporary differences	*c*	*876*		*876*	*474*	-	*474*
Other assets		1,854	-	1,854	2,141	3	2,144
Assets of disposal group classified as held for sale		-	-	-	2,051	(1,921)	130
Total assets		**66,393**	**-**	**66,393**	73,553	(1,534)	72,019
Liabilities							
Due to central banks		13,906	-	13,906	25,267	-	25,267
Due to credit institutions		7,780	-	7,780	4,516	-	4,516
Derivative financial instruments		2,441	-	2,441	2,359	-	2,359
Due to customers		34,031	-	34,031	31,446	178	31,624
Debt securities in issue		102	-	102	150	101	251
Other liabilities		778	-	778	742	3	745
Liabilities of disposal group classified as held for sale		-	-	-	1,941	(1,816)	125
Total liabilities		**59,038**	**-**	**59,038**	66,421	(1,534)	64,887
of which tier 2 instruments subject to phase-out	*d*	*75*	-	*75*	*75*	-	*75*
Equity				-			-
Ordinary share capital		655	-	655	656	-	656
Share premium	*e*	8,055	-	8,055	8,055	-	8,055
Reserves and retained earnings		(2,988)	-	(2,988)	(3,241)	-	(3,241)
of which cash flow hedge reserves	*f*	*(59)*		*(59)*	*(69)*		*(69)*
of which own credit risk	*g*	-		-	-		-
Preference shares	*h*	950	-	950	950	-	950
Total equity attributable to shareholders of the Bank		**6,672**	**-**	**6,672**	6,420	-	6,420
Preferred securities	*i*	43	-	43	43	-	43
Non controlling interests	*j*	640	-	640	669	-	669
Total equity		**7,355**	**-**	**7,355**	7,132	-	7,132
Total equity and liabilities		**66,393**	**-**	**66,393**	73,553	(1,534)	72,019

As noted in section "1.4 Regulatory versus accounting consolidation" due to the sale of Eurolife ERB Insurance Group Holdings S.A. on 4 August 2016, there is no difference between regulatory and accounting consolidation.

2.6 Regulatory capital

The table below shows the composition of the Group's regulatory capital at 31 December 2016 and 2015. Regulatory capital of 2016 and 2015 is calculated according to CRD IV transitional rules.

In addition, in Appendix 1 a transitional own fund disclosure template can be found, which presents the components of regulatory capital on transitional and end-point basis as at 31 December 2016 and 2015. The disclosure has been prepared using the format set out in Annex VI of the "Commission Implementing Regulation (EU) No 1423/2013 of 20 December 2013 laying down implementing technical standards with regard to disclosure of own funds requirements for institutions according to Regulation (EU) No 575/2013 of European Parliament and of the Council".

	Ref.	31 December 2016 € million	31 December 2015 € million
Ordinary shareholders' equity	*e*	5,722	5,470
Preference Shares	*h*	950	950
Non controlling interests per consolidated balance sheet	*j*	640	669
Non controlling interests not allowed in consolidated CET1		(385)	(268)
Regulatory adjustments			
Cash flow hedge reserves	*f*	59	69
Own credit risk	*g*	-	-
Fixed assets' revaluation reserve		(26)	(39)
60% of intangible assets / 40% for 2015	*a*	(87)	(51)
60% of deferred tax assets that rely on future profitability (unused tax losses) / 40% for 2015	*b*	(32)	(127)
Deferred tax assets arising from temporary differences (amount above 10% threshold)	*c*	(37)	-
Other regulatory adjustments		(33)	(50)
Common Equity Tier I capital		**6,771**	6,623
Preferred Securities subject to phase-out	*i*	26	30
Regulatory adjustments			
40% of intangible assets / 60% for 2015	*a*	(58)	(76)
Other regulatory adjustments		32	46
Total Tier I capital		**6,771**	6,623
Tier II capital - subordinated debt subject to phase out	*d*	4	15
Fixed assets' revaluation reserve		26	39
IRB Excess of impairment allowances over expected losses eligible		93	94
SA General credit risk provisions		-	14
Total Regulatory Capital		**6,894**	6,785
Risk Weighted Assets		**38,511**	38,888
Ratios			
Common Equity Tier I		**17.6%**	17.0%
Tier I		**17.6%**	17.0%
Total Capital Adequacy Ratio		**17.9%**	17.4%

The CET1 ratio is defined as CET1 capital divided by RWAs, the Tier 1 ratio is defined as Tier 1 capital divided by RWAs and Total Capital Adequacy ratio is defined as Total Regulatory Capital divided by RWAs.

According to article 27A of the Law 4172/2013 as in force, which is applicable to Greek financial institutions, including leasing and factoring companies, deferred tax assets that have been or will be recognized by the Bank due to (a) losses from the Private Sector Involvement ('PSI') and the Greek State Debt Buyback Program, and (b) accumulated provisions and other losses in general due to credit risk as such (provisions and credit losses) which were accounted as at 30 June

2015, will be converted into directly enforceable claims (tax credit) against the Greek State, in accordance with the law provisions, provided that the Bank's after tax accounting result for the period, is a loss.

According to Regulation (EU) No. 575/2013, article 39, deferred tax assets that can be replaced with a tax credit, shall not be deducted from CET1, but instead be risk weighted by 100%. As at 31 December 2016, deferred tax assets that are eligible for tax credit amounted to € 4,015 million (2015: € 4,065 million). For further details please refer to Consolidated Financial Statements, Note 16.

The Group has sought to maintain an actively managed capital base to cover risks inherent in the business. The adequacy of the Group's capital is monitored using, among other measures, the rules and ratios established by the Basel Committee on Banking Supervision ("BIS rules/ratios") and adopted by the European Union and the BoG in supervising the Bank.

To this direction the Group, is focused on the organic strengthening of its capital position by active derisking of lending portfolios through tighter credit policies and change in the portfolio mix in favor of more secured loans as well as by proceeding to several strategic initiatives to internally generate capital.

Finally, the Group is examining a number of additional initiatives for enhancing its capital base, associated with the management of non performing exposures as well as with restructuring, transformation or optimization of operations, in Greece and abroad, that will generate or release further capital and/or reduce RWAs.

2.7 Supervisory Review and Evaluation Process (SREP) capital requirements

According to the decision of the 2016 Supervisory Review and Evaluation Process performed by the ECB, starting from 1 January 2017 the Bank is required to meet on a consolidated basis a Common Equity Tier 1 ratio of at least 8.75% and a Total Capital Adequacy ratio of at least 12.25%.

2.8 Capital requirement under Pillar 1

The table below shows the Group's risk weighted assets (RWAs) and capital requirements at 31 December 2016 and 2015. The minimum capital requirements under Pillar 1 are calculated as 8% of RWAs.

	Risk Weighted Assets		Minimum Capital Requirements	
	2016	2015	**2016**	2015
	€ million	€ million	**€ million**	€ million
Credit risk (pursuant Standardised approach)				
Central governments or central banks	6,142	5,550	491	444
Regional governments or local authorities	19	41	2	3
Public sector entities	13	5	1	0
Institutions	450	509	36	41
Corporates (excluding past due and secured by real estate property)	2,595	2,026	208	162
Retail (excluding past due and secured by real estate property)	2,251	2,255	180	180
Secured by mortgages on immovable property (excluding past due)	1,515	1,639	121	131
Exposures in default (*)	2,589	1,612	207	129
Items associated with particularly high risk (*)	5	1,357	0	109
Covered bonds	19	48	2	4
Claims in the form of collective investment undertakings (CIUs)	53	55	4	4
Equity exposures	260	973	21	78
Other items (**)	2,889	2,973	231	238
Credit risk total, Standardised approach	**18,800**	19,043	**1,504**	1,523
Credit risk (pursuant IRB approach)				
Corporates	8,599	8,513	688	681
Retail				
- Secured by immovable property - non SME	4,464	4,749	357	380
- Qualifying revolving retail exposures	596	700	47	56
- SME exposures	934	907	75	73
- Other retail exposures	658	538	53	43
Equities (***)	135	127	11	10
Asset backed securities	32	38	2	3
Credit risk total, IRB approach	**15,418**	15,572	**1,233**	1,246
Credit risk total	**34,218**	34,615	**2,737**	2,769
Counterparty risk	513	219	41	18
Market risk (pursuant Standardised approach)				
- Traded debt instruments and CVA	126	169	11	13
- Equity instruments in the trading book	12	2	1	-
- Currencies and gold	79	436	6	35
Internal model approach (Value at Risk)	542	684	43	55
Market risk total	**759**	1,291	**61**	103
Operational risk	**3,021**	2,763	**242**	221
Total 31 December	**38,511**	38,888	**3,081**	3,111
Regulatory Capital 31 December			**6,894**	6,785

(*) Exposures reported as 'Items associated with particularly high risk' in 2015 were reclassified as 'Exposures in default' in 2016 to better reflect their status. This movement did not affect the capital requirements as the specific exposures were already treated as defaulted in terms of risk weights.
(**) Other items include mainly fixed assets and other assets.
(***) Equity exposures are calculated according to Simple risk weight method (Regulation EU 575 article 155 §2).

2.9 Internal Capital Adequacy Assessment Process (ICAAP)

ICAAP aims to identify and assess risks that are inherent in the Group's business model, determine their materiality and allocation at an entity and Group level, evaluate risk monitoring and risk mitigation processes and quantify the relevant internal capital charge where appropriate so as to ensure the ongoing capital adequacy of the Group versus its risk profile.

To accomplish these objectives, the ICAAP leverages upon and integrates the Group's well-established activities on risk, capital and performance management, including in particular planning and monitoring, while also continuously refining its approach to ensure high standards of capital assessment and management.

Oversight and ultimate responsibility for the ICAAP is held with the BoD, which has assumed a leading role in developing a risk conscious organization and maintaining the Group's risk management at high levels of sophistication. Its vision and guidance are distilled in the Group's risk appetite framework, which describes the risk boundaries within which the Group is willing to operate.

The risk appetite is:

- Structured as a series of qualitative and quantitative statements, both on an overall level and per risk type, the objective of which is to ensure adherence to regulatory requirements, guide the organization's business growth and balance the advantages of a strong capital position with those of higher returns on equity;
- Revisited formally once a year or more frequently if the BoD deems it necessary;
- A means of communication across units and functions in the institution.

Moreover, acting as an evaluation mechanism of the Group's entire risk management framework, an integral component of ICAAP is the identification and assessment of current and emerging risks in terms of their materiality at Group level, thus allowing the organization to focus its resources and management attention to those risks that could potentially threaten its business or capital standing and ensuring that all material risks are properly managed and monitored.

Material risks are evaluated qualitatively and quantitatively, as appropriate. The aggregation of the individual capital charges comprises the Group's total internal capital requirement, meaning the amount of capital the Group needs to hold for the purpose of absorbing unexpected losses deriving from its risk profile.

All categories of material risks are continuously managed and the relevant frameworks are constantly evaluated in order to identify ways of strengthening the risk management structure, enhance existing policies, establish new mitigation techniques or improve the internal capital charge calculation. Risk and capital management responsibility, including compliance with regulatory requirements and corporate policies, lies with the Group's management.

The Group uses the regulatory calculation of its required capital ("Pillar I required capital") as a starting point for setting its internal capital, adjusting for additional capital where appropriate. Internal capital better represents the Group's risk profile, compared to regulatory capital, since it takes into account a wider range of risks and utilizes more sophisticated calculation approaches. This approach allows the Group to leverage its advanced risk measurement infrastructure.

Regular scenario-based simulations and stress tests are also being used to assess specific risks as well as the overall risk profile. Stress tests can be classified as follows:

- Risk specific stress tests, where model parameters are based on the severity and frequency of historic market downturns as well as ad hoc scenarios selected by management;
- Integrated stress tests across risks, which evaluate the resilience of the Group's capital position in case of a systemic deterioration of the business environment in a macroeconomic downturn.

The Group also develops forecasts on capital consumption and availability and integrates them into the strategic planning process so as to optimize capital return and allocation, whilst maintaining adequate capital levels. The results of the stress tests are utilized during the capital planning process to ensure that the contingency plans in place are adequate if stressed conditions materialize and to produce a set of plausible action plans to mitigate the impact of the stress scenario.

The Group maintains adequate pre-provision earnings in the medium term and robust risk management practices while the capital actions already executed or underway allow the Group to meet both regulatory and internal capital requirements. As a result, the Group will be in a position to support the risk profile of its balance sheet and its business operations going forward, even under further adverse conditions, should they materialize.

2.10 Internal Liquidity Adequacy Assessment Process (ILAAP)

ILAAP is the internal process for the identification, measurement, management and monitoring of liquidity and it is being implemented by the institution according to Article 86 of Directive 2013/36/EU.

The Group's ILAAP covers the following areas:

- Liquidity and funding risk management framework: identification of the functions/units and management committees responsible for the policy making, management, control, monitoring and reporting of liquidity and funding;
- Description of the liquidity and funding risks: comprehensive description of the liquidity and funding risks that the Group faces taking into account the current macro-economic environment and country-specific and idiosyncratic factors;
- Liquidity risk monitoring process and stress testing: detailed description of the processes, tools and reports that the Group uses for the monitoring and the control of liquidity, with particular emphasis on the following: stress test analysis, liquidity buffer analysis, liquidity & funding indicators;
- Contingency funding plan and liquidity & funding strategy: description of the contingency funding plan and the liquidity and funding strategy;
- Information on strategy regarding liquidity buffers and collateral management;
- Information of cost benefit allocation mechanism;
- Information on intraday liquidity risk management.

3. Risk management overview

3.1 Risk management objectives and policies

The Group acknowledges that taking risks is an integral part of its operations in order to achieve its business objectives. Therefore, the Group's management sets adequate mechanisms to identify those risks at an early stage and assesses their potential impact on the achievement of these objectives.

Due to the fact that economic, industry, regulatory and operating conditions will continue to change, risk management mechanisms are set (and evolve) in a manner that enables the Group to identify and deal with the risks associated with those changes. The Bank's structure, internal procedures and existing control mechanisms ensure both the independence principle and the exercise of sufficient supervision.

Group's management considers effective risk management as a top priority, as well as a major competitive advantage, for the organization. As such, the Group has allocated significant resources for upgrading its policies, methods and infrastructure, in order to ensure compliance with the requirements of the ECB, the guidelines of the EBA and of the Basel Committee for Banking Supervision and the best international banking practices. The Group implements a well structured credit approval process, independent credit reviews and effective risk management policies for credit, market, liquidity and operational risk, both in Greece and in each country of its international operations. The risk management policies implemented by the Bank and its subsidiaries are reviewed annually.

The Board Risk Committee (BRC) ensures that the Group has a well-defined risk and capital strategy and risk appetite.

The Group Risk and Capital Strategy, which has been formally documented, outlines the Group's overall direction regarding risk and capital management issues, the risk management mission and objectives, risk definitions, risk management principles, risk appetite framework, risk governance framework, strategic objectives and key initiatives for the improvement of the risk management framework in place.

The BRC assesses the Group's risk profile, monitors compliance with the approved risk appetite and risk tolerance levels, and ensures that the Group has developed an appropriate risk management framework with appropriate methodologies, modeling tools, data sources and sufficient and competent staff to identify, assess, monitor and mitigate risks.

The BRC consists of six non-executive directors (five-member committee at 31 December 2016), meets at least on a monthly basis and reports to the BoD on a quarterly basis and on ad hoc instances. During 2016 the BRC met thirteen (13) times.

In 2016, the Bank established the Management Risk Committee (MRC) as a consulting committee to the BRC.

The main responsibility of the MRC is to oversee the risk management framework of the Group. The MRC ensures that material risks are identified and promptly escalated to the BRC and that the necessary policies and procedures are in place to prudently manage risk and to comply with the regulatory requirements.

As part of its mandate, the MRC reviews the Bank's and its subsidiaries risk profile vis-à-vis its declared risk appetite and examines any proposed modifications to the risk appetite. In addition, the MRC reviews and approves the methodology, the parameters and the results of the Bank's ICAAP, ILAAP and stress testing programmes. Additionally, the MRC determines appropriate management actions which are discussed and presented to the Executive Board ("EXBO") for information and submitted to BRC for approval.

The Group's Risk Management General Division, which is headed by the Group Chief Risk Officer (GCRO), is independent from the business units and has responsibility for the monitoring, the measurement and the management of credit, market, operational and liquidity risks of the Group. It comprises the Credit Sector, the Group Credit Control Sector, the Capital Adequacy Control (Credit Risk) & Regulatory Framework Sector, the International Credit Sector, the Group Market & Counterparty Risk Sector and the Operational Risk Sector.

3.2 Risk appetite framework

The maximum amount of risk which the Group is willing to assume in the pursuit of its strategic objectives is articulated via a set of quantitative and qualitative statements for specific risk types, including specific tolerance levels as described in the Group's Risk Appetite Framework. The objectives are to support the Group's business growth, balance a strong capital position with higher returns on equity and to ensure the Group's adherence to regulatory requirements.

Risk appetite is clearly communicated throughout the Group, determines risk culture and forms the basis on which risk policies and risk limits are established at Group, business and regional level.

The Group's Risk Appetite Framework comprises the following components:

- Risk Bearing Capacity – this reflects the maximum level of risk at which the Group can operate within capital constraints, funding needs and stakeholder obligations;
- Risk Appetite – this reflects the maximum level of risk that the Group is willing to take in pursuit of its strategic and business objectives. Risk Tolerance reflects the degree of management's acceptance of current risk exposure levels, applicable to certain non-financial risks (e.g. operational risk) which are not actively taken but are tolerated;
- Risk Limits – these reflect specific exposure limiting values placed on specific measures designed to prevent risk exposures from exceeding predefined risk appetite thresholds. Limits are monitored on an ongoing basis.

The Group's Risk Appetite Statements cover the following broad risk categories:

- Capital adequacy and leverage
- Credit risk
- Market risk
- Operational risk
- Liquidity risk
- Country risk
- Business risk
- Earnings risk
- Strategic risk
- Reputational risk
- Model risk

The Risk appetite framework is appropriately documented. The BRC reviews and approves the risk appetite statements and thresholds on an annual basis to ensure that it is consistent with the Group's strategy, business environment and stakeholder requirements. Setting risk appetite aims to ensure that risk is proactively managed to the level desired and approved by the BRC. Risk appetite tolerance limits are set at different trigger levels, with clearly defined escalation requirements which enable appropriate actions to be defined and implemented in a timely manner. In cases where the tolerance levels are breached, it is the responsibility of relevant units to bring it to the attention of the BRC.

Senior management has the responsibility to monitor and manage risk exposures to remain within risk appetite levels and to ensure an appropriate level of risk is assumed to achieve business objectives.

3.3 Types of risk

The Group is exposed to various types of risk that are managed at various levels of the organization.

The most important types of risk are:

- credit risk;
- market risk and liquidity risk;
- operational risk.

The individual risk types are defined in the subsequent sections.

3.4 Organization

The risk management functions of the BRC are performed by the GCRO and risk management sectors, which cover the following areas:

- Credit risk;
- Market, Counterparty and Liquidity risk;
- Operational risk.

Group Chief Risk Officer (GCRO)

Credit Risk

• Basel III IRB approach compliance for significant part of Group loan portfolios;
• Advanced IRB for all retail portfolios (consumer, mortgage, small business) and Foundation IRB for Corporate;
• Independent and centralized approval system;
• Systematic follow up of credits;
• Differentiated credit scoring system for consumer and small business banking, full financial and sectorial analysis for corporates based on independent credit rating;
• Disciplined provisioning policy (wholesale) and statistical portfolio behaviour (retail);
• Regular and ad hoc reporting to Senior Management (Executive Board Committee, BoD, BRC) regarding progress of portfolios and evolution of provisions.

Market, Counterparty & Liquidity Risk

• First Greek bank with complete and validated market risk management system by local regulator (BoG), which covers both trading and banking books;
• Compliance with new CRD IV rules for Trading book (stressed VaR and IRC);
• All market risks monitored daily against approved VaR limits;
• VaR methodology used for business decisions;
• Considerable stress testing development for non normal market conditions, results monitored on a continuous basis;
• Liquidity ratios and liquidity stress test LCR is calculated and monitored on a monthly basis;
• Daily monitoring of credit risk of derivatives' positions using PFE methodology;
• The operation and the monitoring of credit risk mitigation contracts (ISDA/CSA, GMRA) is done on a daily basis through an appropriate tool;
• Country risk, Counterparty and Issuer Risk monitored daily on a Group level through a centralized counterparty risk monitoring tool;
• CVA modelling;
• International operations: market risk for all International subsidiaries managed centrally in Greece.

Operational Risk

• Basel III Standardised Approach for Eurobank's consolidated operations;
• Documented and functioning operational risk framework & risk management system implemented Group-wide;
• Risk & Control Self Assessment program (RCSA);
• Operational risk events collection system;
• Key Risk Indicator (KRI) set-up & monitoring;
• Operational risk scenario analysis (stress testing);
• Operational risk reporting (internal & external);
• A number of operational risk mitigation programs under way throughout the Group;
• Center of competence for counter – fraud activity, coordinating & monitoring respective initiatives.

4. Credit Risk

4.1 Definition of credit risk

Credit risk is the risk that a counterparty will be unable to fulfill its payment obligations in full when due. Credit risk also includes country, dilution and settlement risk.

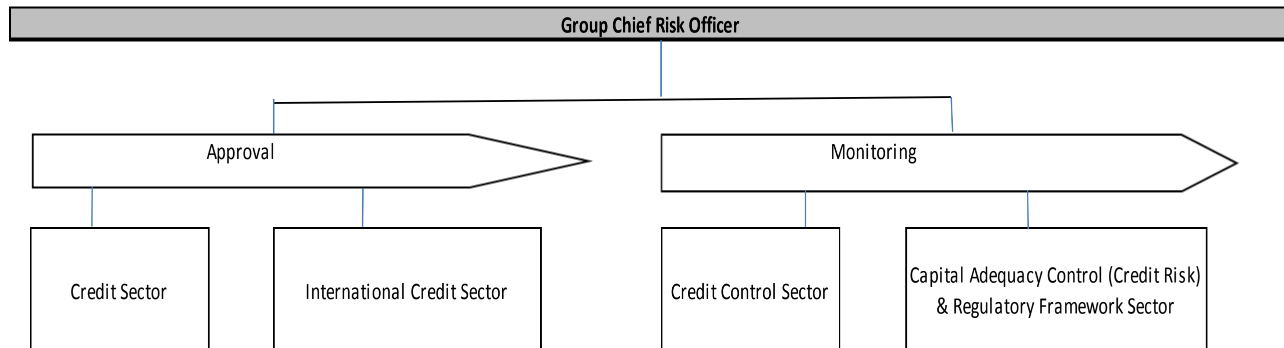
Country risk is the risk of losses arising from economic difficulties or political unrest in a country, including the risk of losses following nationalization, expropriation and debt restructuring.

Settlement risk is the risk arising when payments are settled, for example for trades in financial instruments, including derivatives and currency transactions. The risk arises when the Group remits payments before it can ascertain that the counterparties' payments have been received.

Credit risk arises principally from the corporate and retail lending activities of the Group, including from credit enhancement provided, such as financial guarantees and letters of credit. The Group is also exposed to credit risk arising from other activities such as investments in debt securities, trading activities, capital markets and settlement activities. Credit risk is the single largest risk the Group faces. It is rigorously managed and is monitored by centralized dedicated risk units, reporting to the GCRO.

4.2 Credit risk organization and processes

4.2.1 Credit risk organization



The diagram above depicts the organizational structure of credit risk of the Bank. The functions of each sector are described below.

The organization of the credit risk divisions of the Group's subsidiary banks in International operations (Bulgaria, Romania, Serbia, Cyprus, Luxembourg) also follows the model of the Bank depicted above. The Risk Executive of each subsidiary bank reports directly to GCRO.

4.2.2 Credit approval process

The credit approval and credit review processes are centralized both in Greece and in the International operations. The segregation of duties ensures independence among executives responsible for the customer relationship, the approval process and the loan disbursement, as well as monitoring of the loan during its lifecycle.

The credit approval process in Corporate Banking is centralized through establishment of Credit Committees with escalating Credit Approval Levels, in order to manage the corporate credit risk. Main Committees of the Bank are considered to be the following:

- Credit Committees (Central and Local) authorized to approve new financing, renewals or amendments in the existing credit limits, in accordance with their approval authority level, depending on total limit amount and customer risk category (i.e. high, medium or low), as well as the value and type of security;
- Special Handling Credit Committees authorized to approve credit requests and take actions for distressed clients.
- International Credit Committees (Regional & Country) established for credit underwriting to wholesale borrowers for the Group's international Bank subsidiaries, authorized to approve new limits, renewals or amendments to existing limits, in accordance with their approval authority level, depending on total customer exposure and customer risk category (i.e. high, medium or low), as well as the value and type of security;
- International Special Handling Committees established for handling distressed problematic wholesale borrowers of the Group's international Bank subsidiaries.

The Credit Committees meet on a weekly basis or more frequently, if needed.

The main responsibilities of the Credit Sector of the Risk Management General Division are:

- Review and evaluation of credit requests of:
  - Domestic large and medium scale corporate entities of every risk category;
  - Specialized units such as Shipping and Structured Finance;
  - Retail sector's customers (small business and household lending) above a predetermined threshold;
- Issuance of an independent risk opinion for each credit request, which includes:
  - Assessment of the customer credit profile based on the risk factors identified (market, operations, structural and financial);
  - A focused sector analysis;
  - Recommendations to structure a bankable, well-secured and well-controlled transaction;
- Confirmation of the ratings of each separate borrower, to reflect the risks acknowledged; and
- Participation with voting rights in all credit committees, as per credit approval procedures (except for Special Handling Committee I - no voting rights).

The Credit Sector is responsible for the maintenance of the credit approval archives of the Bank. With respect to the meetings of the Credit Committees (Central, Local and Special Handling), the Credit Sector is responsible for the preparation of the agendas, the distribution of the respective material as well as the preparation of minutes jointly with the Chairman of the Central Credit Committees' Office. The Credit Sector provides also specialized knowledge, expertise and support to other departments of the Bank, in relation to operational and credit procedures, as well as securities' policies.

The approval process for loans to small businesses (turnover up to € 2.5 million) is centralized following specific guidelines for eligible collaterals as well as the 'four-eyes' principle. The assessment is based on an analysis of the borrower's financial position and statistical scorecards.

The credit approval process for Household Lending (consumer and mortgage loans) is centralized. It is based on specialized credit scoring models and credit criteria taking into account the payment behavior, personal wealth and financial position of the borrowers, the type and quality of securities and other factors as well. The ongoing monitoring of the portfolio quality and of any other deviations that may arise, leads to an immediate adjustment of the credit policy and procedures, when deemed necessary.

The International Credit Sector (ICS) is responsible to actively participate in the design, implementation and review of the credit underwriting function for the wholesale portfolio of the International Subsidiaries. Moreover, ICS advises and supports Risk Divisions of the International Subsidiaries.

In this context, ICS is responsible for the implementation of the below activities:

- Participation with voting right in all International Committees (Regional, Country and Special Handling);
- Preparation of the secretariat work of the International Committees including arrangement of the agenda and submission / circulation of the minutes of the respective committees;
- Participation in the sessions of Monitoring Committee responsible to monitor and decide on the strategy of problematic corporate relationships with loan outstanding exceeding a certain threshold, that is jointly set by ICS and Country TAG;
- Chairmanship in Country Risk Committees (CRCs);
- Continuous support to the Credit Risk Units of international subsidiaries by means of providing advice on best practices and training;
- Preparation and periodic update of the International Credit Policy Manual (Wholesale Banking) of international subsidiaries;
- Implementation of Group's credit related special projects.

In cooperation with Group Credit Control, conducting reviews of loan quality and specific loan segments (e.g. Real Estate portfolios and agribusiness).

4.2.3 Credit risk monitoring

The quality of the Group's loans portfolios (business, consumer and mortgage in Greece and abroad) is monitored and assessed by the Group Credit Control Sector (GCCS). The Sector operates independently from all the business units of the Bank and reports directly to the GCRO.

The Credit Control Sector's key activities include:

- monitoring and reviewing the performance of all loan portfolios of the parent bank and its Greek and Foreign subsidiaries;
- conducting field reviews and preparing written reports to management on the quality of loans for all of the Group's lending units;
- supervising and controlling the credit control functions in the subsidiary Banks and financial institutions in South Eastern Europe;
- reviewing credit policies in order to be submitted to the GCRO for final approval;
- supervising, supporting and maintain the Moody's Risk Advisor (MRA), used to assign borrower ratings to corporate lending customers;
- creating, overseeing and supporting the Transactional Rating (TR) application, used for the Wholesale lending portfolio, to measure the overall risk of the credit relationship taking into account both the creditworthiness of the borrower and required collaterals;
- regular monitoring and monthly/quarterly reporting to Eurobank's BRC and quarterly reporting to Eurobank's BoD asset quality issues;
- preparing the proposals of the provisioning policy and regularly reviewing the adequacy of provisions for all portfolios in Greece and in International;
- giving opinion for new lending products and restructuring/rescheduling schemes;
- attending meetings of Credit Committees, Special Handling Committees and Non-Performing Loans Committee without voting right; and
- participating in the Troubled Assets Committee and in the Loans and Products Committee.

The main responsibilities of the Capital Adequacy Control (Credit Risk) & Regulatory Framework Sector are to develop and maintain the IRB approach in accordance with the Basel framework and the Capital Requirements Directive (CRD) for the loans portfolio of the Group; to measure and monitor loan portfolios capital requirements and to manage credit risk regulatory related issues, such as Asset Quality Reviews (AQR) and stress tests. The Sector reports to the GCRO.

The main activities of Capital Adequacy Control (Credit Risk) & Regulatory Framework Sector are:

- Management of external Asset Quality Reviews (BoG, ECB);
- Implementation of the IRB roll-out plan of the Group;
- Development, implementation and validation of IRB models of Probability of Default (PD), Loss Given Default (LGD) and Exposure at Default (EAD) for evaluating credit risk;
- Measurement, monitoring and backtesting of risk parameters (PD, LGD, EAD) for the purposes of capital adequacy calculations, as well as, for provisioning purposes;
- Monthly capital adequacy calculations (Pillar I) and preparation of relevant management, as well as, regulatory reports (COREPs, SREP) on a quarterly basis;
- Performing stress tests both internal and external (EBA/SSM), and maintaining the credit risk stress testing infrastructure;
- Development and maintenance of forecasting models linking macroeconomic factors of credit quality (PD, LGD) for loan portfolios of the Group;
- Preparation of credit risk analyses for Internal Capital Adequacy Assessment (ICAAP) / Pillar II purposes;
- Preparation of Basel Pillar III disclosures for credit risk;
- Participation in the preparation of the business plan, the restructuring plan and the recovery plan of the Group in relation to asset quality and capital requirements for the loan book (projected impairments and RWAs);
- Support the business units in the use of IRB models in business decisions and the development and usage of risk related metrics such as Risk Adjusted Return on Capital (RAROC) etc.;
- Monitoring of the regulatory framework in relation to the above; performing impact assessment; initiating and managing relevant projects;
- Guiding, monitoring and supervising the Basel/Capital Adequacy (Credit Risk) Divisions of Romania and Bulgaria on modelling, credit stress testing and other credit risk related regulatory issues;
- Regular reporting to the GCRO, to the Management Risk Committee and to the BRC on the following topics: risk models performance, risk parameters (PD, LGD, EAD), updates on regulatory changes and impact assessment, credit risk, stress testing and asset quality reviews.

All International bank subsidiaries apply the same credit risk management structure and control procedures as the parent Bank, reporting directly to the Group Chief Risk Officer. Risk management policies and processes are approved and monitored by the credit risk Sectors of the parent bank ensuring that group guidelines are in place and credit risk strategy is uniformly applied across the Group.

The Group structures the levels of credit risk it undertakes by placing limits on the amount of risk accepted in relation to one borrower, or groups of borrowers, and to industry segments. The exposure to any one borrower including banks and brokers is further restricted by sub limits covering on and off-balance sheet exposures, and daily delivery risk limits in relation to trading items such as forward foreign exchange contracts.

Such risks are monitored on a revolving basis and are subject to an annual or more frequent review. Risk concentrations are monitored regularly and reported to the BRC.

4.2.4 Troubled Assets Management

The Bank utilizes a robust and interactive governance model for the management of troubled assets, which strengthens the Bank's borrower centric approach, through remedial management demarcation of the Business Units. The target is to reinstate customers' solvency, reduce overall handling costs for delinquent accounts and improve the portfolio profitability by maintaining low portfolio delinquency rates and facilitating negotiations with delinquent customers. This approach is supported by a combination of experienced personnel and statistical analysis, which highlights the trends and the high risk areas.

Following the publication of the BoG Executive Committee's Act No.42/30.05.2014 as amended by Act No 47/09.02.2015 and Act No 102/30.08.2016 that detail the supervisory directives for the administration of exposures in arrears and non-performing loans, the Bank has responsibly proceeded with a number of initiatives to adopt the regulatory requirements and empower the management of troubled assets. In particular, the Bank transformed its

troubled assets operating model into a vertical organizational structure through the establishment of the Troubled Assets Committee (TAC) and Troubled Assets Group General Division (TAG).

Following the report of BlackRock (for Troubled Assets Review) and the instructions of BoG, a Troubled Assets Committee has been established at top management level, chaired by GM of Troubled Assets Group and reporting to the BRC.

The Troubled Assets Committee's main responsibility is to provide strategic guidance and monitor troubled assets' management, ensuring independence from business and compliance with the requirements of BoG Act 42/30-5-2014. The Deputy CEO of the Bank and Executive member of the BoD is specifically entrusted with the close monitoring of the troubled assets management strategy.

The main responsibilities of the Troubled Assets Committee are the following:

- Process centrally all the internal reports regarding troubled assets management under the provisions of BoG Acts 42/30.05.2014, 47/09.02.2015 and 102/30.08.2016;
- Approve the available forbearance, resolution and closure solutions by loan sub-portfolio, and monitor their performance through suitable KPIs;
- Define criteria to assess the sustainability of credit and collateral workout solutions (design and use of "decision trees");
- Determine the parameters and the range of responsibilities of the bodies and officers involved in the assessment of viability and sustainability of the proposed modifications and the subsequent monitoring of their implementation;
- Design, monitor and assess pilot modification programs (in cooperation with other business units);
- Evaluate proposals for the sale of the Bank's distressed assets portfolio, as well as for the potential provision of services of managing troubled assets of third parties;
- Supervise and provide guidance and know-how to the respective troubled assets units of the Bank's subsidiaries abroad.

The TAG, with a direct reporting line to the Chief Executive Officer, is the overall responsible body for the management of Group's troubled assets portfolio for the whole process, from the pre-delinquency status in case of high risk exposures up to legal workout. It comprises the Retail Remedial General Division, the Corporate Special Handling Sector, the Non-Performing Clients Sector, the TAG Business Planning Sector and the TAG Risk Management & Business Policies Sector.

Since the advent of the financial crisis, the Bank has initiated a number of strategic initiatives with respect to collections and remedial management which include the following:

- Clear demarcation line between performing business and troubled assets management to allow focused & efficient Troubled Assets Management;
- Ensured direct top management involvement in troubled assets management and close monitoring of the respective portfolio;
- Reinforcement of FPS Financial Planning Services SA through its transformation into Servicer Company under the L4354/2015;
- Early intervention to prevent NPL formation and development of early warning models to predict the probability of an account to roll into delinquency;
- Rigorous real estate property search and mechanisms for converting unsecured lending to secured;
- Deployed a sound credit workout strategy through innovative propositions that lead to viable solutions, ensuring a consistent approach for managing troubled assets across portfolios;
- Ensured a consistent approach for managing troubled assets across portfolios;
- Targeted risk mitigating actions to ensure portfolio risk reduction;
- Defined criteria to assess the sustainability of proposed forbearance or resolution and closure measures and design decision trees.

The Financial Planning Services (FPS) Subsidiary

Financial Planning Services (FPS) is the Bank's subsidiary fully dedicated to the remedial management of Individual Banking products. It is involved in all stages of the loan remedial cycle, including debtors extrajudicial notification pre-legal stages for both consumer and mortgage loans and legal stages for unsecured consumer loans only.

FPS ensures that internal and external collection resources are focused and allocated appropriately and efficiently. The installation of a customized collections management system and an automated dialer has enhanced the operational efficiency of collections.
Moreover, FPS is responsible for:

- Delinquent borrowers communication (through "Eurobank Remedial Services" (ERS) according to L3758 that sets the frame of its responsibilities and the Bank's call center) in order to provide extrajudicial notification or propose loan modifications by negotiation of time and type of debts repayment;
- Remedial channels' coordination;
- Delinquent borrowers' performance monitoring;
- Pre-legal and legal actions.

Non Performing Clients Sector

Non Performing Clients Sector (NPCS) is an independent unit with direct report to the Troubled Assets Group Head, responsible for the Collateral Workouts and legal actions enforcement and liquidations acceleration. NPCS is engaged in the management of the non-performing borrowers via close cooperation with the Remedial units and Litigation Counsel's Office in order to gain from the synergies that may arise.

4.2.5 Recent developments

In 2016 the real GDP rate according to the latest data from ELSTAT closed at 0% better than the forecasts of negative 0.3%. Tourism for one more year showed a record in arrivals while on the other hand revenues showed a small decrease vs 2015.

NPLs and NPEs in the Greek Banking Sector presented a stabilisation during the 2nd half of 2016 and according to BoG reports are expected to close at 36% and 50-51% approx. at the end of 2016.

All the 4 systemic Banks have submitted their NPE strategy and targets to SSM for the three year period 2017-2019. According to these the total volume of NPEs are forecasted to decrease by € 40bn, i.e. from € 106bn in 2016 to € 66bn in 2019.

Finally, conditions in the domestic labour market continued to improve throughout 2016 with the unemployment rate hitting a 56-month low ratio of 23% in November 2016. Employment growth averaged 2.3% in the first 11 months, while labour productivity switched into positive territory in Q3 '16, interrupting 5 consecutive quarters of negative growth.

4.3 Credit risk reporting

Group Credit Control and Capital Adequacy Control (Credit Risk) & Regulatory Framework Sectors regularly prepare a detailed analysis of information to quantify, monitor and evaluate risks, as well as provide support to implement the BRC risk management decisions. It has a fixed reporting cycle to ensure that the relevant management bodies and the Board Risk Committee, are updated on an ongoing basis on the developments in the credit portfolio.

The principal risk reports submitted to the relevant management bodies, on a quarterly basis, deal with the following topics:

The quality of the Group's portfolio:	Analysis of provisions for impairment and losses by business unit. Portfolio breakdowns and evolution by rating category, size, delinquency, industry, tenor, vintage and collateralization (e.g. LTV bands) etc.
Large exposures:	- An overview of the twenty five (25) largest exposures (for Greece and International subsidiaries). -The largest problematic and non performing exposures (o/s balances, collaterals, provisions).
Forborne loans evolution	Analysis by portfolio, delinquency status; impairment levels and evolution over time.
The Bank's risk management models and parameters:	Update on the use of risk models, including risk parameters applied and the key results of the models' validation.
	Update on capital adequacy.
	Stress testing scenarios.

In addition, there are reports which are prepared on a monthly basis, in order to inform the relevant management bodies on the evolution of each business area's balances, delinquencies and provisions (impairment charges).

4.4 Credit exposures

Credit exposures for regulatory purposes before any credit risk mitigation are significantly differentiated from equivalent balances presented in IFRS financial statements, due to different basis of consolidation (refer to par. 1.4.2), inclusion of off balance sheet exposures and potential future exposures for derivative financial instruments, as well as inclusion of repos' collaterals.

The following table presents the Group's credit exposures (before any credit risk mitigation) for regulatory purposes at 31 December 2016 and 2015:

	Average of 2016 € million	2016 € million	Average of 2015 € million	2015 € million
Credit risk (pursuant Standardised approach)				
Central governments or central banks	17,359	14,777	22,522	18,500
Regional governments or local authorities	95	89	80	102
Public sector entities	13	17	131	10
Multilateral development banks	197	78	426	385
International organisations	8,818	6,843	10,057	10,042
Institutions	9,986	11,816	7,209	7,500
Corporates (excluding past due and secured by real estate property)	3,218	3,456	3,149	3,074
Retail (excluding past due and secured by real estate property)	3,063	3,085	3,427	3,066
Secured by mortgages on immovable property (excluding past due)	4,353	4,177	4,586	4,525
Exposures in default (*)	1,646	2,407	1,560	1,552
Items associated with particularly high risk (*)	1,003	8	1,178	1,183
Covered bonds	205	191	213	217
Claims in the form of collective investment undertakings (CIUs)	50	53	52	55
Equity exposures	298	134	383	413
Other items (**)	3,755	3,678	3,908	3,848
Credit risk exposures relating to off balance sheet items	483	520	478	462
Credit risk total, Standardised approach	**54,542**	**51,329**	59,359	54,934
			Refer to par.4.7 for exposures after credit risk mitigation	
Credit risk (pursuant IRB approach)				
Corporates				
- Corporates (Foundation IRB approach)	14,545	14,382	14,713	14,623
- Retail exposures that exceed € 1 million (Advanced IRB approach)	452	446	457	458
Retail				
- Secured by immovable property - non SME	10,407	10,332	10,549	10,515
- Qualifying revolving retail exposures	1,813	1,796	1,919	1,892
- SME exposures	5,795	5,790	5,835	5,825
- Other retail exposures	1,780	1,769	1,860	1,810
Equity	55	49	38	47
Asset backed securities	199	173	258	224
Credit risk exposures relating to off balance sheet items	1,495	1,469	1,537	1,505
Credit risk total, IRB approach	**36,541**	**36,206**	37,166	36,899
Credit risk total	**91,083**	**87,535**	96,525	91,833

(*) Exposures reported as 'Items associated with particularly high risk' in 2015 were reclassified as 'Exposures in default' in 2016 to better reflect their status. This movement did not affect the capital requirements as the specific exposures were already treated as defaulted in terms of risk weights.
(**) Other items include mainly cash, fixed assets and other assets.

The off balance sheet items included in the above exposures consist of the credit equivalent of:

- letters of guarantee;
- standby letters of credit; and
- undrawn credit facilities after the application of credit conversion factors (CCF) (refer to paragraph 4.8.3).

Central governments and central banks exposures above include bonds issued by the Bank € 2,500 million (2015: € 13,043 million) under the second stream of Liquidity Support Program and covered bonds € 2,275 million (2015: € 100 million). Both issues are fully retained by the Group and are used as repos' collaterals or pledged to central banks and international financial institutions.

4.4.1 Geographical and industry analysis

The following table presents Group's exposure in due from credit institutions at 31 December 2016 and 2015 as disclosed for IFRS purposes, and categorized by counterparty's geographical region:

	2016 € million	2015 € million
Greece	32	10
Other European countries	2,540	2,692
Other countries	187	106
Total	**2,759**	2,808

The following table presents Group's exposure in derivative financial instruments at 31 December 2016 and 2015 as disclosed for IFRS purposes, and categorized by counterparty's geographical region and industry sectors:

	31 December 2016			
	Greece € million	**Other European countries € million**	**Other countries € million**	**Total € million**
Sovereign	1,119	-	-	**1,119**
Banks	-	354	429	**783**
Corporate	78	-	-	**78**
	1,197	**354**	**429**	**1,980**

	31 December 2015			
	Greece € million	Other European countries € million	Other countries € million	Total € million
Sovereign	1,065	-	-	1,065
Banks	17	332	418	767
Corporate	46	5	1	52
	1,128	337	419	1,884

The following table presents the geographical and industry break down of the Group's loans and advances to customers at 31 December 2016 and 2015, as disclosed for IFRS purposes, according to the geographical location or the activity of groups of borrowers that could be similarly affected by changes in economic or other conditions, in order to mitigate risk. For the geographical breakdown the exposures are allocated to regions based on the country of domicile of its counterparty.

	31 December 2016								
	Greece			Rest of Europe			Other Countries		
	Gross amount € million	Out of which: impaired amount € million	Impairment allowance € million	Gross amount € million	Out of which: impaired amount € million	Impairment allowance € million	Gross amount € million	Out of which: impaired amount € million	Impairment allowance € million
Retail Lending	**27,796**	**14,163**	**(6,720)**	**3,510**	**812**	**(369)**	**15**	**-**	**-**
-Mortgage	15,980	*6,360*	(2,132)	1,849	*399*	(140)	15	-	-
-Consumer	3,911	*2,686*	(2,156)	766	*56*	(40)	-	-	-
-Credit card	1,444	*733*	(528)	207	*8*	(8)	-	-	-
-Small business	6,461	*4,384*	(1,904)	688	*349*	(181)	-	-	-
Wholesale Lending	**13,222**	**6,433**	**(3,535)**	**3,639**	**1,303**	**(832)**	**1,816**	**173**	**(133)**
-Commerce and services	6,336	*3,355*	(2,143)	1,547	*506*	(345)	672	*107*	(100)
-Manufacturing	2,786	*1,057*	(497)	569	*173*	(128)	12	-	-
-Shipping	106	*43*	(18)	109	*80*	(63)	795	*65*	(32)
-Construction	2,071	*1,270*	(673)	1,068	*499*	(270)	89	*1*	(1)
-Tourism	1,429	*686*	(173)	115	*15*	(5)	-	-	-
-Energy	290	*8*	(10)	42	*4*	(5)	-	-	-
-Other	204	*14*	(21)	189	*26*	(16)	248	-	-
Public Sector	**635**	**1**	**(9)**	**23**	**-**	**-**	**-**	**-**	**-**
Total	**41,653**	**20,597**	**(10,264)**	**7,172**	**2,115**	**(1,201)**	**1,831**	**173**	**(133)**

	31 December 2015								
	Greece			Rest of Europe			Other Countries		
	Gross amount € million	Out of which: impaired amount € million	Impairment allowance € million	Gross amount € million	Out of which: impaired amount € million	Impairment allowance € million	Gross amount € million	Out of which: impaired amount € million	Impairment allowance € million
Retail Lending	28,417	13,078	(6,600)	3,637	994	(497)	23	-	-
-Mortgage	16,449	*5,470*	(2,060)	1,790	*346*	(112)	22	-	-
-Consumer	3,965	*2,576*	(1,980)	844	*201*	(152)	1	-	-
-Credit card	1,475	*753*	(581)	285	*75*	(52)	-	-	-
-Small business	6,528	*4,279*	(1,979)	718	*372*	(181)	-	-	-
Wholesale Lending	13,392	6,805	(3,720)	3,618	1,367	(836)	1,768	170	(129)
-Commerce and services	6,182	*3,411*	(2,087)	1,696	*627*	(461)	673	*139*	(120)
-Manufacturing	3,209	*1,318*	(725)	518	*162*	(92)	16	-	-
-Shipping	118	*51*	(24)	37	*12*	(1)	619	*28*	(8)
-Construction	2,076	*1,279*	(664)	1,086	*520*	(262)	163	*3*	(1)
-Tourism	1,291	*678*	(165)	100	*17*	(6)	-	-	-
-Energy	267	*12*	(13)	34	-	-	-	-	-
-Other	249	*56*	(42)	147	*29*	(14)	297	-	-
Public Sector	802	1	(8)	26	-	-	-	-	-
Total	42,611	19,884	(10,328)	7,281	2,361	(1,333)	1,791	170	(129)

The following table presents Group's exposure in debt securities at 31 December 2016 and 2015, as disclosed for IFRS purposes, and categorized by counterparty's geographical region and industry sectors:

	31 December 2016			
	Greece € million	Other European countries € million	Other countries € million	Total € million
Sovereign	3,259	8,492	14	11,765
Banks	-	126	-	126
Corporate	198	265	25	488
Total	**3,457**	**8,883**	**39**	**12,379**

	31 December 2015			
	Greece € million	Other European countries € million	Other countries € million	Total € million
Sovereign	3,834	11,801	-	15,635
Banks	29	127	-	156
Corporate	190	237	23	450
Total	4,053	12,165	23	16,241

4.4.2 Maturity analysis

The following table presents the maturity break down of the Group's credit exposures (before any provisions for impairment losses on loans or OTC derivative transactions) for regulatory purposes, at 31 December 2016 and 2015. Items without contractual maturities (i.e. overdraft loans) are presented in the "less than 1 month" time bucket.

	31 December 2016				
	Up to 1 month € million	1 to 3 months € million	3 months to 1 year € million	> 1 year € million	Total € million
Cash and balances with central banks	1,477	-	-	-	**1,477**
Due from credit institutions	744	23	-	168	**935**
Loans and advances to customers	5,407	721	2,766	41,762	**50,656**
Securities	84	618	910	10,780	**12,392**
Other assets	14	3	4	1,164	**1,185**
Credit risk exposures relating to on balance sheet assets	**7,726**	**1,365**	**3,680**	**53,874**	**66,645**
Contracts under ISDA and CSA (Derivatives) and contracts under GMRA (repos and reverse repos)	1,455	70	23	219	**1,767**
Other Contracts (derivatives and repos outside ISDA, CSA,GMRA)	20	1	11	73	**105**
Credit risk exposures relating to off balance sheet items	**1,475**	**71**	**34**	**292**	**1,872**
Total exposures	**9,201**	**1,436**	**3,714**	**54,166**	**68,517**

	31 December 2015				
	Up to 1 month € million	1 to 3 months € million	3 months to 1 year € million	> 1 year € million	Total € million
Cash and balances with Central banks	1,815	-	-	-	1,815
Due from credit institutions	867	26	-	130	1,023
Loans and advances to customers	7,640	845	3,087	40,512	52,084
Securities	426	1,333	718	13,767	16,244
Other assets	19	2	8	1,318	1,347
Credit risk exposures relating to on balance sheet assets	10,767	2,206	3,813	55,727	72,513
Contracts under ISDA and CSA (Derivatives) and contracts under GMRA (repos and reverse repos)	279	1	26	281	587
Other Contracts (derivatives and repos outside ISDA, CSA,GMRA)	36	4	5	62	107
Credit risk exposures relating to off balance sheet items	315	5	31	343	694
Total exposures	11,082	2,211	3,844	56,070	73,207

Credit exposures shown above include the excess collateral posted by the Bank under credit mitigation contracts (initial margins, independent amounts, extra collateral due to haircut imposed by counterparties under the CSAs, GMRAs, GMSLAs) and uncollateralized exposure from derivatives and repurchase transactions. The above exposures do not include deferred tax, fixed assets, intangible assets and goodwill and other assets that do not carry credit risk. Equities in Available-for-sale portfolios are also excluded since they are presented in par. 5.4.

4.5 Past due and impaired loans

4.5.1 Past due exposures

A financial asset is past due if a counterparty has failed to make a payment when contractually due. Exposures more than 90 days past due presented in the table below (refer to paragraph 4.5.2) include the assets for which counterparties have failed to make a contractual payment for more than 90 days, irrespective of whether the asset is considered as impaired or not.

4.5.2 Impairment of financial assets

The Group assesses at each reporting date whether there is objective evidence that a financial asset or group of financial assets, not carried at fair value through profit or loss, is impaired for accounting purposes. A financial asset or a group of financial assets is impaired and an impairment loss is incurred if there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the financial asset (a 'loss event') and that loss event (or events) has an impact on the estimated future cash flows of the financial asset or group of financial assets that can be reliably estimated.

Impairment indicators

For the Group's retail loan exposures, objective evidence that a loan or group of loans is impaired refers to observable data that comes to the attention of the Group about the following loss events:

- significant financial difficulty of the borrower, significant reduction of personal and/or family income or loss of job;
- a default or breach of contract;
- significant changes in the financial performance and behavior of the borrower (for example, a number of delayed contractual payments);
- measurable decrease in the estimated future cash flows of a group of loans through a negative payment pattern such as missed payments or a decrease in property prices;

- the Group granting to the borrower, for economic or legal reasons relating to the borrower's financial difficulty, a concession that the lender would not otherwise consider, such as a reduction of the borrower's monthly installment for a specific period of time, or a temporary or permanent reduction of interest rate;
- it is becoming probable that the borrower will enter into bankruptcy status or other financial reorganization; and
- loss events that could affect the ability of the borrower to repay contractual obligations within the agreed time, such as:
  - serious illness or disability of the obligor or a family member;
  - death of the borrower.

For all other financial assets including wholesale loan exposures, the Group assesses on a case-by-case basis whether there is any objective evidence of impairment using the following criteria:

- significant financial difficulty of the issuer or borrower;
- a default of breach of contract;
- significant changes in the financial performance of the borrower that affect the borrower's ability to meet its debt obligations, such as:
  - operating losses;
  - working capital deficiencies;
  - the borrower having a negative equity;
- other facts indicating a deterioration of the financial performance of the borrower, such as a breach of loan covenants or other terms, or a partial write-off of the borrower's obligations due to economic or legal reasons relating to his financial status;
- significant changes in the value of the collateral supporting the obligation;
- the Group granting to the borrower, for economic or legal reasons relating to the borrower's financial difficulty, a concession that the lender would not otherwise consider, such as a reduction of the obligors monthly installment for a specific period of time, or a temporary or permanent reduction of interest rate;
- becoming probable that the borrower will enter into bankruptcy or other financial reorganization;
- significant adverse changes in the borrower's industry or geographical area that could affect his ability to meet its debt obligations;
- any material facility at the debtor level failing beyond 90 days past due;
- market related information including the status of the borrower's other debt obligations; and
- a significant downgrade in the internal or external credit rating of the borrower's financial instruments when considered with other information.

Impairment assessment

The Group first assesses whether objective evidence of impairment exists individually for financial assets that are individually significant and collectively for financial assets that are not individually significant. If there is no objective evidence of impairment for a financial asset, the Group includes it in a group of financial assets with similar credit risk characteristics and collectively assesses them for impairment. Impairment losses recognized for financial assets for which no objective evidence of impairment exists (incurred but not reported loss – IBNR), represent an interim step pending to the identification of impairment losses of individual assets in the group. As soon as information is available that specifically identifies losses on individually impaired assets in the group, those assets are removed from it.

Financial assets that are individually assessed for impairment and for which an impairment loss is or continues to be recognized are not included in a collective assessment of impairment.

In determining whether a loan is individually significant for the purposes of assessing impairment, the Group considers a number of factors, including the importance of the individual loan relationship and how it is managed, the size of the loan and the product line. Consequently, loans to wholesale customers and financial institutions, as well as investment securities are generally considered as individually significant. Retail lending portfolios are generally assessed for impairment on a collective basis as they consist of large homogenous portfolios; exposures that are managed on an individual basis are assessed individually for impairment.

The Group assesses at each reporting date whether there is objective evidence of impairment.

The following table presents as at 31 December 2016 and 2015, analysis of credit exposures, broken down by major asset class, as disclosed for IFRS purposes:

	31 December 2016			31 December 2015		
	Credit exposure			Credit exposure		
	Total loans and advances to customers € million	Past due more than 90 days € million	Impaired exposures € million	Total loans and advances to customers € million	Past due more than 90 days € million	Impaired exposures € million
Wholesale	19,335	5,884	7,910	19,606	6,207	8,343
Mortgage	17,844	4,953	6,759	18,261	4,735	5,816
Consumer	6,328	2,995	3,483	6,570	3,297	3,605
Small business	7,149	3,721	4,733	7,246	3,951	4,651
Total	**50,656**	**17,553**	**22,885**	51,683	18,190	22,415

The following table presents the geographical break down of total, past due and impaired advances to customers at 31 December 2016 and 2015 based on the country of the subsidiary granting the loan:

	31 December 2016			31 December 2015		
	Total loans and advances to customers € million	Past due more than 90 days € million	Impaired exposures € million	Total loans and advances to customers € million	Past due more than 90 days € million	Impaired exposures € million
Greece	43,174	16,261	21,189	44,088	16,601	20,428
International Operations	7,482	1,292	1,696	7,595	1,589	1,987
Total	**50,656**	**17,553**	**22,885**	51,683	18,190	22,415

4.5.3 Past due but not impaired exposures

For accounting purposes, “past due but not impaired” category includes loans with contractual payments overdue by at least one day but which are not impaired unless specific information indicates to the contrary. For retail exposures, this is typically when loans are in arrears less than 90 days past due, while for wholesale exposures both the delinquency status and the internal rating, which reflects the borrower's overall financial condition and outlook, are assessed. For loans in the above categories, although not considered impaired, the Group recognizes a collective impairment loss.

4.5.4 Impaired exposures

For accounting purposes, ‘Impaired’ loans that are individually assessed include all wholesale exposures as well as small business and mortgage loans which carry an individual impairment allowance. The rest of retail exposures are considered impaired when they are in arrears for more than 90 days or earlier in case there is an objective evidence of impairment and carry a collective impairment allowance. As of 1 January 2016, the mortgage loans of 90 to 180 days past due have been classified as ‘impaired’.

4.6 Impairment losses on loans and advances

For accounting purposes, the Group reviews its loan portfolios to assess whether there is objective evidence of impairment on an ongoing basis. This assessment is performed individually for loans and advances that are individually significant and collectively (a) for loans and advances that are not individually significant and (b) for those that are individually significant but were found not to be impaired following the individual assessment. Management is required to exercise judgment in making assumptions and estimates when calculating the present value of the cash flows expected to be received on both, individually and collectively assessed loans and advances.

Individual impairment assessment

For loans assessed on an individual basis, mainly the Group's wholesale lending portfolio, management uses its best estimate to determine the present value of the cash flows that are expected to be received. In estimating these cash flows, management makes judgments about the borrower's financial position and the net realizable value of any underlying collaterals.

Each individually assessed loan for impairment is assessed on a case-by-case basis (in cooperation between Credit Risk Management function and the business units) and subsequently it is independently approved by the Credit Risk Management function.

Collective impairment assessment

Collective impairment allowance is established for (a) groups of non-impaired or impaired retail homogenous loans that are not considered individually significant and (b) groups of corporate or retail loans that are individually significant but that were not found to be individually impaired.

In determining whether an impairment loss should be recorded in the income statement, management makes judgments as to whether there is any observable data indicating that there is a measurable decrease in the estimated future cash flows of a loan portfolio before the decrease can be identified on an individual loan basis in that portfolio. This evidence may include observable data indicating that there has been an adverse change in the payment status of borrowers in a group, or national or local economic conditions that correlate with defaults on assets in the group.

In assessing the need for collective impairment, management considers factors such as credit quality, portfolio size, concentrations and economic factors. Management's estimates are based on historical loss experience for assets with similar credit risk characteristics to those in the loan portfolio under assessment when scheduling its future cash flows. Management also applies significant judgment to assess whether current economic and credit conditions are such that the actual level of impairment loss is likely to be greater or lower than that suggested by historical experience. In normal circumstances, historical loss experience provides objective and relevant information in order to assess the loss within each loan portfolio. In other circumstances, historical loss experience provides less relevant information, for example when recent trends in risk factors are not fully reflected in the historical information. Where changes in economic, regulatory and behavioral conditions result in most recent trends in portfolio risk factors not being fully reflected in the impairment calculation model used, the Group adjusts the impairment allowance derived from historical loss experience accordingly.

The uncertainty inherent in the estimation of impairment loss is increased in the current macroeconomic environment, and is sensitive to factors such as the political uncertainty, level of economic activity, bankruptcy rates, geographical concentrations, changes in laws and regulations, property prices and level of interest rates.

The following table presents as at 31 December 2016 and 2015, analysis of provisions for impairment losses, broken down by major asset class, as disclosed for IFRS purposes:

	31 December 2016		31 December 2015	
	Provision for impairment losses		Provision for impairment losses	
	Balance of impairment € million	Impairment charges € million	Balance of impairment € million	Impairment charges € million
Wholesale	4,509	262	4,693	902
Mortgage	2,272	218	2,172	838
Consumer	2,732	228	2,765	361
Small business	2,085	67	2,160	564
Total	**11,598**	**775**	11,790	2,665

The following table presents the movement of the provision for impairment losses on loans and advances to customers for the year ending 31 December 2016 and 2015:

	31 December 2016	31 December 2015
	Total impairment allowance € million	Total impairment allowance € million
Balance at 1 January	**11,790**	9,748
Impairment losses charged for the year	775	2,665
Recoveries of amounts previously written off	8	14
Amounts written off	(582)	(294)
NPV unwinding	(312)	(297)
Foreign exchange differences and other movements	(81)	(46)
Balance at 31 December	**11,598**	11,790

The table below presents the geographical break down of the provision for impairment losses on loans and advances to customers for the year ending 31 December 2016 and 2015 based on the country of the subsidiary granting the loan:

	2016 € million	2015 € million
Greece	10,702	10,750
International Operations	896	1,040
Total	**11,598**	11,790

4.7 Standardised approach

The Group applies the Standardised approach for all subsidiaries exposures and for a part of the Bank's retail loans. Moreover, the Standardised approach is applied for credit exposures with sovereign and institutional counterparties, as well as with corporate bond issuers, for which a permanent exemption has been granted by the BoG.

Credit ratings are retrieved from External Credit Assessment Institutions (ECAIs), such as Moody's or Standard & Poor's or Fitch. In the cases where more than one rating is available, the second better rating is used.

ECAIs are not used for loans' portfolios directly, but only in cases when they are guaranteed by central governments or institutions (risk substitution). In such a case the ECAIs used are the same as the ones described above.

In the case of corporate bond issues, the corresponding issue rating by these agencies is used. In case that an issue rating is not available, rating for other issues by the same issuer can be used, if: (a) the corporate bond under review has

equal or better seniority with these rated bonds or (b) the resulting risk weight is lower than the applicable risk weight of unrated bonds.

The table below presents the credit exposures (before credit risk mitigation, i.e. collaterals, and after the application of CCF for which the standardised approach is applied, at 31 December 2016 and 2015, broken down by supervisory risk weights:

	Supervisory risk weightings - 31 December 2016							
	0% - 4% € million	10% - 20% € million	35% € million	50% € million	75% € million	100% € million	150% - 250% € million	Total € million
Credit risk (pursuant Standardised approach)								
Central governments or central banks	9,666	23	-	-	-	4,401	687	**14,777**
Regional governments or local authorities	-	86	-	-	-	3	-	**89**
Public sector entities	-	-	-	-	-	11	7	**18**
Multilateral development banks	78	-	-	-	-	-	-	**78**
International organisations	6,843	-	-	-	-	-	-	**6,843**
Institutions	1,716	9,544	-	493	-	15	115	**11,883**
Corporates	997	-	-	24	-	2,561	146	**3,728**
Retail	64	-	-	38	3,149	-	-	**3,251**
Secured by mortgages on immovable property	-	-	3,716	473	-	-	-	**4,189**
Exposures in default	3	-	-	1	-	2,028	377	**2,409**
Items associated with particularly high risk	-	-	-	7	-	-	1	**8**
Covered bonds	-	191	-	-	-	-	-	**191**
Claims in the form of collective investment undertakings (CIUs)	-	-	-	-	-	53	-	**53**
Equity exposures	-	-	-	-	-	50	84	**134**
Other items	779	13	-	-	-	2,886	-	**3,678**
Total	**20,146**	**9,857**	**3,716**	**1,036**	**3,149**	**12,008**	**1,417**	**51,329**

	Supervisory risk weightings - 31 December 2015							
	0% - 4% € million	10% - 20% € million	35% € million	50% € million	75% € million	100% € million	150% - 250% € million	Total € million
Credit risk (pursuant Standardised approach)								
Central governments or central banks	13,676	-	-	40	-	4,272	512	18,500
Regional governments or local authorities	-	75	-	-	-	27	-	102
Public sector entities	-	-	-	-	-	-	14	14
Multilateral development banks	385	-	-	-	-	-	-	385
International organisations	10,043	-	-	-	-	-	-	10,043
Institutions	1,616	5,557	-	339	-	8	28	7,548
Corporates	1,147	-	-	20	-	2,011	116	3,294
Retail	52	-	-	34	3,154	-	-	3,240
Secured by mortgages on immovable property	-	-	4,037	503	-	-	-	4,540
Exposures in default	1	-	-	1	-	1,427	123	1,552
Items associated with particularly high risk	1	-	-	13	-	804	365	1,183
Covered bonds	-	188	-	-	-	29	-	217
Claims in the form of collective investment undertakings (CIUs)	-	-	-	-	-	55	-	55
Equity exposures	-	-	-	-	-	40	373	413
Other items	861	16	-	-	-	2,971	-	3,848
Total	27,780	5,836	4,037	950	3,154	11,644	1,531	54,934

Credit exposures shown in the above table do not include goodwill, intangible assets and for 2015 participations in insurance companies that are deducted from regulatory own funds.

The table below presents the credit exposures (after credit risk mitigation, i.e. collaterals) for which the standardised approach is applied, at 31 December 2016 and 2015, broken down by supervisory risk weights:

	Supervisory risk weightings - 31 December 2016							
	0% - 4% € million	10% - 20% € million	35% € million	50% € million	75% € million	100% € million	150% - 250% € million	Total € million
Credit risk (pursuant Standardised approach)								
Central governments or central banks	7,827	23	-	41	-	4,401	687	**12,979**
Regional governments or local authorities	-	83	-	-	-	3	-	**86**
Public sector entities	-	-	-	-	-	10	2	**12**
Multilateral development banks	62	-	-	-	-	-	-	**62**
International organisations	6,843	-	-	-	-	-	-	**6,843**
Institutions	1,716	2,585	-	395	-	18	66	**4,780**
Corporates	-	-	-	-	-	2,525	146	**2,671**
Retail	-	-	-	-	3,099	-	-	**3,099**
Secured by mortgages on immovable property	-	-	3,716	473	-	-	-	**4,189**
Exposures in default	-	-	-	-	-	2,025	376	**2,401**
Items associated with particularly high risk	-	-	-	7	-	-	1	**8**
Covered bonds	-	191	-	-	-	-	-	**191**
Claims in the form of collective investment undertakings (CIUs)	-	-	-	-	-	53	-	**53**
Equity exposures	-	-	-	-	-	50	84	**134**
Other items	779	13	-	-	-	2,886	-	**3,678**
Total	**17,227**	**2,895**	**3,716**	**916**	**3,099**	**11,971**	**1,362**	**41,186**

	Supervisory risk weightings - 31 December 2015							
	0% - 4% € million	10% - 20% € million	35% € million	50% € million	75% € million	100% € million	150% - 250% € million	Total € million
Credit risk (pursuant Standardised approach)								
Central governments or central banks	8,509	-	-	78	-	4,273	512	13,372
Regional governments or local authorities	-	72	-	-	-	27	-	99
Public sector entities	-	-	-	-	-	-	4	4
Multilateral development banks	206	-	-	-	-	-	-	206
International organisations	10,042	-	-	-	-	-	-	10,042
Institutions	1,677	1,705	-	336	-	87	28	3,833
Corporates	-	-	-	17	-	1,932	116	2,065
Retail	-	-	-	-	3,097	-	-	3,097
Secured by mortgages on immovable property	-	-	4,034	503	-	-	-	4,537
Exposures in default	-	-	-	-	-	1,428	123	1,551
Items associated with particularly high risk	-	-	-	11	-	804	365	1,180
Covered bonds	-	188	-	-	-	29	-	217
Claims in the form of collective investment undertakings (CIUs)	-	-	-	-	-	55	-	55
Equity exposures	-	-	-	-	-	40	373	413
Other items	861	16	-	-	-	2,971	-	3,848
Total	21,295	1,981	4,034	945	3,097	11,646	1,521	44,519

Credit exposures shown in the above table do not include goodwill, intangible assets and for 2015 participations in insurance companies which were deducted from regulatory own funds.

4.8 Internal Ratings Based (IRB) approach

4.8.1 Risk classifications

The Bank's risk classifications can be divided into the following main categories:
- rating of large corporate and medium size customers; and
- credit scores assigned to retail customers.

(a) Rating of large corporate and medium size customers

The Bank has decided upon the differentiation of rating models for corporate banking, in order to better reflect the risk for customers with different characteristics. Hence, rating models are employed for a number of general, as well as specific customer segments:

- **Traditional corporate lending:**
  - Moody's Risk Advisor (MRA).
  - Internal credit rating for those customers that cannot be rated by MRA.

MRA is a rating system that aggregates quantitative and qualitative information on individual obligors to perform the assessment of their creditworthiness and determine the credit rating for the obligor. It takes into account the company's financial performance, its cash flows, industry sector trends, peers' performance, as well as qualitative assessment of management, the company's status, market and industry structural factors. MRA is used for the assessment of all legal entities with full accountancy tax books irrespective of their legal form, and is calibrated on the Greek corporate environment.

The table below shows the mapping of MRA internal rating to ICAP (ECAI) ratings:

Mapping of internal (MRA) ratings to ECAIs	
ICAP ratings	MRA ratings
AA, A	1,0 - 2,0
BB, B	2,1 - 3,3
C, D	3,4 - 4,3
E	4,4 - 5,5
F	5,6 - 7,4
G, H	7,5 - 9,9

Mappings are primarily based on medium size corporate customers.

Certain types of companies cannot be analyzed with MRA due to the special characteristics of their financial statements such as insurance companies, state-owned organizations, brokerage firms and start ups. In such cases an internal credit rating system is applied. It is an expert judgment borrower rating system and, similarly to MRA, it combines quantitative and qualitative assessment criteria (such as size, years in business, credit history, industry sector etc.).

Customers are classified with respect to their credit worthiness to 11 Borrower rating categories. Categories 1 to 3 correspond to low risk customers, whereas categories 4 to 6 to customers with medium credit risk. Categories 7 to 9 apply to customers with higher risk who are monitored more closely. Categories 10 and 11 apply to non-performing exposures and write offs respectively.

In addition, the Bank performs an overall assessment of corporate customers, based both on the borrower rating of the obligors (MRA or ICR), and the collaterals and guarantees referred to in its approved credit limit, using a 14 grade rating scale. Credit exposure is subject to detailed reviews by the appropriate approval level of the Bank based on the respective transactional rating (TR). Low risk corporate customers are reviewed at least once a year, whereas higher risk customers are reviewed either on a semi-annual (watchlist) or quarterly basis (substandard and distressed). All high risk corporate customers are reviewed by the Special Handling Committees (there are three SCHs) on a weekly basis.

• **Specialized lending (shipping, real estate and project finance):** slotting methodology

For the specialized lending portfolios i.e. the primary source of repayment of the obligation is the income generated by the asset(s), rather than the independent capacity of the commercial enterprise, the Bank utilizes the Slotting Method by adapting and refining the CRD criteria to the Bank's risk practices. Customers falling in the specialized lending category (shipping, real estate and project finance) are classified in 5 categories: strong, good, satisfactory, weak and default. Each of the 5 categories is associated with a specific risk weight and EL percentage.

The fundamental standards underlying the Group's centralized loan approval and rating processes are to review the global exposure of the customer and to use the 'four-eyes' principle, which requires each credit limit/rating to be evaluated by more than one individual. Ratings are approved by Credit Committees according to the level of exposure involved and each committee has its own specific approval limit. Ratings of customers whose exposure exceed Credit Committees' thresholds are reviewed by the Group's Central Committee. The Credit Committees are composed of senior managers from different business units, as well as from risk management and each committee has its own independent chairman.

As a general rule, each corporate customer is rated separately. For major corporate customers – where it is customary to assign a rating based on the customer's affiliation to a group or parent company – the rating of the parent company is transferred to the subsidiaries, if the Group believes that the parent company can and will guarantee the fulfilment of the obligations of its subsidiaries.

The rating systems described above are an integral part of the Corporate Banking decision making and risk management processes:

- the credit approval process, both at the origination and review process;
- the calculation of Economic Value Added (EVA) and risk-adjusted pricing; and
- the quality assessment of issuers of cheques prior to their pledge as collateral.

(b) Credit scores assigned to retail customers

The Bank assigns credit scores to its retail customers using a number of statistically based models both at origination and an ongoing basis through behavioral scorecards. Those models have been developed to predict, on the basis of available information, the probability of default (PD), loss given default (LGD) and exposure at default (EAD). They cover the entire spectrum of retail products (Credit Cards, Consumer Lending unsecured revolving credits, Car loans, Personal loans, Mortgages and Small Business Loans).

The models were developed based on the Bank's historical data and credit bureau data. Behavioral scores are calculated automatically on a monthly basis, thus ensuring that credit risk assessments are up to date.

The models are used in the credit approval process, in credit limit management, as well as in the collections' process for the prioritization of the accounts in terms of handling. Furthermore, the models have been often used for the risk segmentation of the customers. They are also utilized for risk based pricing in particular segments or new products introduced.

All of the above processes are centralized and based on the 'four-eyes' principle.

Retail exposures are grouped into homogeneous pools (refer to credit risk measurement in paragraph 4.8.3(e)).

4.8.2 Rating process and models' monitoring

The Bank considers the process and periodic review of credit policy implementation to be of critical importance, as they enable both the integration of the latest market information and analysis into the decision process and ensure the necessary uniformity in the face of the customer. Accordingly, a comprehensive credit policy manual is utilized on the extension and monitoring of credit, detailing the guiding principles, as well as specific rules relating to lending policies.

The credit rating process is also monitored independently by the Group Credit Control Sector via post approval control and evaluation of all credit portfolios through field reviews (case by case) for corporate lending.

Capital Adequacy Control (Credit Risk) & Regulatory Framework Sector independently monitors the capacity of rating models and scoring systems to classify customers according to risk, as well as to predict the PD, LGD and EAD.

The Bank's validation policy follows a procedure that complies with international best practices and regulatory requirements. The Bank verifies the validity of the rating models and scoring systems on an annual basis and the validation includes both quantitative and qualitative aspects.

The quantitative validation includes statistical tests relating to the following:

- Model stability reports such as population stability, comparison of actual and expected score distributions and characteristic analysis.
- Discriminatory power of rating models i.e. the ability to distinguish default risk on a relative basis.
- Accuracy/backtesting, i.e. comparison of ex ante probabilities of default and other risk parameters and ex post observed default/loss/credit exposure as defined for regulatory purposes level.

The validation of risk parameters is based on historical in house data utilising confidence intervals or market data/benchmarks, where such benchmarks exist. The qualitative assessment includes the use of the models, data, model design, structures and processes underlying the rating systems. In addition to the annual validation of the models, the Bank has established a quarterly monitoring procedure to assess the significance of any changes.

Validation procedures are documented and regularly reviewed and reported to the BRC. Group Internal Audit also independently reviews the validation process annually.

4.8.3 Credit risk measurement

The credit risk framework is articulated around two measures: expected loss (EL) and unexpected loss (UL) for credit risk.

- EL is the expected annual credit loss over an economic cycle.
- UL is defined as the volatility (or one standard deviation) of annual losses. If losses always equaled their expected levels then there would be no uncertainty. UL outlines the risk arising from volatility in loss levels and thus in earnings.

The core credit risk parameters included in the estimation of expected loss, unexpected loss and credit RWAs are: Probability of Default (PD), Loss Given Default (LGD), credit exposure as defined for regulatory purposes (EAD) and Effective Maturity (M).

(a) Probability of Default (PD)

The PD represents the probability that a customer will default on his credit obligation within the next 12 months. The definition of default used by the Bank is consistent with the requirements of the CRD and BoG.

The Bank’s historical default data have been used in developing PD estimates. For each grade or pool, the long term average default rate expanding over a 10 years period is used as reference when assessing the PD values.

Under the Bank's validation framework, models are validated at least annually. This back testing is performed in order to timely identify possible misalignments of the model or possible reverse trends of the PDs. In this way, the Bank reassures that the PDs used are representative of the portfolios' quality and no underestimation underlies the information disclosed.

(b) Loss Given Default (LGD)

LGD represents the loss on an exposure after a customer defaults. It is expressed as a percentage of the exposure that the Bank expects to lose at the point of default.

The first step in the development process of behavioral LGD models or segments for the Retail portfolios of the Bank was to calculate realized (historical) LGD for a significant number of years starting before 2000. Data was collected and realized losses were calculated taking into account the concept of economic loss. To calculate historical LGD values for retail exposures, the workout LGD method was employed.

The statistical modeling technique employed for the development of behavioral LGD models for consumer lending was Stepwise Linear Regression. This technique is used to first select the most predictive characteristics, and then to determine the weights for each variable. For the remaining portfolios the segmentation approach was used for estimating the LGD, based on material loss drivers.

When determining the final parameter, the Bank allows for uncertainty in the data and also applies an additional margin for economic downturn, by reference to external data.

For corporate lending which is under Foundation IRB, the supervisory LGD parameters are applied.

(c) Credit exposure as defined for regulatory purposes (EAD)

For estimating credit exposures for regulatory purposes, future draw downs are taken into account through the use of Credit Conversion Factors (CCFs).

This is meaningful only for products with a risk of drawings that is loan commitments, credit cards and the like, as ordinary loans do not involve a risk of future drawings. Conversion factors are influenced by the Bank's ability to identify slow paying borrowers at an early stage and reduce their access to additional drawings.

CCF estimates for the retail portfolios of the Bank are based on the Bank's historical data. As in the LGD estimation, the Bank employed statistical modeling techniques for consumer lending products (credit cards and open line) and for small business revolving and overdraft facilities, based on key drivers.

It is noted that in some cases credit exposure as defined for regulatory purposes is observed to be lower than the current balance outstanding. In these cases a capping has been applied at the pool design stage and credit exposure as defined for regulatory purposes has been set to equal current balance outstanding, as stipulated by CRD, thus allowing for an additional margin of conservatism.

For corporate lending which is under Foundation IRB, the supervisory CCF parameters are applied.

(d) Effective Maturity (M)

For corporate lending which is under Foundation IRB, the supervisory parameter is applied (i.e. 2.5 years).

(e) Pools (retail asset classes)

For retail lending portfolios, after building the models, ratings have been defined for the risk parameters (PD, LGD and CCF) with the purpose of smoothing out fluctuations by score in the development sample and help the derivation of statistically reliable estimates of the relationship between the score and PD, LGD and CCF, respectively.

The functional relationship between the score and the risk parameter was used to create a harmonized rating scale of PD, LGD and CCF across all retail portfolios. For example, the harmonized PD Rating 1 corresponds to the same PD range regardless of unit, product or scorecard in use.

Rated exposures have been assigned into particular pools, each containing groups of sufficiently homogenous exposures to allow for accurate and consistent estimation of loss characteristics at pool level.

Pools' setting for the retail lending portfolios was driven by a number of segmentation variables (product, financial status, time on books, current delinquency status, etc.), as well as the score. All these provide for a meaningful differentiation of risk as the score is based on the assessment of numerous variables (borrower and transaction characteristics).

Back testing and comparison analysis with external data, where available, are conducted at least annually to validate the risk parameters' estimations and pools, as described in rating process and models' monitoring in paragraph 4.8.2.

The Group has received approval for using the internal rating models and all detailed validations of the parameters were submitted to and reviewed by the regulator, as part of the IRB approval process and also as part of the ongoing supervisory monitoring. Annual validation results and actions taken (redevelopment or refit of scorecards; calibration of risk parameters of PD, LGD and EAD) are also independently reviewed by Internal Audit as part of the annual recurring Basel III compliance audit in accordance with BoG Governor's Act 2577. During 2016, the Bank has performed all required adjustments and re-calibrations and incorporated in the capital calculations revised through the cycle (TTC) risk parameters to reflect the macroeconomic environment and loss severities affecting the portfolios leveraging up to date performance.

4.8.4 Exposures subject to IRB approach

The following table presents the credit exposures after guarantees' deduction as defined for regulatory purposes, subject to the IRB approach, broken down by supervisory asset classes at 31 December 2016 and 2015:

	2016 € million	2015 € million
Credit risk (pursuant IRB Approach)		
- Corporate exposures (Foundation IRB approach) and specialised lending (Slotting methodology)	14,689	14,969
- Retail exposures that exceed € 1 million (Advanced IRB approach)	446	456
Retail exposures		
- Secured by immovable property - non SME	10,332	10,513
- Qualifying revolving retail exposures	2,706	2,805
- SME exposures	5,736	5,782
- Other retail exposures	1,769	1,812
Equity	49	47
Asset backed securities	173	224
Credit risk total, IRB approach	**35,900**	36,608

The following table presents corporate credit exposures after guarantees' deduction as defined for regulatory purposes and the corresponding weighted average risk weight, weighted average probability of default (PD) and weighted

average loss given default (LGD) or weighted average expected loss (EL), broken down by PD band at 31 December 2016 and 2015:

	31 December 2016				31 December 2016		
	Corporate exposures (Foundation IRB)				Retail exposures that exceed € 1 million (Advanced IRB)		
PD bands	Weighted average PD %	€ million	Weighted average risk weight %	Weighted average LGD %	€ million	Weighted average risk weight %	Weighted average EL %
0.00% - 0.03%	0.03%	22	13%	42%	-	-	-
0.03% - 0.10%	0.10%	554	31%	45%	-	-	-
0.10% - 0.50%	0.20%	516	42%	42%	2	6%	0.03%
0.50% - 1.00%	0.73%	817	75%	41%	1	9%	0.1%
1.00% - 2.00%	1.29%	850	103%	44%	5	35%	0.4%
2.00% - 3.00%	2.43%	296	99%	41%	2	44%	0.7%
3.00% - 4.00%	3.32%	775	124%	39%	1	45%	0.96%
4.00% - 5.00%	4.28%	288	102%	40%	21	58%	1.03%
5.00% - 10.00%	7.30%	1,347	154%	41%	27	66%	1.7%
10.00% - 20.00%	15.85%	558	164%	39%	24	89%	3.7%
20.00% - 30.00%	23.33%	93	225%	39%	5	47%	2.9%
30.00% - 50.00%	30.52%	168	182%	39%	39	113%	8.1%
50.00% - 99.99%	-	-	-	-	58	94%	15.8%
Sub total - non defaulted	**5.15%**	**6,284**	**110%**	**41%**	**185**	**84%**	**7.6%**
100%		5,975	-	42%	261	-	52.2%
Total		**12,259**			**446**		

The corporate portfolio under FIRB is reduced by € 162 million due to write-offs in 2016.

	31 December 2015				31 December 2015		
	Corporate exposures (Foundation IRB)				Retail exposures that exceed € 1 million (Advanced IRB)		
PD bands	Weighted average PD %	€ million	Weighted average risk weight %	Weighted average LGD %	€ million	Weighted average risk weight %	Weighted average EL %
0.00% - 0.03%	0.03%	50	14%	44%	-	-	-
0.03% - 0.10%	0.10%	254	29%	42%	-	-	-
0.10% - 0.50%	0.20%	378	39%	41%	-	44%	0.2%
0.50% - 1.00%	0.72%	1,209	77%	42%	-	-	-
1.00% - 2.00%	1.32%	1,107	97%	44%	8	33%	0.4%
2.00% - 3.00%	2.44%	289	89%	39%	5	33%	0.4%
3.00% - 4.00%	3.41%	536	106%	37%	-	2%	0.04%
4.00% - 5.00%	4.28%	415	102%	39%	18	60%	1.2%
5.00% - 10.00%	7.33%	1,417	154%	42%	18	69%	2.2%
10.00% - 20.00%	15.46%	526	158%	38%	33	73%	3.3%
20.00% - 30.00%	23.33%	60	218%	39%	3	92%	6.3%
30.00% - 50.00%	30.38%	223	177%	38%	52	104%	8.3%
50.00% - 99.99%	-	-	-	-	46	83%	16.8%
Sub total - non defaulted	5.17%	6,464	109%	41%	182	80%	7.7%
100%		6,171	-	42%	274	-	51.3%
Total		12,635			456		

The table below presents the specialized lending credit exposures (shipping, real estate and project finance) broken down by supervisory risk weights:

Weights	2016 € million	2015 € million
0%	813	803
50%	10	53
70%	352	372
90%	665	617
115%	559	485
250%	31	4
Total	**2,430**	2,334

The following table presents retail credit exposures as defined for regulatory purposes and the corresponding weighted average risk weight and weighted average expected loss (EL), broken down by PD band at 31 December 2016 and 2015. It is noted that based on Regulation (EU) 445/2016, Article 4, there is a change of default definition in mortgage portfolio, from 180dpd to 90dpd, effective as of 31.12.2016.

	31 December 2016			31 December 2016			31 December 2016		
	Secured by immovable property non-SME retail exposures			Qualifying revolving retail exposures			SME exposures		
		Weighted average risk weight	Weighted average EL		Weighted average risk weight	Weighted average EL		Weighted average risk weight	Weighted average EL
PD bands	€ million	%	%	€ million	%	%	€ million	%	%
0.00% - 0.03%	-	-	-	209	2%	0.02%	-	-	-
0.03% - 0.10%	-	-	-	362	4%	0.1%	-	-	-
0.10% - 0.50%	607	9%	0.1%	379	10%	0.2%	55	16%	0.1%
0.50% - 1.00%	801	17%	0.1%	189	23%	0.5%	10	34%	0.4%
1.00% - 2.00%	1,656	24%	0.2%	152	41%	1.1%	429	21%	0.4%
2.00% - 3.00%	351	36%	0.4%	62	62%	1.9%	25	31%	0.7%
3.00% - 4.00%	218	47%	0.6%	51	78%	2.6%	78	41%	1.2%
4.00% - 5.00%	-	-	-	66	96%	3.7%	211	21%	0.8%
5.00% - 10.00%	430	63%	1.0%	107	130%	5.9%	441	30%	1.8%
10.00% - 20.00%	746	118%	3.1%	51	172%	9.9%	228	44%	4.0%
20.00% - 30.00%	416	146%	5.7%	13	219%	17.5%	136	51%	6.4%
30.00% - 50.00%	786	137%	9.7%	10	235%	28.8%	148	53%	9.2%
50.00% - 99.99%	893	90%	21.4%	8	189%	46.3%	788	47%	15.6%
Sub total - non defaulted	**6,904**	**65%**	**4.7%**	**1,659**	**36%**	**1.7%**	**2,549**	**37%**	**6.5%**
100%	3,428	-	39.5%	1,047	-	88.9%	3,187	-	51.9%
Total	**10,332**			**2,706**			**5,736**		

Credit Risk

	31 December 2015			31 December 2015			31 December 2015		
	Secured by immovable property non-SME retail exposures			Qualifying revolving retail exposures			SME exposures		
		Weighted average risk weight	Weighted average EL		Weighted average risk weight	Weighted average EL		Weighted average risk weight	Weighted average EL
PD bands	€ million	%	%	€ million	%	%	€ million	%	%
0.00% - 0.03%	148	1%	0.004%	190	1%	0.02%	-	-	-
0.03% - 0.10%	-	-	-	12	2%	0.03%	-	-	-
0.10% - 0.50%	2,745	10%	0.1%	800	8%	0.1%	48	17%	0.1%
0.50% - 1.00%	22	22%	0.1%	117	24%	0.6%	10	34%	0.4%
1.00% - 2.00%	929	24%	0.2%	144	38%	1.0%	395	22%	0.4%
2.00% - 3.00%	349	50%	0.6%	34	54%	1.6%	19	36%	0.9%
3.00% - 4.00%	-	-	-	59	68%	2.2%	84	40%	1.2%
4.00% - 5.00%	-	-	-	68	89%	3.3%	201	19%	0.7%
5.00% - 10.00%	756	82%	1.4%	156	119%	5.3%	413	30%	1.7%
10.00% - 20.00%	836	123%	3.6%	77	169%	10.0%	207	41%	3.7%
20.00% - 30.00%	545	144%	6.3%	12	216%	18.0%	167	52%	6.5%
30.00% - 50.00%	466	152%	10.2%	25	225%	28.7%	189	55%	9.5%
50.00% - 99.99%	799	115%	20.0%	19	172%	47.1%	792	42%	16.4%
Sub total - non defaulted	7,595	63%	3.8%	1,713	41%	2.4%	2,525	36%	7.0%
100%	2,918	-	43.0%	1,092	-	84.4%	3,257	-	50.3%
Total	10,513			2,805			5,782		

	31 December 2016			31 December 2015		
	Other retail exposures			Other retail exposures		
		Weighted average risk weight	**Weighted average EL**		Weighted average risk weight	Weighted average EL
PD bands	**€ million**	**%**	**%**	€ million	%	%
0.00% - 0.03%	0.05	9%	0.02%	8	1%	0.003%
0.03% - 0.10%	-	-	-	-	7%	0.02%
0.10% - 0.50%	146	24%	0.2%	393	15%	0.1%
0.50% - 1.00%	123	36%	0.3%	49	58%	0.5%
1.00% - 2.00%	213	42%	0.5%	110	37%	0.4%
2.00% - 3.00%	79	67%	1.2%	59	60%	1.0%
3.00% - 4.00%	29	62%	1.4%	15	104%	2.3%
4.00% - 5.00%	16	105%	3.1%	17	105%	3.1%
5.00% - 10.00%	71	48%	2.0%	99	35%	1.5%
10.00% - 20.00%	114	74%	5.1%	142	50%	3.8%
20.00% - 30.00%	67	84%	8.0%	75	58%	5.9%
30.00% - 50.00%	117	93%	13.5%	101	76%	10.8%
50.00% - 99.99%	163	72%	29.3%	184	64%	19.5%
Sub total - non defaulted	**1,138**	**58%**	**7.0%**	1,252	43%	4.8%
100%	631	-	62.3%	560	-	49.7%
Total	**1,769**			1,812		

The following table shows undrawn credit facilities before Credit Conversion Factors (CCF) and the corresponding CCF.

	31 December 2016		31 December 2015	
	Off Balance Sheet before CCF € million	Credit Conversion Factor (CCF%)	Off Balance Sheet before CCF € million	Credit Conversion Factor (CCF%)
Qualifying revolving retail exposures	1,463	62%	1,485	61%
SME exposures	640	10%	672	10%
Other retail exposures	0.1	84%	16	13%
Retail exposures that exceed €1 million	25	9%	5	11%

The following table presents the impairment losses, by asset class subject to the IRB approach, charged in the year ending 31 December 2016 and 2015:

	2016 € million	2015 € million
Residential real estate property retail exposures	140	606
Qualifying revolving retail exposures	12	138
Other retail exposures	76	572
Corporates / Retail exposures that exceed €1 million	225	873
Total	**453**	2,189

It is noted that the impairment losses of 2015 include the 2015 ECB AQR results and corresponding adjustments (€ 1.4bn in IRB portfolios).

The following table presents the equity exposures, broken down by risk weights at 31 December 2016 and 2015:

Weights	2016 € million	2015 € million
190%	20	18
290%	13	16
370%	16	13
Total	**49**	47

4.9 Credit risk mitigation

A key component of the Group's business strategy is to reduce risk by utilizing various risk mitigating techniques. The most important risk mitigating means are collaterals' pledges, guarantees and netting arrangements in master agreements for derivatives.

4.9.1 Types of collateral commonly accepted by the Bank

Internal policies include specific instructions for the collateral types that could be accepted:

- residential real estate, commercial real estate and land;
- receivables (trade debtors) and post dated cheques;
- financial collateral, listed shares, listed bonds and other specific securities accepted;
- deposits;
- guarantees and letters of support;
- insurance contracts; and
- machinery and equipment, vehicles and vessels.

A specific coverage ratio is pre-requisite upon approval and on ongoing basis for each collateral type, specified in the credit policy manual.

For Treasury exposures (i.e. repos, reverse repos, derivatives, etc.) the Group accepts only cash or liquid bonds as collaterals.

4.9.2 Valuation principles of collateral

For loan products, the valuation principle for collateral is regarded as a conservative approach, taking long term market value and volatility into account when defining the maximum collateral ratio. Valuation and hence eligibility is based on the following principles:

- Market value is assessed; markets must be liquid, quoted prices must be available and the collateral is expected to be liquidated within a reasonable time frame.
- A reduction of the collateral value is considered if the type, location or characteristics (such as deterioration and obsolescence) of the asset indicate uncertainty regarding the sustainability of the market value.
- Forced sale principle; assessment of market value or the collateral value must reflect that realization of collateral in a distressed situation is initiated by the Bank.
- No collateral value is assigned if a pledge is not legally enforceable.

Real estate collaterals for all units are valued by Eurobank Property Services S.A., a subsidiary of the Bank, which reports to the General Manager of Global Markets, Wealth Management & Group Real Estate Asset Management. Eurobank Property Services S.A is regulated by the Royal Institute of Chartered Surveyors (RICS) and employs internal or external qualified appraisers based on predefined criteria (qualifications and expertise). All appraisals take into account, among other things, the region, age and marketability of the property, and are further reviewed and countersigned by experienced staff of the subsidiary. The valuation methodology employed is based on IVS (International Valuation Standards) and quality controls are in place such as reviewing mechanisms, independent sample reviews by independent well established valuation companies. In 2006, the Bank initiated a project in collaboration with other banks in Greece to develop a real estate property index (Prop. Index) for residential properties. The methodology, which was developed by an independent specialized statistical company, has been approved by the BoG and its use enables a dynamic monitoring of residential property values and market trends, on an annual basis. For commercial real estate, re-valuations are performed by qualified property valuers within a time horizon of two to three years. More frequent re-valuations either on site or desktop are performed depending on the materiality level of the credit exposure and the classification of the borrower (risk category).

To ensure the quality of post-dated cheques accepted as collateral, the Bank has developed a pre-screening system, which takes into account a number of criteria and risk parameters, so as to evaluate their eligibility. Furthermore, the post-dated cheques' valuation is monitored weekly through the use of advanced statistical reports and monthly through detailed information regarding recoverability of cheques, referrals and bounced cheques, per issuer broken down by business unit (corporate and small business banking).

In case of reverse repos, the bonds received as collateral are evaluated on a daily basis by the official valuation system. All these are monitored via credit exposure measurement system that takes into account the specific characteristics of every contract.

4.9.3 Collateral policy and documentation

For loan products, Group instructions emphasize that practices followed are timely and prudent in order to ensure that collateral items are controlled by the Group's entities and that the loan and pledge agreement, as well as the collateral is legally enforceable. Therefore, the Group's entities hold the right to liquidate collateral in the event of the obligor's financial distress and can claim and control cash proceeds from a liquidation process.

The Group uses to a large extent standard loan and pledge agreements, ensuring legal enforceability.

The application of CSA (Credit Support Annex) and GMRA (Global Master Repurchase Agreements) contracts determines the cash that should be paid or received in case of derivatives and repos contracts.

4.9.4 Guarantees and credit derivatives

The guarantees used as credit risk mitigation by the Group are largely issued by central and regional governments in the countries in which it operates. The Public Fund for very small businesses (ETEAN) and similar funds, banks and insurance companies are also important guarantors of credit risk.

The Bank enters into credit derivative transactions with both retail and investment banks. The lowest counterparty rating is A, whereas the average counterparty rating is AA (Standard & Poor's rating scale).

Only eligible providers of guarantees and credit derivatives can be recognized in the Standardised and Foundation IRB approach for credit risk. All central governments, regional governments and institutions are eligible. Guarantees issued by corporate entities can only be taken into account if their rating corresponds to A- (Standard & Poor's rating scale) or better.

The table below shows guarantees received broken down by primary type of guarantee as at 31 December 2016 and 2015:

	2016 € million	2015 € million
Guarantees issued by Central Banks or Central Governments	253	195
Guarantees issued by Banks	28	157
	281	**352**

4.9.5 Netting agreements

The Group further restricts its exposure to credit losses by entering into master netting arrangements with counterparties with which it undertakes a significant volume of transactions. Master netting arrangements do not generally result in an offset of balance sheet assets and liabilities, as transactions are usually settled on a gross basis. However, the credit risk is reduced by a master netting agreement to the extent that if an event of default occurs, all amounts with the counterparty are terminated and settled on a net basis. The Group's overall exposure to credit risk on derivative instruments subject to master netting arrangements can change substantially within a short period, as it is affected by each transaction subject to the arrangement.

For treasury exposures the Group uses standardised ISDA (International Swaps and Derivatives Association) contracts and GMRA contracts for the application of netting agreements on derivatives and repos, respectively. An exposure measurement system is used for the daily monitoring of the net exposure after netting application and collateral exchange.
The Bank already implements the framework for clearing transactions through central counterparty (CCP). Additionally, the Bank is in a position to apply the regulatory framework for transactions not cleared through central counterparty.

4.9.6 Concentration risk on collaterals

For loan products, the most commonly accepted collaterals for credit risk mitigation purposes are real estate. Consumer loans are not collateralized, except for car loans where the Bank retains ownership until full loan repayment. Mortgage loans are fully collateralized with residential real estate properties.

The Bank does not undertake significant market or credit risk on collaterals of Treasury transactions. In case of cash collateral in foreign currency transactions, the Bank manages the respective foreign exchange exposure accordingly.

Furthermore since the Bank uses GMRAs for the risk mitigation of repos and reverse repos, the market risk exposure is minimal. In case of reverse repo transactions the Bank generally accepts high quality government issues as collaterals. The collateral amount on corporate bonds is immaterial.

4.9.7 Analysis of collaterals

The table below show collateral received broken down by primary type of collateral at 31 December 2016 and 2015:

	31 December 2016					
	Recognized financial collateral € million	Real estate property € million	Guarantees € million	Other collaterals € million	Credit Derivatives € million	Total € million
Credit risk (pursuant Standardised approach)						
Central governments or central banks	2,050	-	-	-	-	**2,050**
Regional governments or local authorities	3	-	-	-	-	**3**
Public sector entities	-	-	5	-	-	**5**
Multilateral development banks	16	-	-	-	-	**16**
Institutions	7,273	-	-	-	-	**7,273**
Corporates (excluding past due and secured by real estate property)	1,030	-	27	-	-	**1,057**
Retail (excluding past due and secured by real estate property)	111	-	40	-	-	**151**
Secured by mortgages on immovable property (excluding past due)	-	5,602	-	-	-	**5,602**
Exposures in default	4	1,604	4	-	-	**1,612**
Items associated with particularly high risk	-	-	-	-	-	**-**
Credit risk total, Standardised approach	**10,487**	**7,206**	**76**	**-**	**-**	**17,769**
Credit risk (pursuant IRB approach)						
Corporate exposures						
- Corporate exposures	323	4,079	86	1,745	-	**6,233**
- Retail exposures that exceed €1 million	6	279	2	3	-	**290**
Retail exposures						
- Secured by immovable property non-SME	14	10,317	-	-	-	**10,331**
- Qualifying revolving retail exposures	-	-	-	-	-	**-**
- SME exposures	99	3,307	116	50	-	**3,572**
- Other retail exposures	63	1,189	-	-	-	**1,252**
Credit risk total, IRB approach	**505**	**19,171**	**204**	**1,798**	**-**	**21,678**
Credit risk total	**10,992**	**26,377**	**280**	**1,798**	**-**	**39,447**

	31 December 2015					
	Recognized financial collateral € million	Real estate property € million	Guarantees € million	Other collaterals € million	Credit Derivatives € million	Total € million
Credit risk (pursuant Standardised approach)						
Central governments or central banks	5,324	-	-	-	-	5,324
Regional governments or local authorities	3	-	-	-	-	3
Public sector entities	1	-	10	-	-	11
Multilateral development banks	180	-	-	-	-	180
Institutions	3,968	-	-	-	-	3,968
Corporates (excluding past due and secured by real estate property)	1,146	-	82	-	-	1,228
Retail (excluding past due and secured by real estate property)	109	-	34	-	-	143
Secured by mortgages on immovable property (excluding past due)	-	6,068	3	-	-	6,071
Exposures in default	1	1,103	1	-	-	1,105
Items associated with particularly high risk	1	588	2	-	-	591
Credit risk total, Standardised approach	10,733	7,759	132	-	-	18,624
Credit risk (pursuant IRB approach)						
Corporate exposures						
- Corporate exposures	379	4,267	105	1,592	-	6,343
- Retail exposures that exceed €1 million	6	331	2	1	-	340
Retail exposures						
- Secured by immovable property non-SME	18	10,495	2	-	-	10,515
- Qualifying revolving retail exposures	-	-	-	-	-	-
- SME exposures	114	3,870	111	48	-	4,143
- Other retail exposures	75	1,190	-	-	-	1,265
	592	20,153	220	1,641	-	22,606
Credit risk total	11,325	27,912	352	1,641	-	41,230

Note:
1. The value of collaterals shown above is the allocated value of securities.
2. Financial collaterals are presented after regulatory haircuts.
3. For real estate property the lower between market value and the pledged amount is considered.
4. The "Other collaterals" category includes vessels of €806 million (2015: €755 million) securing shipping exposures under the slotting-specialised lending category.

4.10 Asset Backed Securities

4.10.1 Bank's objectives and role

The Bank has securitized various financial assets. Up to August 2007 the objective of the Bank in each of its securitization transactions was to convert illiquid receivables to "tradeable" securities, to be placed with investors for long-term funding. Since then the objective of the Bank in each securitization transaction is to convert illiquid receivables to "tradeable" securities that are eligible for financing.

In all the securitization transactions the Bank acts, among other, as the Originator, the Servicer, the Sponsor, the Cash Manager and the Account Bank. The Bank also provides the issuer with the subordinated reserve loan in order to fund the reserve account up to the initial required amount.

The Bank has not proceeded with any synthetic securitization and re-securitization.

4.10.2 Methodology for risk weightings

For the purchased securities exposures the Bank applies the Ratings Based Approach (RBA) for the risk weighting of asset backed securities. According to this approach the risk weight factor that applies is a function of the rating and seniority of the security.

4.10.3 Accounting policies

As part of its funding activity the Group sponsors the formation of certain securitization vehicles, i.e. structured entities, the relevant activities of which have been predetermined as part of their initial design by the Group.

The Group securitizes various financial assets, which generally results in the transfer of these assets to the structured entities, which, in turn issue debt securities held by investors and the Group's entities. Interests in the securitized financial assets may be retained in the form of subordinated tranches or other residual interests.

The Bank under the current securitization framework retains substantially all risks and rewards. The securitized loan portfolios are accounted for, according to the same methodology as non-securitized portfolios.

The Group is exposed to variability of returns from these vehicles through the holding of debt securities issued by them or by providing credit enhancements in accordance with the respective contractual terms. In assessing whether it has control, the Group considers whether it manages the substantive decisions that could affect these vehicles' returns. The abovementioned structured entities, which are bankruptcy-remote entities, may acquire assets directly from the Bank.

For more information about asset backed securities refer to Consolidated Financial Statements Note 36.

4.10.4 Securitized exposures

The following table presents the risk weights of the purchased securitized exposures of the Group, based on the IRB approach, at 31 December 2016 and 2015:

	2016 € million	2015 € million
Risk weight: to 10%	102	137
Risk weight: over 12% to 18%	7	13
Risk weight: over 20% to 35%	57	69
Risk weight: over 40% to 75%	4	5
Risk weight: over 75% under 250%	3	-
Total	**173**	224

For securitization exposures the Group uses one or more of the following external rating agencies: Moody's, Standard & Poor's and Fitch (refer to par. 4.7).

5. Market Risk

5.1 Definition and policies

Market risk is the potential loss occurring from changes in interest and foreign exchange rates, equities and commodity prices, as well as market volatilities.

In order to ensure the efficient monitoring of market risks that emanate from its overall activities, the Group adheres to certain principles and policies. The objectives of the market risk policies applied by the Group are to:

- establish an effective market risk monitoring and management framework at Group level;
- ensure regulatory compliance; and
- create a competitive advantage over competition through more accurate assessment of the risks assumed.

5.2 Internal model - Value at Risk (VaR) model & Credit Risk (IRC)

The Bank uses its own, validated by the Bank of Greece since 2005, internal VaR model in order to calculate capital requirements for market risk in its trading book, for the Bank's activities in Greece. VaR is a statistical risk measure of the maximum loss that the Bank may, under normal market conditions, incur over a certain period of time with a certain confidence level. For example, a 99% 1 day VaR of € 1 million means that there is a 99% probability that the Bank will not lose more than € 1 million within the next day.

The internal model described above covers the following risks:

- Interest rate risk: the risk of losses because of changes in interest rates.
- Foreign exchange risk: the risk of losses on foreign currency positions because of changes in exchange rates.
- Equity risk: the risk of losses because of changes in equity prices, equity indices and mutual funds.
- Commodity risk: the risk of losses because of changes in commodity prices.
- Volatility risk: the risk of losses on option positions because of changes in implied volatility levels.

Market risk of the Group, with the exclusion of International operations, is managed and monitored using VaR methodology. Market risk in International operations is managed and monitored using mainly sensitivity analyses. Information from International operations is presented separately as it originates from significantly different economic environments with different risk characteristics.

The internal VaR model is based on the Monte Carlo simulation. The VaR is calculated on 99% confidence level and for a 1 day holding period. Full repricing is applied on every position of the portfolio. This means that the model covers all types of non linear instruments (i.e. options).

VaR models are designed to measure market risk under normal market environment. It is assumed that any changes in the risk factors follow a normal distribution. Since VaR constitutes an integral part of the Group's market risk control regime, VaR limits have been established for all (trading and non trading portfolio) operations and actual exposure is reviewed daily by management. From 31.12.2011 the Bank implemented the Stressed VaR and Incremental Risk Charge (IRC) using the internal model as requested by Basel 2.5 framework. IRC is computed on all fixed income positions in Bank’s trading activities in Greece. It estimates the incremental risk arising from rating migrations and defaults, using Monte Carlo simulation, to a 99.9% confidence level over a one year holding period. The model was approved by BoG on 31.12.2011.

The Bank’s exposure to commodities and volatilities is immaterial.

Market Risk

The following table presents the VaR figures, performed on 99% confidence interval for 1 day holding period, by risk type, for trading and banking book in Greece, Cyprus and Luxembourg for 2016 and 2015:

VaR	2016				2015			
	Average € million	Min.[2] € million	Max.[2] € million	31 Dec. € million	Average € million	Min.[2] € million	Max.[2] € million	31 Dec. € million
Interest Rate Risk[1]	17	10	30	17	47	18	93	19
Foreign Exchange Risk	1	1	2	1	2	1	4	1
Equities Risk	2	1	3	1	4	2	6	2
Total VaR	18	10	31	18	49	19	97	20

The aggregate VaR of the interest rate, foreign exchange and equities VaR benefits from diversification effects.

The following table presents the VaR and Stressed VaR figures for Trading book in Greece for 2016 and 2015, performed on a 99% confidence interval for 1 day holding period, by risk type, that was taken into account in the capital charge calculation using the internal model:

TRADING BOOK VaR	2016				2015			
	Average € million	Min.[2] € million	Max.[2] € million	31 Dec. € million	Average € million	Min.[2] € million	Max.[2] € million	31 Dec. € million
Interest Rate Risk	0	0	1	0	1	0	1	1
Foreign Exchange Risk	1	1	1	1	1	1	1	1
Equities Risk	0	0	0	0	0	0	0	0
Total VaR	1	1	1	1	1	1	1	1

TRADING BOOK STRESSED VaR	2016				2015			
	Average € million	Min.[2] € million	Max.[2] € million	31 Dec. € million	Average € million	Min.[2] € million	Max.[2] € million	31 Dec. € million
Interest Rate Risk	0	0	0	0	1	0	1	0
Foreign Exchange Risk	3	3	5	3	3	3	3	3
Equities Risk	0	0	0	0	0	0	0	0
Total VaR	3	3	5	3	3	3	4	3

The following table presents the capital requirements for the trading book in 2016 and 2015 per risk factor, in relation to VaR and Stressed VaR and after the application of the relevant multiplier and the addition of IRC. According to regulatory requirements the VaR and Stressed VaR calculation is performed on 99% confidence level, for a 10 day holding period. The IRC is added to the Interest Rate Risk.

CAPITAL REQUIREMENTS	2016				2015			
	Average € million	Min.[3] € million	Max.[3] € million	31 Dec. € million	Average € million	Min.[3] € million	Max.[3] € million	31 Dec. € million
Interest Rate Risk	11	8	15	9	23	21	28	21
Foreign Exchange Risk	36	35	36	37	46	45	47	45
Equity Risk	1	2	0	2	0	0	1	0
Total capital requirements on total diversified position	43	41	46	43	57	55	62	55
of which Incremental Risk Charge (IRC)	5	3	6	4	3	3	6	3

Notes:

[1] *Interest rate volatility applied to all portfolios. Credit spread volatility applied to Trading and Available-for-sale positions*

[2] *Min and Max refer to each separate risk factor*

[3] *Min and Max of the risk factors are based on the statistics of the respective Total capital requirements*

Total Capital requirements figure is less than the sum of the individual figures for Foreign Exchange, Interest Rate, Equities and Volatility, due to diversification.

5.2.1 Stress testing

Given that the VaR approach does not cover extreme market conditions, the Group has been applying stress tests, to simulate the effect of many standard deviation movements of risk factors and the breakdown of historical correlations.

The main types of stress tests performed are subjective stress tests, where the portfolios are exposed to scenarios for risk factors that are deemed particularly relevant (depreciation of foreign currencies, yield curves parallel shifts, long term steepening, long term flattening, 10σ upward shift, credit spread increase, equities prices reduction and implied volatilities adverse moves).

5.2.2 Back testing

The Bank employs back testing controls in order to test the calibration and predictive capabilities of its internal risk assessment model. Back testing is applied through comparison of daily VaR readings to portfolio value changes. Back testing for 2016 revealed two (2) exceptions out of total of 250 working days, one of which was attributed to FX volatility and one was statistical. According to the regulatory framework this number of exceptions results to a multiplier equal to 3 for capital adequacy calculations for market risk. Backtesting for 2015 revealed seven (7) exceptions, six of which were attributed to FX volatility and one was attributed both to FX, interest rate and spread adverse movements, which according to the regulatory framework resulted, for 2015, to a multiplier equal to 3.75 for capital adequacy calculations for market risk.

5.3 Standardised approach for market risk

The Bank uses the Standardised approach for the measurement of market risk exposure and capital requirements of its subsidiaries in Greece and in International operations. The following table summarizes the capital requirements for market risk per risk factor, based on the Standardised approach, at 31 December 2016 and 2015:

	2016 € million	2015 € million
General risk of traded debt instruments	1	2
Specific risk of traded debt instruments	-	-
General and specific risks of equities	1	-
Credit valuation adjustment risk (CVA)	9	11
Foreign exchange risk	6	35
Total	**17**	48

5.4 Equity exposures not included in the trading book

Available-for-sale equity investments are those intended to be held for an indefinite period of time, which may be sold in response to needs for liquidity or changes in equity prices. Purchase and sales of equity available-for-sale investments are recognized on trade date, the date on which the Group commits to purchase or sell the equity investment. Initial recognition is at fair value plus transaction costs. Derecognition occurs when the rights to receive cash flows from those investments have expired or where the Group has transferred substantially all risks and rewards of ownership.

Available-for-sale equity investments are subsequently carried at fair value. Gains and losses arising from changes in fair value are recognized directly in equity until the financial asset is derecognized or impaired at which time the cumulative gain or loss previously recognized in equity is recognized in profit or loss.
The fair values of quoted investments in active markets are based on current bid prices. If the market for an equity is not active (and for non-listed securities), the Group establishes fair value by using valuation techniques. These include the use of recent arm's length transactions, reference to the current fair value of another instrument that is substantially the same, a discounted cash flow analysis, option pricing models and other valuation techniques commonly used by market participants.

In case of equities classified as available-for-sale, a significant or prolonged decline in the fair value of the security below its cost is considered in determining whether the assets are impaired. If any such evidence exists for available-for-sale equities, the cumulative loss – measured as the difference between the acquisition cost and the current fair value, less any impairment loss on that equity investment previously recognized in profit or loss – is removed from equity and recognized in the income statement. Impairment losses recognized in the income statement on equity investments are not reversed through the income statement.

As at 31 December 2016, the Group has recognized impairment losses amounting to € 11 million on equity securities (including mutual funds, listed and non-listed equities), for which the decline in fair value below cost is considered to be significant and/or prolonged, as a result of the continuing deterioration in the equity markets. As at 31 December 2015, the Group recognized impairment losses amounting to € 6 million on equity securities.

The following table presents equity holdings belonging to the available-for-sale portfolio and included in regulatory exposures at 31 December 2016 and 2015:

	2016 € million	2015 € million
Held for:		
Strategic investments	21	21
Equity investments for capital appreciation	122	129
Total	**143**	150
Listed	29	29
Non-listed	36	38
Other (MF & other type of funds)	78	83
Total	**143**	150

The table below presents the realized gains/(losses) after tax from disposal of available-for-sale equity investments, as well as the unrealized gains/(losses) from revaluations, at 31 December 2016 and 2015:

	2016 € million	2015 € million
Realised gains/(losses)	55	6
Unrealised gains/(losses)	21	22

The amount of unrealized gains of available-for-sale equity investments, recognized in reserves as at 31 December 2016 is included in CET1 capital.

5.5 Interest rate risk not included in the trading book

The Bank calculates and monitors the interest rate risk of the banking book for the Bank's operations in Greece, Luxembourg and Cyprus on a daily basis, using the internal VaR model. For the International operations (Romania, Bulgaria, Serbia) the Group applies sensitivity analysis and is preparing to implement the VaR methodology.

The system takes into account all assets, liabilities and off balance sheet items, which are sensitive to interest rates. The interest rate exposure is calculated using the contractual maturity dates or the next repricing dates in case of floating rate instruments. This is also applied to lending instruments, where no prepayment adjustments are made since this type of risk is immaterial. The major part of non-maturity accounts has a short term repricing structure and therefore treated accordingly.

At end of year 2016 and 2015 the average interest rate VaR for a 99% confidence level and a holding period of 1 day for Greece, Cyprus and Luxembourg, was as follows:

	2016 € million	2015 € million
Interest rate VaR of the banking book[1]	17	47
Total interest rate VaR (trading and banking book[1])	17	47

[1] *Interest rate volatility applied to all portfolios. Credit spread volatility applied to Trading and Available-for-sale positions*

Furthermore, the Bank calculates sensitivity on interest rates applying 100 bps parallel shifts on interest rates. The following table presents sensitivity analysis by currency for the Bank at 31 December 2016 and 2015:

2016	TOTAL € million	EUR € million	CHF € million	JPY € million	PLN € million	RON € million	TRY € million	USD € million	OTHERS € million
Interest rate risk (banking book): +100 bps parallel shift	**(11)**	(11)	1	-	-	-	-	(1)	-
Interest rate risk (trading and banking book): +100 bps parallel shift	**(23)**	(23)	1	-	-	-	-	(1)	-

2015	TOTAL € million	EUR € million	CHF € million	JPY € million	PLN € million	RON € million	TRY € million	USD € million	OTHERS € million
Interest rate risk (banking book): +100 bps parallel shift	91	89	1	-	-	-	-	1	-
Interest rate risk (trading and banking book): +100 bps parallel shift	85	82	1	-	-	-	-	2	-

The following table presents the sensitivity analysis for interest rate sensitive position of the banking book in the major International subsidiaries (Romania, Bulgaria, Serbia, Ukraine), at 31 December 2016 and 2015, by applying a 100bps upward parallel shifts:

	31 December 2016		
	Sensitivity trading book € million	**Sensitivity banking book € million**	**Total sensitivity € million**
Romania	(1)	(9)	(10)
Bulgaria	-	(4)	(4)
Serbia	6	(1)	5
Ukraine	-	-	-

	31 December 2015		
	Sensitivity trading book € million	Sensitivity banking book € million	Total sensitivity € million
Romania	(2)	(13)	(15)
Bulgaria	-	(3)	(4)
Serbia	-	(3)	(3)
Ukraine	-	(3)	(3)

5.6 Counterparty risk

5.6.1 Definition

Counterparty risk is the risk that a counterparty in an off balance sheet transaction (i.e. derivative transaction) defaults prior to maturity and the Bank has a claim over the counterparty (the market value of the contract is positive for the Bank).

5.6.2 Mitigation of counterparty risk

To reduce the exposure towards single counterparties, risk mitigation techniques are used. The most common is the use of closeout netting agreements (usually based on standardised ISDA contracts), which allow the bank to net positive and negative replacement values in the event of default of the counterparty.

Furthermore, the Bank also applies margin agreements (CSAs) in case of counterparties. Thus, collateral is paid or received on a daily basis to cover current exposure. In case of repos and reverse repos the Bank applies netting and daily margining using standardised GMRA contracts.

5.6.3 Counterparty risk monitoring

The current exposure for counterparty risk at 31 December 2016 and 2015 is presented in the table below:

	31 December 2016				
	Current exposure before netting € million	Current exposure after netting € million	Netting effect € million	Collateral received / (paid) € million	Total exposure after netting and margin collateral € million
Contracts under ISDA and CSA (derivatives)	1,992	1,189	803	(454)	211
Contracts under GMRA (repos and reverse repos)	1,515	1,514	1	(39)	1,548
Other contracts (derivatives and repos outside ISDA and CSA, GMRA)	104	104	-	-	104
Total	**3,611**	**2,807**	**804**	**(493)**	**1,863**

	31 December 2015				
	Current exposure before netting € million	Current exposure after netting € million	Netting effect € million	Collateral received / (paid) € million	Total exposure after netting and margin collateral € million
Contracts under ISDA and CSA (derivatives)	1,923	1,129	794	(651)	296
Contracts under GMRA (repos and reverse repos)	245	244	1	(51)	292
Other contracts (derivatives and repos outside ISDA and CSA, GMRA)	77	77	-	-	77
Total	2,245	1,450	795	(702)	665

Notes:

1. Netting and collateral posting is applied per counterparty only for contracts under ISDA, CSA or GMRA.
2. Repo and reverse repos with central banks (Bank of Greece, European Central Bank, etc) are excluded.
3. In case of exposure calculation on transactions under GMRA, haircuts are taken into account and increase the exposure.
4. In case of exposure calculation on transactions under CSA threshold & independent amounts are taken into account and increase the exposure.
5. In the "Collateral received / (paid)" column we include Greek Treasury bills received as collateral through the CSA signed with Public Debt Management Agency (PDMA).

5.6.4 Wrong way risk

The Bank prevents the initiation of derivative transactions in cases that the value of the underlying instrument is highly correlated with the credit quality of the counterparty.

5.6.5 Implications under rating downgrade

The Bank's financial collateral agreements (CSAs covering derivative transactions) with other banks contain in some cases rating triggers. For these agreements, the minimum exposure level (threshold amount) for further posting of collateral will be lowered in case of a downgrading. Given the Bank's current rating, the additional effect is immaterial.

5.6.6 Credit derivatives

As of 31 December 2016 the Group held no Credit Default Swap positions.

The Bank does not have any brokerage activity in this market. Furthermore, the Bank does not hedge its loan portfolio with CDSs as this market in Greece is not developed.

6. Operational Risk

6.1 Governance

Acknowledging the fact that operational risk is embedded in every business activity undertaken, the organizational governance stems from the Board of Directors (BoD) through the Executive Board and Senior Management to the Heads and staff of every business unit. The organizational governance is applicable to all jurisdictions accordingly.

An Operational Risk Unit operates in every subsidiary of the Bank, being responsible for implementing the Group's operational risk strategy and framework in the jurisdiction the Bank operates.

The BoD monitors, through the Board Risk Committee (BRC), the operational risk level and profile including the level of operational losses, their frequency and severity, and through the Audit Committee, the status of operational risk-related control issues. The Operational Risk Committee assesses the operational risks arising from the activities of the Group, ensures that each business entity has appropriate policies and procedures for the control of its operational risk and that prompt corrective action is taken whenever a high risk area is identified.

The Group Chief Risk Officer is the sponsor of any operational risk related initiative and ensures implementation of the operational risk policy. The Group Chief Risk Officer has the overall responsibility and oversight of the Operational Risk Units in the countries that the Bank operates.

The prime responsibility for operational risk management lies with the respective Heads of each business unit. To this end, every business unit:

- Identifies, evaluates and monitors its operational risks and implements risk mitigation techniques;
- Assesses control efficiency;
- Reports all relevant issues; and
- Has access to and uses the common methods and tools introduced by the Operational Risk Sector, in order to facilitate the identification, evaluation and monitoring of operational risk.

An OpRisk Partner is assigned in each business unit, being responsible for acting as the internal operational risk manager and coordinator and as a liaison to the Operational Risk Unit.

Certain business units have established a dedicated Anti-Fraud Unit/Function, according to the fraud risk to which their operations are exposed. Their main objective is to continuously identify fraud risks and timely undertake all appropriate actions in addressing and mitigating those risks.

The Operational Risk Sector is responsible for defining and rolling out the methodology for the identification, assessment, reporting of operational risk in accordance with BRC decisions, implementing regulatory requirements and Group guidelines, monitoring the operational risk level and profile and reporting thereon to the BRC, and defining and rolling out the methodology for the calculation of the regulatory capital charge for operational risk.

6.2 Operational risk management framework

The Group Operational Risk Framework is built on four elements:

- Principles
- Governance and Organization
- Processes
- Infrastructure

Operational Risk

The operational risk management framework and related policies are designed to:

- Establish the operational risk framework and governance, aligning Bank's structure and processes with best international banking practices;
- Introduce risk identification quantification and monitoring processes such as risk and control self-assessment, key risk indicators, historic risk events collection and scenario analysis;
- Establish a common definition and consistent approach for operational risk to enable common identification and aggregation of operational risk across the Bank;
- Establish a proactive operational risk management culture across our business, linking business operations with the objectives of risk control;
- Establish comprehensive and integrated operational risk reporting;
- Adhere to the Group guidelines and meet local regulatory requirements and practices relating to operational risk of the jurisdictions in which Eurobank operates;
- Achieve a competitive advantage in terms of operational risk management through risk-based decision making; and
- Leverage international knowledge and good practices on operational risk management.

Operational risk processes consist of risk identification, assessment (including measurement and valuation), control management, risk mitigation, risk reporting and performance improvement. These processes are supported by and implemented with the operational risk tools/methods, which are the following:

- **Risk & Control Self-Assessment (RCSA)**
  RCSA is a team-based technique aiming to identify, assess and ultimately mitigate operational risk. Its outcome is a portfolio of operational risks per business unit, summarised into operational risk profiles. Business units assess operational risks, evaluate the effectiveness of controls in place, assess whether identified risks are within business risk appetite tolerance levels and establish specific action plans to mitigate the assessed exposure.
- **Key Risk Indicators (KRIs)**
  KRIs are metrics based on historical data and are relevant to specific and measurable activities indicating operational risk exposures. KRIs are quantifiable and expressed as an amount, a percentage or a ratio, assigned to specific operational risks and linked with tolerance.
- **Operational Risk Events**
  Operational Risk Events are identified and reported with the purpose of populating the internal operational risk events database. Operational risk events are classified according to their owner, cause, risk category, impact, business function and business line.
- **Operational Risk Scenarios**
  Operational Risk Scenario analysis assesses the exposure to a range of significant operational risks through the examination of extreme or catastrophic yet plausible future events. Scenarios take into account the current and projected business, economic, social and geo-political environment.
- **Operational Risk Reporting**
  Operational risk reports are produced for internal and regulatory purposes.
- **Fraud Risk Management**
  Fraud risk management constitutes a major commitment of the Group to mitigate fraud risk and reduce fraud losses. The Group strategy for combating fraud is based on three main directions:
  1) Organizational Initiatives to strategically focus in the fight against fraud and improve coordination,
  2) Staff Related Initiatives to raise awareness and to create an anti-fraud culture, and
  3) Fraud Prevention and Detection Environment Initiatives to strategically enhance the Group's control environment against fraud.
- **Operational Risk Mitigation**
  The Bank is covered by the Crime & Professional Liability Insurance which buys through the London Market, covering the entirety of its operations Group-wide.

6.3 Operational risk capital requirements calculation

As required by Basel III for the use of the Standardised Approach, the Group's business activities have been divided into eight business lines and the annualized gross operating income for 2014, 2015 and 2016 is calculated for each business line. The required business line beta factors are then applied to the relevant business line gross operating income, to establish the required regulatory capital per business line; with these numbers summed together to establish the overall Pillar 1 regulatory capital requirements for operational risk.

7. Asset Encumbrance

7.1 Information on importance of encumbrance

The Bank uses the following main types of encumbrance:

i) secured funding through Eurosystem (ECB's Main Refinancing Operations (MRO)/Targeted Long Term Refinancing Operations (TLTRO)), for this funding the Bank mainly uses as collateral: retained Law 3723/2008 Pillar II bonds, GGBs and GTBs, eligible loans and other eligible debt securities;
ii) secured funding (repos) with interbank counterparties backed with high quality securities (mainly European Financial Stability Fund (EFSF) bonds);
iii) secured funding with interbank counterparties backed with retained own covered bonds, own ABSs and retained Law 3723/2008 Pillar II issues;
iv) covered bonds issuance and securitisations backed with loans, the majority of these issues are retained and part of them (the senior tranches in case of ABSs) are used for interbank repos as per point (iii) above.

During 2016 the Group's secured funding from Eurosystem sources (ECB's MRO/TLTRO & ELA) decreased by € 11.4bn, from € 25.3bn in December 2015, to € 13.9bn in December 2016.

Following ECB's Governing Council decision to reinstate the waiver affecting the eligibility of marketable instruments issued or guaranteed by the Hellenic Republic used as collateral in Eurosystem's monetary policy operations (effective 29.06.2016) the Group's secured funding from ECB's MRO/TLTRO decreased by approximately € 3.3bn, from € 5.3bn in December 2015. Furthermore, after the decision by ECB to make EFSF bonds (used to recapitalize Greek banks under the most recent Greek bailout program) eligible for purchase under its QE plan, the Bank sold during 2016 EFSF bonds of total notional of € 3.1bn. The liquidity effect of these transactions was limited since these bonds had been funded through market repos or through ECB funding with very low haircuts. The re-instatement of the waiver also permitted the reduction of emergency liquidity assistance (ELA) funding and the normalization of collateral haircut for Pillar II Government guaranteed bonds gave the Group the opportunity to reduce further its Pillar II issues. Within 2016, the Bank decreased its secured funding from BoG (ELA) by € 8.1bn to € 11.9bn from € 20bn in 2015. In 2016 the bank issued € 1.2bn notional Covered Bonds that were fully retained and were used as collateral mainly in the interbank market (secured funding). The bank interbank/client secured funding increased by € 3.3bn in 2016 reaching € 7.3bn in total. Other major developments in 2016 were the increase in deposits and the deleveraging of assets.

The encumbrance of assets and the encumbrance of assets received by the group as collateral is a centralized function and it is implemented by Eurobank, Greece.

The level of secured funding (repos with foreign counterparties) in subsidiaries is immaterial.

As of end of year 2016 the over-collateralization in case of secured funding through repos, ECB and ELA was 16%, 39% and 33% accordingly.

For the interbank secured funding (repos), the Bank uses the standard terms of the GMRA (Global Master Repurchase Agreement). According to this contract, the exposure between the Bank and its counterparty is calculated on a daily basis and collateral is posted to or received by the counterparty so that the exposure remains almost zero.

7.2 Assets

	31 December 2016			
	Carrying amount of encumbered € million	Fair value of encumbered assets € million	Carrying amount of unencumbered assets € million	Fair value of unencumbered assets € million
Equity instruments	-	-	155	155
Debt securities	8,169	7,619	4,210	4,287
Other assets	22,201		31,640	

	31 December 2015			
	Carrying amount of encumbered assets € million	Fair value of encumbered assets € million	Carrying amount of unencumbered assets € million	Fair value of unencumbered assets € million
Equity instruments	-	-	150	150
Debt securities	11,481	11,223	4,760	4,722
Other assets	21,555		34,073	

7.3 Collateral received

	31 December 2016		31 December 2015	
	Fair value of encumbered collateral received or own debt securities issued € million	Fair value of collateral received or own debt securities issued available for encumbrance € million	Fair value of encumbered collateral received or own debt securities issued € million	Fair value of collateral received or own debt securities issued available for encumbrance € million
Own debt securities issued other than own covered bonds or ABSs	2,261	267	11,060	1,837

7.4 Encumbered assets/collateral received and associated liabilities

	31 December 2016		31 December 2015	
	Matching liabilities, contingent liabilities or securities lent € million	Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered € million	Matching liabilities, contingent liabilities or securities lent € million	Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered € million
Carrying amount of selected financial liabilities	22,812	32,207	31,029	43,687

8. Leverage Ratio

The new regulatory framework has introduced the leverage ratio as a non-risk based measure which is intended to restrict the build-up of excessive leverage from on and off balance sheet items in the banking sector.

The leverage ratio is defined as Tier 1 capital divided by the total exposure measure and will be a binding requirement at the beginning of 2018.

The bank submits to the regulatory authorities the leverage ratio on quarterly basis and monitors the level and the factors that affect the ratio.

The level of the leverage ratio with reference date 31.12.2016 on consolidated basis was at 9.90% (2015 9.07%), according to the transitional definition of Tier 1 capital, significantly over the 3% minimum threshold applied by the competent authorities.

In the table below, the detailed disclosures on the Group's leverage ratio are presented with reference date 31 December 2016 and 2015:

Summary reconciliation of accountng assets and leverage ratio exposures

	31 December 2016	31 December 2015
	€ million	€ million
Total assets as per published financial statements	66,393	73,553
Adjustment for entities which are consolidated for accountng puroses but are outside the scope of regulatory consolidation	-	(1,534)
Adjustment for fiduciary assets recognised on the balance sheet pursuant to the applicable accounting frameworkbut excluded from the leverage ratio exposure measure to article 429(13) of Regulation (EU)NO 575/2013	-	-
Adjustments for derivative financial instruments	(561)	(406)
Adjustments for securities financing transactions	1,680	516
Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	1,412	1,372
(Adjustment for intragroup exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (7) of Regulation (EU) No 575/2013)	-	-
(Adjustment for exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (14) of Regulation (EU) No 575/2013)	-	-
Other adjustments	(558)	(490)
Total leverage ratio exposure	**68,366**	73,011

Leverage Ratio

Leverage ratio common disclosure

	CRR leverage ratio exposures 2016 € million	CRR leverage ratio exposures 2015 € million
On - balance sheet exposures (excluding derivatives and STF's)		
On-balance sheet items (excluding derivatives and STF's, but including collateral)	64,012	69,811
Asset amounts deducted in determining Tier I capital	(157)	(195)
Total on-balance sheet exposures (excluding derivatives and STF's)	**63,855**	69,616
Derivative exposures		
Replacement cost associated with derivatives transactions	1,179	1,205
Add-on amounts for PPE associated with derivatives transactions	240	273
Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	-	-
(Deductions of receivables assets for cash variation margin provided in derivatives	-	-
(Exempted CCP leg of client-cleared trade exposures)	-	-
Adjusted effective notional amount of written credit derivatives	-	-
(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	-	-
Total derivative exposures	**1,419**	1,478
Securities financing transaction exposures		
Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	-	-
(Netted amounts of cash payables and cash receivables of gross SFT assets)	-	-
Counterparty credit risk exposure for SFT assets	1,680	544
Derogation for SFTs: Counterparty credit risk exposure in accordance with Article 429b (4) and 222 of Regulation (EU) No 575/2013	-	-
Agent transaction exposures	-	-
(Exempted CCP leg of client-cleared SFT exposure)	-	-
Total securities financing transaction exposures	**1,680**	544
Off-balance sheet exposures		
Off-balance sheet exposures of gross notional amount	4,427	4,098
Adjustments for conversion to credit equivalent amounts[1]	(3,015)	(2,726)
Total off-balance sheet exposures	**1,412**	1,372
Exempted exposures in accordance with CRR Article 429 (7) and (14) (on and off balance sheet)		
(Exemption of intragroup exposures (solo basis) in accordance with Article 429(7) of Regulation (EU) No 575/2013 (on and off balance sheet))	-	-
(Exposures exempted in accordance with Article 429 (14) of Regulation (EU) No 575/2013 (on and off balance sheet))	-	-
Capital and Total Exposures		
Tier I capital	**6,771**	6,623
Total leverage ratio exposures	**68,366**	73,011
Leverage Ratio		
Leverage Ratio	**9.90%**	9.07%
Choise on transitional arrangements and amount of derecognised fidiciary items		
Choice on transitional arrangements for the definition of capital measure	**Transitional**	Transitional
Amounts of derecognised fiduciary items in accordance with the Article 429(11) of Regulation (EU) NO 575/2013		

[1] Total off-balance sheet items exposures presented in accordance with Article 111 (1) of Regulation (EU) No 575/2013 (standardised approach).

Leverage Ratio

Split-up on balance sheet exposures (excluding derivatives and SFTs)

	CRR leverage ratio exposures 2016 € million	CRR leverage ratio exposures 2015 € million
Total on-balance sheet exposures (excluding derivatives and SFT'S) of which:	**64,012**	69,811
Trading book exposures	-	-
Banking book exposures of which:	**64,012**	69,811
Covered bonds	191	217
Exposures treated as sovereigns	17,833	22,031
Exposures to regional goverments,MOB, international organisations and PSE NOT treates as sovereigns	-	-
Institutions	2,895	3,200
Secured by mortgages of immovable properties	12,544	13,321
Retail exposures	5,543	5,714
Corporate	10,952	10,598
Exposure in default	9,959	8,962
Other exposures (eg equity, securitisations and other non-credit obligation assets)	4,095	5,768

9. Liquidity Risk

The Group is exposed to events on a daily basis which affect the level of its available cash resources due to deposits withdrawals, maturity of medium or long term notes and maturity of secured or unsecured funding (interbank repos and money market takings), loan draw-downs and forfeiture of guarantees. Furthermore, margin calls on secured funding transactions (with ECB and the market) and on risk mitigation contracts (CSAs, GMRAs) result in liquidity exposure. The Group maintains cash resources to meet all of these needs. The Board Risk Committee (BRC) sets liquidity limits to ensure that sufficient funds are available to meet such contingencies.

Past experience shows that liquidity requirements to support calls under guarantees and standby letters of credit are considerably less than the amount of the commitment. This is also the case with credit commitments where the outstanding contractual amount to extend credit does not necessarily represent future cash requirements, as many of these commitments will expire or terminate without being funded.

The matching and controlled mismatching of the maturities and interest rates of assets and liabilities is fundamental to the management of the Group. It is unusual for banks to be completely matched, as transacted business is often of uncertain term and of different types. An unmatched position potentially enhances profitability, but also increases the risk of losses.

The maturities of assets and liabilities and the ability to replace, at an acceptable cost, interest bearing liabilities as they mature, are important factors in assessing the liquidity of the Group.

Liquidity Risk Management Framework

The Group’s Liquidity Risk Management Policy defines the following supervisory and control structure:

- BRC's role is to approve all strategic liquidity risk management decisions and monitor the quantitative and qualitative aspects of liquidity risk;
- Group Assets and Liabilities Committee has the mandate to form and implement the liquidity policies and guidelines in conformity with Group's risk appetite and to review at least monthly the overall liquidity position of the Group;
- Group Treasury is responsible for the implementation of the Group's liquidity strategy, the daily management of the Group’s liquidity and for the preparation and monitoring of the Group’s liquidity budget;
- Global Market and Counterparty Risk Sector is responsible for measuring, monitoring and reporting the liquidity of the Group.

The Bank as per ECB, EBA & BoG directives applies risk management policies, processes and controls regarding, Asset Encumbrance / Liquidity Buffers and Collateral Management, Contingency Funding Plan (CFP), Intraday Liquidity Risk Management and Liquidity Stress Tests. These policies, processes and controls along with the liquidity governance are described in the ILAAP (Internal Liquidity Adequacy Assessment Process).

These policies, processes and controls are applicable in the specific Greek macro-economic environment, Banks’ business model and market conditions on wholesale funding.

Liquidity Buffer

The Group holds a diversified portfolio of cash and high liquid assets to support payment obligations and contingent deposit withdrawals in a stressed market environment. The Group's assets held for managing liquidity risk comprise:
(a) Cash and balances with central banks;
(b) Eligible bonds and other financial assets for collateral purposes;
(c) Interbank placings maturing within one month.

The unutilized assets, containing highly liquid and central banks eligible assets, provide a contingent liquidity reserve of € 6.7bn as at 31 December 2016 (2015: € 6bn). In addition the Group holds other types of highly liquid assets, as defined by the regulator, amounting to € 2.1bn (cash value) (2015: € 2.2bn). It should be noted that the major part of ECB's available collateral of € 3.1bn (cash value) is held by Group's subsidiaries for which temporary local regulatory restrictions are applied and currently limit the level of its transferability between group entities.

Wholesale and Eurosystem's Funding

The credibility of the Greek banking system was significantly restored during 2016 following the successful finalisation of the 1st review of the Third Economic Adjustment Program which permitted the disbursement of an additional instalment of € 10.3bn from the ESM loan. Following this positive development, ECB decided the re-instatement of the waiver for Greek collateral and the normalisation of collateral haircut for Greek sovereign securities at the end of June 2016. This resulted to a positive impact on the liquidity status of the Group (increase of liquidity buffer approximately by € 1bn). The re-instatement of the waiver for Greek sovereign bonds permitted the reduction of ELA funding and the normalisation of collateral haircut for Pillar II Government guaranteed bonds gave the Group the opportunity to reduce further its Pillar II issues.

Furthermore, the Greek Government legislated another round of relaxation of capital controls (on 22nd July 2016). This development along with the reduction of the political uncertainty in Greece led to a further increase of deposits for the Greek banking system.

Following the aforementioned positive developments, Group's dependence from the Eurosystem has been significantly decreased in 2016 by € 11.4bn (o/w reduction of ECB funding by € 3.3bn, reduction of ELA funding by € 8.1bn). Total Eurosystem funding: € 13.9bn at 31 December 2016 compared to € 25.3bn at 31 December 2015. This was the result of the following inflows:

- Increase in deposits + € 2.6bn;
- Increase in interbank repos + € 3.3bn (mainly with own Pillar II bonds and new own issued covered bonds);
- Investment securities deleveraging + € 3.9bn (mainly due to EFSF bonds participation in ECB's Public Sector Purchase Program);
- Other items + € 1.6bn (mainly inflows attributable to PPI (Pre Provision Income), disposal of subsidiaries, loans deleveraging and decreased balances with Central Banks).

LCR calculations

LCR is not an appropriate metric for liquidity risk for banks that are experiencing a system wide crisis for an extended period, as is the case for Greek Banks.

Appendix 1: Transitional own funds disclosure

		2016 Current period € million	2016 Full impact € million	2015 Current period € million	2015 Full impact € million
Common Equity Tier 1 (CET1) Capital: instruments and reserves					
1	Capital instruments and the related share premium accounts	8,711	8,711	8,712	8,712
2	Retained earnings	(10,705)	(10,705)	(11,027)	(11,027)
3	Accumulated other comprehensive income (and other reserves, to include unrealised gains and losses under the applicable accounting standards)	7,716	7,716	7,785	7,786
	Public sector capital injections grandfathered until 1 January 2018	950	-	950	-
5	Minority interests (amount allowed in consolidated CET1)	255	1	401	1
6	**Common Equity Tier 1 (CET1) capital before regulatory adjustments**	**6,927**	**5,723**	6,821	5,472
Common Equity Tier 1 (CET1) capital: regulatory adjustments					
8	Intangible assets (net of related tax liability) (negative amount)	(87)	(145)	(51)	(127)
10	Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability where the conditions in Article 38 (3) are met) (negative amount)	(32)	(54)	(127)	(319)
11	Fair value reserves related to gains or losses on cash flow hedges	59	59	69	69
12	Negative amounts resulting from the calculation of expected loss amounts	-	-	-	-
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	-	-	-	-
16	Direct and indirect holdings by an institution of own CET1 instruments (negative amount)	(1)	(1)	(4)	(4)
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability where the conditions in 38 (3) are met) (negative amount)	(37)	(314)	-	-
22	Amount exceeding the 15% threshold (negative amount)	-	-	-	-
23	of which: direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities	-	-	-	-
25	of which: deferred tax assets arising from temporary differences	-	-	-	-
25a	Losses for the current financial year (negative amount)	-	-	-	-
26b	Amount to be deducted from or added to Common Equity Tier 1 capital with regard to additional filters and deductions required pre CRR	(26)	-	(39)	-
	Of which: difference from revaluation reserves of fixed assets	(26)	-	(39)	-
27	Qualifying AT1 deductions that exceed the AT1 capital of the institution (negative amount)	(32)	-	(46)	-
28	**Total regulatory adjustments to Common equity Tier 1 (CET1)**	**(156)**	**(455)**	(198)	(381)
29	**Common Equity Tier 1 (CET1) capital**	**6,771**	**5,268**	6,623	5,091
Additional Tier 1 (AT1) capital: instruments					
33	Amount of qualifying items referred to in Article 484 (4) and the related share premium accounts subject to phase out from AT1	26	-	30	-
36	**Additional Tier 1 (AT1) capital instruments before regulatory adjustments**	**26**	**-**	30	-
Additional Tier 1 (AT1) capital: regulatory adjustments					
41a	Residual amounts deducted from Additional Tier 1 capital with regard to deduction from Common Equity Tier 1 capital during the transitional period pursuant to article 472 of Regulation (EU) No 575/2013	(58)	-	(76)	-
	Of which: goodwill and intangible assets (net of related tax liability)	(58)	-	(76)	-
	Of which: shortfall of provision to expected losses	-	-	-	-
43	**Total regulatory adjustments to Additional Tier 1 (AT1) capital**	**(58)**	**-**	(76)	-
44	**Additional Tier 1 (AT1) capital**	**-**	**-**	-	-
45	**Tier 1 capital (T1 = CET1 + AT1)**	**6,771**	**5,268**	6,623	5,091

Eurobank

Appendix 1: Transitional own funds disclosure

		2016 Current period € million	2016 Full impact € million	2015 Current period € million	2015 Full impact € million
Tier 2 (T2) capital: instruments and provisions					
47	Amount of qualifying items referred to in Article 484 (5) and the related share premium accounts subject to phase out from T2	4	-	15	-
50	Credit risk adjustments	93	93	108	108
51	**Tier 2 (T2) capital before regulatory adjustments**	**97**	**93**	123	108
Tier 2 (T2) capital: regulatory adjustments					
56a	Residual amounts deducted from Tier 2 capital with regard to deduction from Common Equity Tier 1 capital during the transitional period pursuant to article 472 of Regulation (EU) No 575/2013	-	-	-	-
	Of which shortfall of provision to expected losses	-	-	-	-
56c	Amount to be deducted from or added to Tier 2 capital with regard to additional filters and deductions required pre-CRR	26	-	39	-
	Of which: difference from revaluation reserves of fixed assets	26	-	39	-
57	**Total regulatory adjustments to Tier 2 (T2) capital**	**26**	**-**	39	-
58	**Tier 2 (T2) capital**	**123**	**93**	162	108
59	**Total Capital (TC = T1 + T2)**	**6,894**	**5,361**	6,785	5,199
60	**Total risk weighted assets**	**38,511**	**38,190**	38,888	38,888
Capital ratios and buffers					
61	Common Equity Tier 1	**17.6%**	**13.8%**	17.0%	13.1%
62	Tier 1	**17.6%**	**13.8%**	17.0%	13.1%
63	Total capital	**17.9%**	**14.0%**	17.4%	13.4%
68	Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount)	**17.6%**	**13.8%**	17.0%	13.1%
Amounts below the thresholds for deduction (before risk weighting)					
72	Direct and indirect holdings of the capital of financial sector entities where the institution does not have a significant investment in those entities (amount below 10% threshold and net of eligible short positions	58	58	42	42
73	Direct and indirect holdings by the institution of CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	84	84	373	373
75	Deferred tax assets arising from temporary differences (amount below 10% threshold, net of related tax liability where the conditions in 38 (3) are met)	687	558	470	470
Applicable caps on the inclusion of provisions on Tier 2					
76	Credit risk adjustments included in T2 in respect of exposures subject to standardized approach (prior to the application of the cap)	-	-	14	14
77	Cap on inclusion of credit risk adjustments in T2 under standardised approach	-	-	19,180	19,180
78	Credit risk adjustments included in T2 in respect of exposures subject to internal ratings-based approach (prior to the application of the cap)	93	93	94	94
79	Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach	15,514	15,514	15,615	15,615
Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2013 and 1 Jan 2022)					
82	Current cap on AT1 instruments subject to phase out arrangements	60%	-	70%	-
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	17	-	13	-
84	Current cap on T2 instruments subject to phase out arrangements	60%	-	70%	-
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	3	-	6	-

Appendix 2: Capital instruments' main features disclosure

			SERIES A
1	Issuer	**Eurobank Ergasias S.A.**	**ERB Hellas Funding LTD**
2	Unique identifier	GRS323003012	DE000A0DZVJ6
3	Governing law(s) of the instrument	Greek	The Preferred Securities will be governed by, and construed in accordance with Jersey law. The Guarantee will be governed by, and construed in accordance with, English law, save that the provisions concerning the ranking of the Guarantee and the rights upon liquidation, each as described above, will be governed by, and construed in accordance with, Greek law.
	Regulatory treatment		
4	Transitional CRR rules	Common Equity Tier 1	Additional Tier 1
5	Post- transitional CRR rules	Common Equity Tier 1	Ineligible
6	Eligible at solo/(sub-) consolidated/solo & (sub-) consolidated	Solo & Consolidated	Solo & Consolidated
7	Instrument type (types to be specified by each jurisdiction)	Ordinary shares	Additional Tier 1
8	Amount recognised in regulatory capital as at 31 December 2016	€ 655.8 million	€ 1 million
9	Nominal amount of instrument	€ 0.30 per ordinary share (at date) / € 655.8 million	€ 1,604,000
9a	Issue price	-	100%
9b	Redemption price	-	100%
10	Accounting classification	Shareholders Equity	Equity
11	Original date of issuance	Various	18 March 2005
12	Perpetual or dated	Perpetual	Perpetual
13	Original maturity date	-	No maturity
14	Issuer call subject to prior supervisory approval	NA	Yes
15	Optional call date, contingent call dates and redemption amount	NA	First call date 18 March 2010 at 100%
16	Subsequent call dates, if applicable	NA	Annually
	Coupon / dividends	NA	
17	Fixed or floating dividend/coupon	NA	Fixed to floating
18	Coupon rate and any related index	NA	6,75% to 03/07 ; thereafter 10yr €csm +12,5bp. Max coupon = 8%
19	Existence of a dividend stopper	NA	No
20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Partially discretionary	Partially discretionary . Dividend Pusher (Compulsory Payments for each Series)
20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Partially discretionary	Mandatory
21	Existence of step up or other incentive to redeem	No	No
22	Noncumulative or cumulative	Non cumulative	Non cumulative
23	Convertible or non-convertible	Non convertible	Non convertible
24	If convertible, conversion trigger(s)	NA	N/A
25	If convertible, fully or partially	NA	N/A
26	If convertible, conversion rate	NA	N/A
27	If convertible, mandatory or optional conversion	NA	N/A
28	If convertible, specify instrument type convertible into	NA	N/A
29	If convertible, specify issuer of instrument it converts into	NA	N/A
30	Write-down features	No	No
31	If write-down, write-down trigger(s)	NA	N/A
32	If write-down, full or partial	NA	N/A
33	If write-down, permanent or temporary	NA	N/A
34	If temporary write-down, description of write-up mechanism	NA	N/A
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Additional Tier I	Lower Tier II
36	Non-compliant transitioned features	No	Yes
37	If yes, specify non-compliant features	N/A	Upon the occurance of a trigger event, the principal amount can not be written down
	Terms and Conditions	https://www.eurobank.gr/Uploads/pdf/katastatiko_en.pdf	

Appendix 2: Capital instruments' main features disclosure

		SERIES B	SERIES C
1	Issuer	**ERB Hellas Funding LTD**	**ERB Hellas Funding LTD**
2	Unique identifier	XS0232848399	XS0234821345
3	Governing law(s) of the instrument	The Preferred Securities will be governed by, and construed in accordance with Jersey law. The Guarantee will be governed by, and construed in accordance with, English law, save that the provisions concerning the ranking of the Guarantee and the rights upon liquidation, each as described above, will be governed by, and construed in accordance with, Greek law.	The Preferred Securities will be governed by, and construed in accordance with Jersey law. The Guarantee will be governed by, and construed in accordance with, English law, save that the provisions concerning the ranking of the Guarantee and the rights upon liquidation, each as described above, will be governed by, and construed in accordance with, Greek law.
	Regulatory treatment		
4	Transitional CRR rules	Additional Tier 1	Additional Tier 1
5	Post- transitional CRR rules	Ineligible	Ineligible
6	Eligible at solo/(sub-) consolidated/solo & (sub-) consolidated	Solo & Consolidated	Solo & Consolidated
7	Instrument type (types to be specified by each jurisdiction)	Additional Tier 1	Additional Tier 1
8	Amount recognised in regulatory capital as at 31 December 2016	€ 2 million	€ 11 million
9	Nominal amount of instrument	€ 3,704,000	€ 18,946,000
9a	Issue price	100%	100%
9b	Redemption price	100%	100%
10	Accounting classification	Equity	Equity
11	Original date of issuance	2 November 2005	9 November 2005
12	Perpetual or dated	Perpetual	Perpetual
13	Original maturity date	No maturity	No maturity
14	Issuer call subject to prior supervisory approval	Yes	Yes
15	Optional call date, contingent call dates and redemption amount	First call date 2 November 2015 at 100%	First call date 9 January 2011 at 100%
16	Subsequent call dates, if applicable	Quarterly	Quarterly
	Coupon / dividends		
17	Fixed or floating dividend/coupon	Fixed to floating	Fixed
18	Coupon rate and any related index	4,565% until 02 November 2015 , then 3mE + 222bps	6%
19	Existence of a dividend stopper	No	No
20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Partially discretionary . Dividend Pusher (Compulsory Payments for each Series)	Partially discretionary . Dividend Pusher (Compulsory Payments for each Series)
20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Mandatory	Mandatory
21	Existence of step up or other incentive to redeem	No	No
22	Noncumulative or cumulative	Non cumulative	Non cumulative
23	Convertible or non-convertible	Non convertible	Non convertible
24	If convertible, conversion trigger(s)	N/A	N/A
25	If convertible, fully or partially	N/A	N/A
26	If convertible, conversion rate	N/A	N/A
27	If convertible, mandatory or optional conversion	N/A	N/A
28	If convertible, specify instrument type convertible into	N/A	N/A
29	If convertible, specify issuer of instrument it converts into	N/A	N/A
30	Write-down features	No	No
31	If write-down, write-down trigger(s)	N/A	N/A
32	If write-down, full or partial	N/A	N/A
33	If write-down, permanent or temporary	N/A	N/A
34	If temporary write-down, description of write-up mechanism	N/A	N/A
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Lower Tier II	Lower Tier II
36	Non-compliant transitioned features	Yes	Yes
37	If yes, specify non-compliant features	Upon the occurance of a trigger event, the principal amount can not be written down	Upon the occurance of a trigger event, the principal amount can not be written down

Appendix 2: Capital instruments' main features disclosure

		SERIES D	
1	Issuer	**ERB Hellas Funding LTD**	**Eurobank Ergasias S.A.**
2	Unique identifier	XS0440371903	XS0302804744
3	Governing law(s) of the instrument	Instruments Jersey law. The Guarantee English law. Ranking of guarantee and the rights upon liquidation Greek law	Instruments English Law. The Deed of guarantee Greek law
	Regulatory treatment		
4	Transitional CRR rules	Additional Tier 1	Tier 2
5	Post- transitional CRR rules	Ineligible	Ineligible
6	Eligible at solo/(sub-) consolidated/solo & (sub-) consolidated	Solo & Consolidated	Solo & Consolidated
7	Instrument type (types to be specified by each jurisdiction)	Additional Tier 1	Tier 2
8	Amount recognised in regulatory capital as at 31 December 2016	€ 12 million	€ 4 million
9	Nominal amount of instrument	€ 19,500,000	€ 74,993,000
9a	Issue price	100%	99.909%
9b	Redemption price	100%	100%
10	Accounting classification	Equity	Liability-amortised cost
11	Original date of issuance	29 July 2009	8 June 2007
12	Perpetual or dated	Perpetual	Dated
13	Original maturity date	No maturity	8 June 2017
14	Issuer call subject to prior supervisory approval	Yes	Yes
15	Optional call date, contingent call dates and redemption amount	First Call date 29 October 2014 at 100%	First Call date 08 June 2012 at 100%
16	Subsequent call dates, if applicable	Annually	Quarterly
	Coupon / dividends		
17	Fixed or floating dividend/coupon	Fixed	Floating
18	Coupon rate and any related index	8.25%	3m Euribor + 1.6 %
19	Existence of a dividend stopper	No	No
20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Partially discretionary . Dividend Pusher (Compulsory Payments for each Series)	Mandatory
20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Mandatory	Mandatory
21	Existence of step up or other incentive to redeem	No	Step up happened in June 2012, margin increased from 0.30% to 1.60%
22	Noncumulative or cumulative	Non cumulative	Non cumulative
23	Convertible or non-convertible	Convertible	Non convertible
24	If convertible, conversion trigger(s)	A "Holders' Conversion Trigger Event" shall be deemed to have occurred if the Bank has paid any dividend or other distribution(s) on its ordinary share capital other than any such payment of dividend or other distribution(s) the whole of which is mandatorily required to be paid by mandatory operation of Greek law from time to time.	N/A
25	If convertible, fully or partially	Always Fully	N/A
26	If convertible, conversion rate	Exchange Ratio" shall be determined by the Calculation Agent by reference to the following formula: (i) Liquidation Preference / (Exchange Discount Factor * VWAP) or, if lower, (ii) Liquidation Preference / Ordinary Share Nominal Value.	N/A
27	If convertible, mandatory or optional conversion	At the option of both holder and issuer	N/A
28	If convertible, specify instrument type convertible into	Common Equity	N/A
29	If convertible, specify issuer of instrument it converts into	Eurobank Ergasias S.A. Ordinary Shares	N/A
30	Write-down features	No	No
31	If write-down, write-down trigger(s)	N/A	N/A
32	If write-down, full or partial	N/A	N/A
33	If write-down, permanent or temporary	N/A	N/A
34	If temporary write-down, description of write-up mechanism	N/A	N/A
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Lower Tier II	Senior Unsecured
36	Non-compliant transitioned features	Yes	Yes
37	If yes, specify non-compliant features	Upon the occurance of a trigger event, the principal amount can not be written down	Step up feature