Small deceleration of the global economy in 2018

Global economy slows to 3.6% vs. 3.8%

Eurozone GDP growth slipped to 1.8% vs. 2.4%

MONETARY POLICIES IN THE ADVANCED ECONOMIES REMAINED SUPPORTIVE

The ECB
Maintained its intervention rate unchanged at 0.0%

Ended its QE program in December 2018

Announced seven TLTROs of two-year duration (09/19 – 03/21)

The Fed
Increased its benchmark rate by 100 bps to 2.25% in 2018

Reduced its balance sheet by $373bn

2018 WAS A CRUCIAL YEAR FOR THE GREEK ECONOMY

Growth at 1.9% vs. 1.4% y/y – the best rate of the past 11 years

Outing of Greece in the markets

Upgrade of Greece’s credit rating by international rating agencies

Successful completion of the 3rd Financial Assistance Programme

New mid-term public debt relief measures

Significant liquidity buffer to cover funding needs of the Greek State

The Greek real estate market showed steady signs of recovery

House prices grew by 1.5% in 2018 and by 2.5% in Q4

Commercial property prices grew by 5.3% in H1.2018

Growth in residential and commercial real estate prices is gaining pace in 2019

The Greek banking system has entered a recovery trajectory

Private deposits up by €7.9bn

Business lending up

Reliance on ELA funding down to just €0.9bn and full disengagement in 2019
THE GROUP’S BUSINESS IN GREECE

OVER 5 MILLION ACTIVE CUSTOMERS
- 210,000 Premium Banking customers with funds under management at €15.1bn
- 865,000 special interest customers with funds under management at €9.5bn
- 39,000 NBG Asset Management customers with funds under management at €1.4bn (end of 2018)

Enhancing the quality of our customer services
Implementing a customer-centric model

RAPID DIGITAL TRANSFORMATION OF THE BANK

4-fold increase in the use of i-bank Internet Banking over the past 5 years
10-fold increase in the use of i-bank Mobile Banking over the past 5 years
24% increase in number of users and 11% increase in transactions performed through Internet Banking 2018
51% increase in the number of users and 74% increase in transactions performed through Mobile Banking in 2018
Micro-loans of up to €25K through Internet Banking
80% of customer transactions were performed through the Bank’s online channels
Transactions via NBG’s “i-bank Pay” e-wallet up by 136% in 2018
1,467 ATMs and 143 Automated Payment Centers
89.5% of cash withdrawals were carried out at ATMs

NBG HOLDS COMMANDING POSITION IN CREDIT CARDS

Managing 5.2m cards with annual turnover of €71bn (up 20.8% vs. 2017)
Running a network of 172K partner retailers
Share of card issuance grows to 26.2% from 25.5%
Share of payment settlements grows to 23.8% vs. 20.4%
Share of debit card issuance at 30.2%
Share of prepaid card issuance at 46.6%
Provides the prepaid “meal voucher” card

NBG GAINED TRACTION IN GRANTING NEW LOANS IN 2018

Total business loan disbursements €2.6bn (up 67% vs 2017)
The business portfolio grew by €458m in Q4 2018
Disbursements in the context of infrastructure project financing grew by €325m (up 55%)
Loans totalling €319m on favorable terms to medium enterprises, in cooperation with European organizations
Expanding customer base in Shipping
Leading market share in import/export products
LCs up by €474m
Small business loans up by 4%
New housing and consumer loans up by 58% and 19%, respectively
Leading position in consumer credit for cars and electrical & household goods
2018 #AT A GLANCE

REDUCTION IN NPEs

Domestic NPEs down by €2.1bn

NPE coverage ratio strengthens to 59%, a sector high

Sale of a portfolio of unsecured retail NPEs totalling €26bn at a price that boosted the Bank’s capital and profitability

Outsourcing of Medium Enterprise NPE management by joint initiative of the country’s four systemic banks

Auctions of 1,381 business properties in 2018

Encouraging customers to agree to out-of-court settlement

MEASURES TO REDUCE NPEs

Sale of secured small & medium business loans equal to €1bn outstanding principal (in completion phase)

Sale of €1bn retail unsecured loan portfolio (in completion phase)

Sale of secured small & medium business loans totalling €0.7bn within H2 2019

Launch of 42 Claim Settlement Centres at NBG Branches for retail debts

Restructuring of secured mortgage and consumer loans by means of our ground-breaking “Split & Freeze” product

NBG IS THE LEADER IN PROVIDING SERVICES TO PUBLIC BODIES

Providing specialized services to 4,000 legal entities, mainly public legal entities with funds representing 10.3% of NBG’s total deposits (€3.9bn at end-2018)

Payment transactions grew by 10% vs. 1% at peer banks

Collections grew by 5.7% to €14.4bn

Market share of payment transactions at 37% and collections at 27%

EFFECTIVE RISK MANAGEMENT

Assessment of internal capital for all significant risk types at Group level

Macro stress test exercise

Review of pricing models for businesses and individuals

HIGH CALIBRE CORPORATE GOVERNANCE

Applying sector-best Corporate Governance

Strong Internal Control System

NBG gains awards for its Corporate Governance practices

2018 LANDMARK YEAR FOR NBG’S LIQUIDITY PROFILE

The only Greek bank to restore its liquidity ratios within supervisory limits (LCR - NSFR)

Liquidity Coverage Ratio (LCR) reached a very solid 128% at the end of 2018

Net Stable Funding Ratio at 107% at year-end

ECB funding down by €0.5bn to €2.25bn

NBG the first Greek systemic bank to disengage from ELA funding (November 2017)

Deposits grow by €3.5bn to €42.2bn

NBG covered bonds notched up to investment grade

Raising of €3.4bn from the markets through repurchase agreements

Blended funding cost at 0.46%, representing the lowest among its domestic peers
SECTION 1: THE ECONOMIC ENVIRONMENT
1.1 GLOBAL DEVELOPMENTS
1.2 THE GREEK ECONOMY

SECTION 2: ACTIVITIES OF THE GROUP IN GREECE
2.1 RETAIL BANKING
Retail banking
Card portfolio
Retail loans
Asset management
Private banking

2.2 BUSINESS BANKING
Corporate lending
Structured financing
Lending to medium-sized businesses
Key accounts
Shipping
Global transaction services
Brokerage

2.3 NPE MANAGEMENT
Corporate Special Assets Management
Retail Collections Management

2.4 NETWORK STRATEGY
Branch network
Alternative networks

2.5 RISK MANAGEMENT
Basic principles and governance structure of the Group risk management
Group risk management units
Risk profile assessment/Risk taxonomy
Internal capital adequacy assessment process (ICAAP)
Internal liquidity adequacy assessment process (ILAAP)
New developments within 2018
Estimation and management of risks

2.6 REGULATORY COMPLIANCE

2.7 INTERNAL AUDIT

2.8 CORPORATE GOVERNANCE

2.9 OTHER NBG GROUP ACTIVITIES
Insurance
Real estate

SECTION 3: INTERNATIONAL ACTIVITIES OF THE GROUP
210 SUMMARY FINANCIAL STATEMENTS
211 INDEPENDENT AUDITOR’S REPORT
220 SUMMARY FINANCIAL DATA 2018
222 INVITATION TO THE BANK’S ANNUAL GENERAL MEETING OF SHAREHOLDERS
Dear Shareholders,

Last year was a turning point for the Greek economy and the banking system, while 2019 marks the beginning of a sustainable course of growth that will gradually spread to a larger part of the Greek economy and society.
The completion of the 3rd Program, the recovery of economic activity coupled with fiscal consolidation, as well as the adoption of mid-term debt relief measures comprise key milestones in the return of the Greek economy to normality after prolonged turbulence. Over the first half of 2019, progress has been ramping up, as reflected in the decreasing country risk premium, the restoration of the country’s access to markets at sustainable interest rates and enhanced inflows of foreign direct investments amounting to circa €9.3bn in the past three years. Annual GDP growth accelerated to 1.9% in 2018 and is likely to continue at this pace in 2019, despite headwinds in the international environment.

The export orientation of the economy has been strengthened, with commodity exports rising steadily and thereby posting a new record high in 2018. Likewise, tourism is upgrading its offering in qualitative and quantitative terms, while shipping and other export services present notable momentum, reflecting an increasing diversification of Greek exports. In addition, having undergone substantial restructuring, sustainable business sectors show signs of resilience, as they report more robust financial results. All these signs of improvement are visible and underscore the depth of restructuring that has taken place across the Greek economy.

The challenge of transforming the Greek economy is pressing and urgent and demands realistic vision, clearly defined goals and concerted efforts that support the achievement of targets and give substance to the credibility of the overall endeavour. The key players in the economy and those responsible for designing economic policy are called on to articulate a charter of intent, interim targets and an end vision. It is essential that a strategy framework is in place for the next phase of the Greek economy, setting out specific actions and priorities that will add further stimulus to this momentum and correct any deviations in a timely manner. The banking sector is already making decisive moves in this direction.

Against this backdrop, National Bank of Greece is once again at the forefront of developments, implementing an ambitious and comprehensive Transformation Program that was initially envisaged by the Bank’s board and management team, and thereafter developed with the participation of our people. It is a plan that we are all proud of. Today we are developing a financial organization that stands out for its governance, transparency and recognition of merit, investing in its people and cultivating their potential. We are forging a truly customer-focused, disciplined, efficient and profitable bank that systematically adds value to its shareholders. Throughout the 180 years of our history, every change has proved to be a step forward. With each change we have the opportunity to become a better bank, without losing sight of our historic and strong bonds with Greek society. And this – for yet another time – is our current task. Today, together, we are forging the National Bank of Greece of tomorrow.

Costas P. Michaelides
Chair of the Board (Non-Executive Member)
Dear Shareholders

NBG is in a critical stage of its transformation, as the bank capitalizes on balance sheet strengths and makes significant progress on improving its operating profitability and accelerating NPE reduction.

Clearly, the highlight of 2018 was the initiation of our four-year strategy and business plan, which was presented in May 2019 at NBG’s Investor Day in London. The strategy leverages our strengths:
trustworthiness, strong balance sheet, large and low cost deposit base, strong client relationships and a new and dynamic leadership team. Our strategic priorities include:

1. Running down the NPE stock quickly and decisively, without capital dilution;
2. Making the bank more efficient and productive, reducing operating costs;
3. Improving our business and service model in corporate and retail banking, to increase our share of wallet in our target segments and boosting fee generation;
4. Changing our HR management practices to better motivate and develop our people;
5. Optimizing our processes, upgrading our technology infrastructure, in response to the digital challenge; and
6. Measuring and monitoring the implementation of our strategies so as to be able to continuously improve them.

Delivery of our strategy and business plan is being monitored and supported by a strong transformation program office, imposing accountability and tight monitoring mechanisms, while at the same time providing the required project support. Gradually, NBG will be transformed into a much simpler, more agile, clean and profitable organization, which puts customer needs first, adds value to its shareholders, invests in its people and leads Greece’s economic growth.

Efforts to turn around operating profitability already started to bear fruit in H2.2018. In 2018, core operating profitability reached €114m against losses of €103m in 2017, reflecting a sharp improvement in the quality of our core income and a marked reduction in credit risk charges. In Q1.2019, results improved further, across all key lines of the P&L, beginning to reflect our efforts to transform NBG into an efficient and profitable bank, clear of NPEs.

Recognizing our legacy cost base, we have completed a VES of 780 employees, far outperforming our initial target. As a next step, this year, we have introduced a new, larger scale VES, with departures of 380 employees so far, and we are rationalizing further G&As, having introduced a new empowered cost control unit.

On the revenue side, we exchanged the IRS with the Greek State into GGBs, adding PBT of more than €110m per annum, increasing at the same time the amount of collateral eligible for zero-cost ECB liquidity. We have improved further our liquidity management, and are currently the only systemic bank in Greece meeting both the LCR ratio and the NFSR regulatory requirements.

We have also rejuvenated our corporate banking unit and, as a result, we achieved FY.2018 disbursements to €2.6b, including record high quarterly corporate disbursements of €1.2b in Q4.2018. This led corporate exposures to increase by €0.5b in Q4.2018, the first expansion in over 3 years. In Q1.2019, a seasonally-weak quarter, corporate loans expanded by another €0.5b.

NPEs were reduced by €2b in 2018, reflecting the improved pace of liquidations, while 2019 started on a very strong footing, with NPEs already reduced by more than €1b in Q1.2019, as we secured binding bids on the sale of an SB and SME portfolio, while maintaining negative organic formation. Binding bids for a second sale of unsecured loans amounting to c. €1b were received in June 2019, exceeding already the FY.2018 efforts.

Going forward, we expect the increased confidence in the Greek economy and the concomitant macroeconomic tailwinds to support our transformation efforts and help us meet the heightened expectations of our shareholders, our customers, our people and the communities in which we operate.

Finally, I would like to express my deep gratitude and appreciation to our people who make positive change happen every day through their dedication and determination. I am proud of what our team is achieving, as it rises to the challenge and leads NBG to what it can and should be: the bank of choice for all Greeks.

Thank you.

Paul Mylonas
Chief Executive Officer
**BOARD OF DIRECTORS**

**EXECUTIVE MEMBERS**

- **Costas Michaelides**
  Chair of the Board (Non-Executive Member)

- **Paul Mylonas**
  Chief Executive Officer

- **Dimitrios Kapotopoulos**
  General Manager, Corporate and Investment Banking

- **Claude Piret**
  Independent Non-Executive Expert Member as prescribed by Art. 10 of Greek Law 3864/2010 as in force. Risk experience/Financial Services

- **Andrew McIntyre**
  Independent Non-Executive Expert Member as prescribed by Art. 10 of Greek Law 3864/2010 as in force. Risk and Financial Audit Expertise

- **John McCormick**
  Independent Non-Executive Expert Member as prescribed by Art. 10 of Greek Law 3864/2010 as in force. Banking and Audit Experience

**INDEPENDENT NON-EXECUTIVE MEMBERS**

- **Periklis Drougkas**
  Economist

- **Panos Dasmanoglou**
  General Manager – Group Chief Compliance and Corporate Governance Officer

**SECRETARY OF THE BOARD & BOARD COMMITTEES**

- **Panos Dasmanoglou**
  General Manager – Group Chief Compliance and Corporate Governance Officer
Notes:
The current Board of Directors of the Bank has been elected by the Annual General Meeting of Shareholders on 26.07.2018, with a term of 3 years, i.e. through to the AGM of 2021. On the same day, the Board of Directors convened and decided on its constitution into a body. From 2018 and until today, the following changes were made to the Board's membership:

- On 30 July 2019, at the meeting of the Board of Directors, the resignation of three non-executive members of the BoD was announced - Ms. Eva Cederbalk, Mr. Haris Malikis and Mr. Ioannis Zographakis. Furthermore, at the same BoD meeting it was announced that Mr. Panos Dasmanoglou will no longer serve as executive member of the Board, and will remain as General Manager at the Bank and Company Secretary, with the same duties.
- On 24 January 2019, the Board of Directors elected Mr. Dimitrios Kapotopoulos as an executive member of the Board of Directors replacing the resigned executive member Mr. Dimitrios Dimopoulos.
- As notified to the Bank by HFSF’s letter, dated 23 July 2018, the duties of the HFSF’s Representative, in the context of Law 3864/2010, are exercised by Mr. Periklis Drougkas.
- On 17 July 2018, at the meeting of the Board of Directors, Mr. Paul Mylonas was elected as Chief Executive Officer.
- As notified to the Bank by HFSF’s letter, dated 23.05.2018, the duties of the HFSF’s Representative, in the context of Law 3864/2010, are exercised by Mr. Christoforos Koufalias.
- On 4 May 2018, at the meeting of the Board of Directors, the Board of Directors accepted the resignation of the Bank’s Chief Executive Officer, Mr. Leonidas Fragiadakis. Consequently, in accordance with Article 21 of the Bank’s Articles of Association, the Board of Directors unanimously resolved upon its reconstitution into a body and upon the appointment of Mr. Paul Mylonas, Deputy Chief Executive Officer as Acting Chief Executive Officer until the Annual General Meeting of Shareholders of year 2018.
- On 23 April 2018, the Board of Directors elected Mr. Andrew McIntyre as new independent non-executive member of the Board of Directors.
- On 28 February 2018, Mr. Petros Satabacalis submitted his resignation as independent non-executive member of the Board of Directors.
- On 31 January 2018, during the Board of Directors session, the stepping down of Mr. Mike Aynsley from the position of independent non-executive Board member was announced.
# GENERAL MANAGERS

- **Dimitrios Kapotopoulos**
  - Executive Board Member
  - General Manager, Corporate and Investment Banking

- **Panos Dasmanoglou**
  - General Manager, Group Chief Compliance and Corporate Governance Officer
  - Secretary of NBG Board of Directors and of its Committees

- **Ioannis Vagionitis**
  - General Manager of Group Risk Management (Chief Risk Officer)

- **Christina Theofilidi**
  - General Manager, Retail Banking

- **Fotini Ioannou**
  - General Manager, Special Assets

- **Georgios Triantafillakis**
  - General Manager of Legal Services

- **Christos Christodoulou**
  - General Manager, Group Chief Financial officer (CFO)

- **Constantinos Vossikas**
  - General Manager, Chief Credit Officer (CCO)

- **Vasileios Kavalos**
  - General Manager, Group Treasury and Financial Markets

# ASSISTANT GENERAL MANAGERS

- **Ioannis Kyriakopoulos**
  - General Manager, Group Real Estate

- **Chara Dalekou**
  - General Manager, Group Marketing

- **Ernestos Panayiotou**
  - General Manager, Transformation and Business Strategy

- **Eleni Hatzioannou**
  - General Manager, Group Human Resources Strategy and Development

- **Ioannis Adamopoulos**
  - Assistant General Manager, Strategic Transactions

- **Anastasia Nazidou**
  - Assistant General Manager, Head of Network

- **Nektarios (Aris) Divaris**
  - Assistant General Manager of Operations

- **Ellie Kakoullou**
  - Assistant General Manager, Group Real Estate

- **Vassilis Karamouzis**
  - Assistant General Manager, Corporate and Investment Banking

- **Chrysoula Koutoudi**
  - Assistant General Manager, Corporate Special Assets

- **George Koutsoudakis**
  - Assistant General Manager of Corporate Banking

- **George Maligiannis**
  - Assistant General Manager, Retail Collections

- **Pantelis Maraveas**
  - Assistant General Manager, Retail Segments

- **Stratos Molyviatis**
  - Assistant General Manager, Group Chief Information Officer

- **Stratos Molyviatis**
  - Assistant General Manager, Group Chief Information Officer

- **Stratos Molyviatis**
  - Assistant General Manager, Group Chief Information Officer

- **Stratos Molyviatis**
  - Assistant General Manager, Group Chief Information Officer
2018 HIGHLIGHTS AND KEY ACHIEVEMENTS

2018 HAS BEEN A YEAR OF TURNAROUND FOR GREEK BANKS LED BY POSITIVE DEVELOPMENTS FOR THE GREEK ECONOMY AND THE DOMESTIC BANKING SYSTEM.

The Greek economy continued to strengthen, led by exports from an increasingly healthy corporate sector. Importantly, employment growth trends remained in the 1.5-2.8% range, while real estate prices gained further momentum, on both the commercial (+5.3% yoy in H1.18 prime commercial real estate), as well as the residential side (+1.5% yoy in 2018).

At the same time, the legal framework continued to improve, underpinned by the updated household protection scheme and the steadily improving efficiency of the courts. Aided by macroeconomic developments, corporate loan demand picked up, with nascent signs that the household sector is also gradually seeking more credit. The return of private deposits, up by 6% in 2018, also reflects returning confidence.

Capitalizing on the improving economic and banking environment, NBG remained focused on key strategic objectives, namely to increase lending to the economy, reduce NPEs ahead of SSM targets and return to meaningful operating profitability.
1. Large scale Transformation Programme to deliver a clean Bank and unlock NBG’s untapped profitability potential

Building upon its long-lasting tradition of trust and service to the society, NBG embarked on a large-scale Transformation Programme (TP) in the second half of the year to transform itself, responding to the challenges and tapping the business opportunities presented by the rapidly changing economic and banking landscape. The TP identified the strategic areas that leverage our strengths and address our weaknesses, so as to unlock the Bank’s substantial untapped profitability potential, though six discrete Workstreams and more than 20 initiatives, involving more than 500 executives and employees of the Bank.

The bank’s new strategy, including key drivers and the resulting ambitious set of financial and business targets for the period 2019-2022, along with the new management team, was presented to the investment community in London on May 16th. NBG’s investor day was highly successful, bringing together c120 investors in London, constituting the first such event from a Greek Bank for more than 10 years.

The Transformation Programme will deliver a clean and profitable Bank through six workstreams

2. Successful execution of our NPE reduction strategy delivers balance sheet strength

The stock of NPEs has been reduced by €2bn yoy in FY.18 and €6.1bn since YE’15, driven by negative organic formation (€2.4bn) and write-offs (€3.7bn). The latter included the €2bn NPL disposal of an unsecured retail and small business loan (SBL) portfolio in Greece in July 2018 for a total consideration of c6% of the outstanding principal amount, adding c18bps to CET1 ratio. Such a P&L accretive disposal is being followed by a circa €0.75bn small business (SBs) and a €1.0bn unsecured retail sale, as well as a c€0.8bn large & medium corporate disposal within 2019.

Moreover, NBG and the other systemic banks entered on 31 July 2018 into an innovative servicing agreement with doBank S.p.A, a credit institution specialized on servicing of non-performing loans. This agreement opts to reduce the Greek banking system’s SME NPE exposures, protecting at the same time the viability of Greek SMEs.

Finally, new operational targets have been submitted to the SSM for the period 2019-2021. The new plan is ambitious and frontloaded, calling for an NPE reduction of €11.5bn at the Group level by 2021, of which c€4.5bn already in 2019. Half of the envisaged reduction comprises organic actions consisting of aggressive restructurings, including debt forgiveness, and liquidations. The other half derives from portfolio sales and securitizations, facilitated by NBG’s high cash coverage ratio of 59%. Upon achieving these targets, the NPE ratio will have been reduced to a low-teens level by 2021, and to c5% in 2022, without utilizing any additional dilutive capital.

CHART 1
NPE REDUCTION TARGET FOR 2018-2021 (GROUP, €BN)
2018 HIGHLIGHTS & KEY ACHIEVEMENTS

3. Exchange into GGBs of the interest rate swap (IRS) with the Greek State

On 15 February 2019 the Bank announced that the Hellenic Republic and NBG have agreed to cancel the interest rate swap (IRS) contract of 31 December 2008, replacing it by Greek Government bonds (GGBs) maturing 2023, 2025 and 2026. The GGB total nominal value of €3.3bn reflected the value of the IRS on NBG’s balance sheet at the transaction date.

The GGBs NBG received earn an annual interest income of more than €110m, while eliminating the need to hedge the exchanged IRS, also simplifying the Bank’s asset structure, reducing funding costs and enhancing LCR ratio.

This landmark transaction constitutes part of NBG’s strategic plan that aims at effectively leveraging the Bank’s strong liquidity, significantly strengthening the Group’s Nil, PAT and RoE.

4. Delivery of Restructuring Plan commitments

In the context of its Restructuring Plan (RP), NBG successfully completed the disposals of Banka NBG Albania in July 2018 and South African Bank of Athens (SABA) in October 2018. Both transactions were capital accretive, adding c16bps to the CET1 ratio of the Group.

On May 10th 2019, the European Commission announced the extension of the Bank’s RP until the end of 2020, while the Bank remains committed to divest to two foreign subsidiaries in Romania and Cyprus, as well as from Ethniki Insurance in Greece, maintaining ownership of Stopanska Banka in Northern Macedonia. The initial commitment of the Bank to divest Stopanska Banka (North Macedonia) has been replaced by a commitment to sell NBG’s minority shareholding in Pangaea REIC.

With regards to the progress of foreign subsidiaries divestments, the Bank has already signed a sale and purchase agreement for the sale of its Egyptian operations to Bank Audi (Egypt) in May 2019. The completion of the transaction is subject to regulatory approvals. In Romania (Banca Romaneasca) and Cyprus (NBG Cyprus Ltd), a sale process has already started in 2018 and the Bank has received binding offers for both subsidiaries. It is expected that both disposals will be concluded within the next 12 months. As far as the disposal of a majority equity holding in Ethniki Insurance is concerned, NBG is planning to launch a new sale process within 2019, as agreed with the DG Competition.

5. Enhanced liquidity profile facilitating NBG’s credit expansion plans

NBG’s dependence on Eurosystem funding returned at a pre-crisis level, amounting to €2.25bn as at 31 December 2018 from €2.75bn at end-Q4.17 and compared to its peak of €276bn in Q2.15, comprising of Targeted Long-term Refinancing Operations (TLTROs) funding from the ECB, with the Bank enjoying a large liquidity buffer. Furthermore, as at 31 December 2018, the Bank’s Eurosystem liquidity buffer stood at a cash value of €9.3bn.

The removal of ECB’s waiver in August 2018 did not affect NBG’s funding cost, as Greek government bonds (GGBs) and treasury bills (T-Bills) were replaced by investment grade covered bonds. Group Liquidity Coverage Ratio (LCR) exceeded the minimum regulatory requirement of 100% since July 2018, reaching a level of 144% at end-2018. Moreover, Group Net Stable Funding Ratio (NSFR) also exceeded the regulatory threshold of 100% for the first time in September 2018 settling at 108% on 31 December 2018.

Our enhanced liquidity profile facilitates ambitious credit expansion plans. Corporate disbursements reached €2.6bn in 2018 up by almost 70% yoy, while corporate performing balances started to increase again in Q4.18 for the first time in 3 years. Moreover, Group deposits grew by 8.6% yoy, reflecting deposit inflows of €3.4bn in Greece, fending off capital control relaxation.

6. Significant CoR normalization facilitates our return to operating profitability

NBG’s efforts to turnaround operating profitability bore fruit in 2018. Core operating profit reached €114m in 2018, compared with a loss of €103m in 2017, excluding one-off charges, mostly comprised of restructuring costs, such as the Voluntary Exit Scheme (VES). The key driver was a sharp, yet sustainable, drop in the cost of risk (CoR), which more than offset the NII pressure. The Net Interest Income (NII) reduction reflected mainly the first time adoption of IFRS9, the NPE restructuring effort and further loan deleveraging, reversing trend in Q4.18.

In 2018, loan provisions experienced a marked drop, by more than 60% yoy, with Group CoR settling at 99bps vs 243bps in 2017, reflecting NBG’s superior NPE coverage levels of 59% and higher quality NII.
2018 HIGHLIGHTS & KEY ACHIEVEMENTS

7. Cost cutting as a key Transformation lever towards an efficient and agile organization:

On the cost side, FY.18 Group OpEx ended up flat yoy. However, in Q4.18, a seasonally poor quarter for costs, domestic personnel and G&A expenses were brought down by 4.0% and 6.5% qoq respectively, as the efforts to reduce personnel and branches started to bear fruit feeding through to costs. The VES, which was completed at the end of Q1.19, initially targeted 500 full time employees (FTEs), but has exceeded the target by c280 FTEs, delivering annualized cost savings of €c40m that will be supporting profitability in 2019.

GROUP P&L

<table>
<thead>
<tr>
<th>€m</th>
<th>FY.18</th>
<th>FY.17</th>
<th>yoy</th>
<th>Q4.18</th>
<th>Q3.18</th>
<th>qoq</th>
</tr>
</thead>
<tbody>
<tr>
<td>NII</td>
<td>1 014</td>
<td>1 367</td>
<td>-20%</td>
<td>269</td>
<td>269</td>
<td>0%</td>
</tr>
<tr>
<td>Net fees &amp; commissions</td>
<td>240</td>
<td>233</td>
<td>+3%</td>
<td>66</td>
<td>57</td>
<td>+15%</td>
</tr>
<tr>
<td>Core income</td>
<td>1 324</td>
<td>1 600</td>
<td>-17%</td>
<td>326</td>
<td>327</td>
<td>+0%</td>
</tr>
<tr>
<td>Trading &amp; other income</td>
<td>(14)</td>
<td>(6)</td>
<td>&gt;50%</td>
<td>(30)</td>
<td>0</td>
<td>--</td>
</tr>
<tr>
<td>Income</td>
<td>1 320</td>
<td>1 594</td>
<td>-17%</td>
<td>305</td>
<td>335</td>
<td>-9%</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>(192)</td>
<td>(191)</td>
<td>+0%</td>
<td>(229)</td>
<td>(238)</td>
<td>-4%</td>
</tr>
<tr>
<td>Core PPI</td>
<td>413</td>
<td>482</td>
<td>-9%</td>
<td>106</td>
<td>99</td>
<td>+9%</td>
</tr>
<tr>
<td>PPI</td>
<td>399</td>
<td>676</td>
<td>-41%</td>
<td>76</td>
<td>97</td>
<td>-22%</td>
</tr>
<tr>
<td>Provisions</td>
<td>(219)</td>
<td>(785)</td>
<td>-62%</td>
<td>(64)</td>
<td>(81)</td>
<td>-25%</td>
</tr>
<tr>
<td>Operating profit</td>
<td>100</td>
<td>(109)</td>
<td>--</td>
<td>15</td>
<td>16</td>
<td>-4%</td>
</tr>
<tr>
<td>Other impairments</td>
<td>(10)</td>
<td>(32)</td>
<td>-41%</td>
<td>(4)</td>
<td>1</td>
<td>--</td>
</tr>
<tr>
<td>PBT/E</td>
<td>87</td>
<td>(131)</td>
<td>--</td>
<td>11</td>
<td>17</td>
<td>-36%</td>
</tr>
<tr>
<td>Taxes</td>
<td>(27)</td>
<td>(27)</td>
<td>+37%</td>
<td>(10)</td>
<td>(9)</td>
<td>+13%</td>
</tr>
<tr>
<td>PAT (continuing operations)</td>
<td>50</td>
<td>(158)</td>
<td>--</td>
<td>1</td>
<td>8</td>
<td>-90%</td>
</tr>
<tr>
<td>PAT (discontinued operations)</td>
<td>(22)</td>
<td>(254)</td>
<td>-91%</td>
<td>(77)</td>
<td>17</td>
<td>--</td>
</tr>
<tr>
<td>Minorities</td>
<td>(24)</td>
<td>(21)</td>
<td>-10%</td>
<td>(7)</td>
<td>(8)</td>
<td>-14%</td>
</tr>
<tr>
<td>One-offs</td>
<td>(76)</td>
<td>--</td>
<td>--</td>
<td>(36)</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>PAT (reported)</td>
<td>(84)</td>
<td>(443)</td>
<td>-81%</td>
<td>(120)</td>
<td>17</td>
<td>--</td>
</tr>
</tbody>
</table>

1 For comparability reasons, FY.17 NII & trading income have been restated to reclassify the interest income of the loan to the Greek State from NII to trading income under IFRS 9.

8. The 2018 EU wide stress test identified no capital shortfall for NBG

A Stress Test (ST) assessment was conducted by the European Central Bank (ECB) for the period 2018-20, the first ST conducted under IFRS 9 accounting standards. According to EBA methodology, both baseline and adverse scenarios were applied on static balance sheets as of 31.12.17 including IFRS 9 impact. Therefore, effects from forthcoming actions (e.g. planned divestments) were not taken into account.

The results for the four systemic Greek showed that in the adverse scenario, the average Common Equity Tier 1 (CET1) capital depletion was 9 percentage points (ppt), equivalent to €15.5bn across the four systemic Greek banks. Following the superviso-

LOOKING AHEAD

2019 is a pivotal year as NBG capitalizes on balance sheet strengths and makes significant progress on improving operating profitability and reducing NPEs aggressively.

Economic recovery should sustain its positive momentum, with fiscal policy and monetary conditions being supportive of growth, potentially offsetting the impact from the slowdown in Europe.

P&L operating trends will improve markedly, driving FY.19 group operating profit significantly higher yoy. Moreover, NII will benefit by €113m on an annualized basis from the swap of the Greek State IRS for GGBs concluded in mid-February, also simplifying the bank’s asset structure, improving liquidity and reducing further funding costs. Fees will be supported by loan origination, budgeted at €3.6bn in 2019. With LCR and NSFR ratios well above 100%, and a substantial cash buffer, NBG is well placed to facilitate the demand for new corporate disbursements. Finally, the decline in staff costs will accelerate, reflecting both the current VES, as well a new larger scale VES to be launched before mid-year.
IN SEPTEMBER 2018, NBG LAUNCHED A RIGOROUS TRANSFORMATION PROGRAMME, COMMITTING TO THE DELIVERY OF ASPIRING FINANCIAL AND OPERATIONAL TARGETS.
Following a clear mandate from NBG’s Board of Directors, the Bank embarked into a journey to transform itself deeply, so as to embrace its future with confidence.

This Transformation Programme is being designed and delivered across six (6) Workstreams, each headed by a senior leader of the Bank. These Workstreams (and their respective aims) are:

1. **HEALTHY BALANCE SHEET (HBS):**
   - Aims at maintaining and further strengthening NBG’s strong Balance Sheet, through a series of initiatives relating to the acceleration of NPE reduction, the optimization of capital and liquidity deployment.

2. **EFFICIENCY & AGILITY (ENA):**
   - Aims at eliminating operational inefficiencies in a sustainable manner. To do so, this Workstream will be performing detailed work on optimizing the Bank’s geographical footprint, FTE allocation, overhead spending, process automation and supplier optimization.

3. **BEST BANK FOR OUR CLIENTS (BBC):**
   - Capitalizing on the relationship of trust NBG has with its Corporate and Retail Customers, this Workstream places emphasis on further enhancing customer service so as to meet their current and future needs. We intend to achieve this through better understanding of our Customers’ needs, as fueled by our superior use of advanced analytics combined with deeply personal relationships. Digitization everywhere is set at the center of our market strategy.

4. **TECHNOLOGY & PROCESSES (TEP):**
   - Aims at improving all aspects of the Bank’s underlying technological platform and processes. We are pursuing efficient processes both for our Customers and for our People, aiming to become seamless and hassle-free in all our touchpoints.

5. **HR, ORGANIZATIONAL STRUCTURES & GOVERNANCE (HROG):**
   - This Workstream will deliver a modern, robust and comprehensive Value-Based Management (VBM) framework, which will enhance the transparency as well as the quality of decision-making in the organization. Moreover, this Workstream promotes improvements in the area of non-financial risks management, reinforces the organization’s risk culture and oversees the design and delivery of an enhanced system of internal controls.

6. **TRANSPARENCY, COMPLIANCE & AUDIT (TCA):**
   - The aim is to revamp NBG’s governance and HR framework so as to develop a flexible and efficient organization.
2018 #NBG’S TRANSFORMATION

TRANSFORMATION PROGRAMME

4-YEAR STRATEGIC PLAN

NBG PURPOSE, VALUES AND STRATEGY

CLEAN BALANCE SHEET

ENHANCING EFFICIENCY & AGILITY

ENHANCING REVENUES

UPGRADING TECHNOLOGY & PROCESSES

MOTIVATING STAFF

TRANSPARENCY, COMPLIANCE & CONTROL

MECHANISM FOR TRACKING TARGET ACHIEVEMENT
Each Workstream will be delivering tangible outcomes over six-month periods, termed Seasons. This setup maintains the pace and ensures that the organization remains focused yet agile, as new Initiatives may enter or be removed from the Programme and existing ones can be appropriately adjusted. Each Season begins and ends with a Ceremony, aimed at reviewing progress made, acknowledging achievements and ensuring that lessons to be learned from each Season are embedded in our future planning. In parallel, a strong Transformation Programme Office (TPO) has been established so as to:

- Ensure coherent and consistent planning of Workstream, Initiative and Sub-Initiative activities, including prioritization of activities and programme-level dependencies tracking
- Provide project and Programme management discipline and best practices to Workstream, Initiative and Sub-Initiative Leaders
- Deploy a thorough, timely and effective progress (and risk) reporting mechanism
- Deploy a thorough, timely and effective progress (and risk) reporting mechanism
- Deliver a thorough, timely and effective progress (and risk) reporting mechanism

THE TRANSFORMATION OFFICE (TPO)

IT IS A FUNDAMENTAL ACTOR IN EXECUTING THE TRANSFORMATION IN A COORDINATED, TIMELY AND DISCIPLINED FASHION

- Presentation of workstream outcome every 6 months
- Transformation program actualization desk

INTRODUCING THE ROLE OF THE TRANSFORMATION PROGRAMME OFFICE (TPO) AND EMPHASIZING SEASONAL ACHIEVEMENTS

Transforming our clients' experiences by:

- Creating a healthy balance sheet
- Efficiency & Agility
- Best bank for our clients
- Technology & Processes
- People, Organisation & Governance
- Visibility, Control & Compliance
- Delivery Engine

Full Accountability Across the Organisation
CORPORATE SOCIAL RESPONSIBILITY

NATIONAL BANK OF GREECE, FULLY AWARE OF THE SIGNIFICANCE OF CORPORATE SOCIAL RESPONSIBILITY (CSR) AND SUSTAINABLE DEVELOPMENT AS KEY FACTORS IN GENERATING SUSTAINABLE GROWTH FOR THE GROUP, AND WITH A VIEW TO IMPLEMENTING THE BANK’S STRATEGY TO PROMOTE SUSTAINABLE GROWTH AND DEVELOPMENT, FOCUSED ON THE FOLLOWING STRATEGIC AIMS IN 2018 TO:

- Forge Long-Term Value and Sustainability
- Apply International Sustainability and CSR Standards
- Measure the Impact of the Group’s Business at the Economic, Environmental, and Social Levels
- Promote the Protection of the Environment and Contribute to the Community

In this context, NBG implemented a series of CSR and Sustainable Development action, responding to the demands and expectations of all our stakeholders.
A significant event regarding the Bank’s CSR and Sustainable Development strategy in 2018 was the Bank’s participation in the UN’s voluntary “Global Compact” initiative, as approved on 18 June 2018. Thousands of companies from more than 150 countries participate, while NBG is the only Greek financial institution that has joined the UN Global Compact as a “Participant”. The UN Global Compact is a non-binding framework for operation and strategy-setting whereby participants are invited to align themselves with 10 globally accepted Principles in the fields of human rights, working conditions, the environment, the fight against corruption, and the 17 Sustainable Development Goals (SDGs).
Aiming at environmental protection, the Bank launched its i-bank statements service whereby its customers receive electronic statements regarding their credit cards and mortgage or consumer loans, deposit accounts, and at the same time stop receiving printed statements. More than 570,000 statements have already been converted from printed to electronic format. Moreover, NBG’s i-bank delivery channels are being enriched on an ongoing basis with new services and more transactions enabling customers to carry out transactions 24/7 from home or using their mobile phone. Notably, some 362,000 new users were registered in 2018 for NBG’s Internet-Phone-Mobile Banking services.

In addition, the Bank launched in 2018 the following green banking products, which contribute to environmental protection:

- **Loans for participation in the “Energy-Saving at Home II” program co-funded by ETEAN S.A., on favorable terms for energy improvements in homes**
- **“Green Loan”: a loan granted under favourable terms and conditions for financing the purchase and installation of energy-saving equipment**
- **“Photovoltaic Home” loan for the installation of Photovoltaic Systems in homes**
- **“Estia Green Home”: a loan for the purchase, repair or construction of energy upgraded homes**

For yet another year the Bank contributed to the country’s efforts to improve its environmental footprint by financing RES projects worth €250.9m.
In 2018, despite the continued headwinds in the economic environment, NBG stood by its commitment to support the community, continuing its sponsorship program to the tune of €12.8m. In this context, NBG supported a wide range of corporate, social and cultural responsibility initiatives, both directly as a bank, as well as via its Cultural Foundation (MIET) and Historical Archives.

The three key pillars of the “RESPONSIBILITY” CSR Action program are: “Community” – “Culture” – “Environment”.

COMMUNITY
• Strengthening of actions to upgrade health services. Continuation of the long-running sponsorship program for the Construction of a New Surgical Wing at Evangelismos General Hospital, support for 11 public hospital units and local health centers in Greece with the supply of medical and other equipment.
• Development of social solidarity programs (i.e. support to soup kitchens and initiatives for public welfare and solidarity).
• Supporting the work of bodies and organizations with distinguished track records in the alleviation of social problems.
• Supporting vulnerable social groups and individuals (the elderly, children, individuals with special needs).

SCIENCE – RESEARCH – TRAINING
• Sponsorship for scholarship programs for bachelor and master’s degrees in Greece and abroad.
• Contribution to enhancement of the education provided and support for educational programs.

CULTURE – HISTORY – ART
• Sponsoring the preservation and showcasing of the historical and cultural heritage.
• Sponsoring the preservation and restoration of monuments, as well as archaeological excavations.
• Sponsorship support for initiatives involving publications of cultural and historical interest.
• Supporting actions and events that involve music and the performing arts.

SPORT
• Continuation of the sponsorship for various sports associations as well as sponsorship for individual athletes as they prepared to participate in world championships (such as the Hellenic Paralympics Committee, Maria Sakkai, Katerina Stefaniidi, and others).

ENVIRONMENT
• Supporting environmental training programs.
• Sponsorship for programs aimed at enhancing fire prevention and the rehabilitation of fire-stricken areas and ecosystems of our country.
• Contribution to actions designed to support biodiversity.
• Supporting the work of bodies that are involved in environmental preservation and sustainable development actions (i.e. the Botanical Garden of I. & A.N. Diomedes, the Goulandri Natural History Museum, the Greek Wind Energy Association (ELETAEN), the Hellenic Centre for Marine Research (HCMR) etc.).

MISCELLANEOUS
• Supporting publications, conferences and other events dealing with investment and financial issues.
Since the act4Greece program was launched in February 2016, and by 31.12.2018, a total of €3,302,875 was raised, vs €1,769,180 through to 31.12.2017 and €1,012,761 through to 31.12.2016. During the whole course of the program, NBG has contributed €1,810,989 in total, while the NBG Group total contribution has reached €1,966,987 (59.6%). Under the program, the strategic partners donated €215,141 (6.5%), while individuals and legal entities (outside NBG Group) donated a total budget of €1,120,745 (33.9%) (€738,631 individuals, and €382,114 legal entities).

In 2018, a total of €1,533,695 was collected, €1,124,407 (73%) of which was donated by NBG Group, €86,070 (6%) by strategic partners, €65,738 (4%) by third parties (legal entities) and €257,480 (17%) by individuals (mainly for the victims of the Attica wildfires). Among the actions launched in 2018, 7 actions fall under the Welfare, Health and Solidarity action area with a total budget of €1,836,000, 1 action under Research, Education and Training with a total budget of €50,000, 1 action under Environment & Sustainability with a total budget of €300,000 and 1 action under Sporting Activities with a total budget of €25,000 (2nd stage of an action with a total budget of €100,000). The overall amount raised corresponded to a total of 31,203 donations that can be broken down under the following channels:
In 2018, NBG won a significant international distinction for its 2017 performance as a member of the Bloomberg Gender Equality Index 2018, which is comprised of 104 companies across all sectors.

The Bloomberg Gender-Equality Index (GEI) 2018 covered 24 countries, including (for the first time) companies headquartered in Greece, Italy, Belgium, Chile, Ireland, Singapore and Taiwan.

This distinction has been reaffirmed for 2018 with the Bank's assessment by the aforesaid Index, as NBG has been positively assessed for the second consecutive year and listed in the "Gender Equality Index 2019", which covers 36 countries and includes 230 companies. The 230 companies of the Index come from various business sectors.

This Bloomberg Index assesses gender equality as regards statistics inside the companies, business policies for staff, outside support and collaboration with society, as well as the products and services offered that enhance gender equality and awareness. The selection was made by the Bloomberg itself.

In 2018, NBG was included in the FTSE4GOOD Emerging Index, which recognizes companies demonstrating sound environmental, social and governance (ESG) practices.

NBG, after evaluation, was included in the FTSE4GOOD Emerging Index, which was created in December 2016 by the FTSE Russel Group.

The FTSE4Good index is a leading global responsible investment index that is designed to recognize companies that demonstrate sound practices on issues relating to the environment, society and governance (ESG), which are evaluated on the basis of international standards.

In 2018, NBG was rated by ISS Corporate Solutions regarding the pillars of “Environment”, “Society” and “Governance”.

The Bank was ranked in the top category “Highest Rating by Institutional Shareholder Services” for the “Society” and “Environment” pillars.

This performance serves yet again to confirm the Bank’s admirable level of environmental and social responsibility.

Since 2007, NBG has published, through the Carbon Disclosure Project, data on global warming, water consumption and CO2 emissions.

At the same time, through the independent, not-for-profit organization CARBON DISCLOSURE PROJECT, NBG published for the 9th consecutive year information about its strategy regarding global warming, as well as data on its water consumption and CO2 emissions.
As part of its efforts to promote awareness regarding sustainable development and corporate responsibility, NBG participates in relevant bodies and initiatives. Specifically:

### The Hellenic Network for Corporate Social Responsibility:

NBG has been a key member of the Hellenic Network for CSR since December 2008.

### Hellenic Bank Association (HBA):

Through its participation in the HBA, NBG takes part in the regulatory process and the decision-making regarding the drafting of relevant legislation.

With regards to actions related to sustainable development, the HBA has set up an interbank Committee of which NBG is a member.

### Sustainable Greece 2020 Initiative:

The “Sustainable Greece 2020 Initiative”, launched by the QualityNet Foundation in partnership with the leading business associations of Greece, aims to raise awareness among the Greek business community and society on issues relating to Sustainable Development, Responsible Entrepreneurship and Social Responsibility.

The Initiative’s strategic goal is the development of systematic dialogue and the creation of methodologies and tools that would support national efforts towards sustainable development on the micro and macroeconomic level. NBG continues to support this initiative as Sustainability Ambassador.

The “Sustainability Performance Directory” was developed by the QualityNet Foundation, is part of the “Sustainable Greece 2020” Initiative and rounds off the creation of a toolbox that supports organizations in adopting sustainable policies, upgrading their corporate approach to sustainable development and responsible entrepreneurship, while boosting their competitiveness.

The “Sustainability Performance Directory” was created on the basis of Greek Sustainability Code standards, in line with the German Sustainability Code, and supports companies in addressing major challenges such as adapting their companies to regulatory frameworks for non-financial reporting, environmental management and social risk, their integration into responsible networks of suppliers and international value chains, and, last, the signalling and recognition of responsible entrepreneurship.

NBG was ranked as a key member of the business elite, following the assessment of its performance as well as its holistic approach to sustainable development issues.
RATINGS, PARTICIPATIONS AND DISTINCTIONS

2018 Corporate Social Responsibility

CR INDEX 2017-2018:
The Corporate Responsibility Institute awarded NBG’s initiatives to integrate CSR in its business strategy through fostering activities that generate benefits for the community, the environment, its employees and the market.

NBG, which participated for the seventh time in the CR Index, succeeded in gaining a Diamond award for 2017-2018. This serves as recognition of the Bank’s policy, actions and initiatives developed in order to support society.

The CR Index is an important international rating index of the performance of corporations in the area of CSR and is used as a national CSR index in various countries.

A key rating tool, it also serves as a benchmark for comparative evaluation of CSR performance in four specific areas: Community, the Environment, Employees and the Market.

“Environmental Awards 2018”:
NBG won GOLD prize for its “Prevention” program aiming at the support of Parnitha National Park Management Agency under the Section: Organization & Process Innovation - Environmental CSR” at the “Environmental Awards 2018”.

“Healthcare Business Awards 2018”:
NBG was awarded GOLD prize at the Healthcare Business Awards organized for the 3rd consecutive year by Boussias Communications and Health Daily.

The Bank earned a distinction for its “Multi-year sponsorship of public hospital units and other health structures in Greece” in the “Support to Health sector by Companies/ Organizations outside the health sector” category.

Award for NBG in the context of “BRAVO 2018”:
The Bravo Sustainability Awards aim at promoting and rewarding best practices applied in Greece for Sustainability, Social Cohesion, standards for responsible behavior, and improvements in the quality of life. National Bank of Greece won distinctions for:
• “NBG Corporate Governance framework” in the “Governance” category
• “NBG Business Seeds program” in the “Market” category.
# GROUP FINANCIAL HIGHLIGHTS

## Profit & loss account data (€ millions) 2018 2017

- **Net interest income**: 1,094 1,532
- **Net fee & commission income**: 240 233
- **Earned insurance premia net of claims & commissions**: 17 (124)
- **Net trading income / (loss) & results from investment securities**: (31) (47)
- **Total operating income**: 1,320 1,594
- **Total operating expenses & other non-cash expenses**: (921) (918)
- **Operating profit / (loss) before provisions**: 399 676
- **Credit provisions & other impairment charges**: (312) (807)
- **Restructuring Costs**: (78) -
- **Profit / (loss) before tax & minorities**: 9 (131)
- **Taxes**: (37) (27)
- **Profit / (loss) from discontinued operations**: (22) (254)
- **Minorities**: 34 31
- **Attributable profit / (loss)**: (84) (443)

## Balance Sheet data (€ millions)

- **Due from banks (net)**: 5,138 1,778
- **Loans & advances to customers (net)**: 30,134 37,941
- **Investment securities & financial assets**: 8,959 5,573
- **Other assets**: 20,864 19,476
- **Total assets**: 65,095 64,768
- **Due to banks**: 7,667 7,341
- **Due to customers**: 43,027 40,265
- **Debt securities in issue & other borrowed funds**: 1,414 1,197
- **Other liabilities**: 8,025 9,269
- **Total shareholder equity**: 4,962 6,696
- **Total equity & liabilities**: 65,095 64,768

## Key figures & ratios

- **Earnings (losses) per share (€)***: (0.07) (0.48)
- **Net interest margin**: 2.7% 3.2%
- **CET1**: 16.1% 17.0%
- **Total CAR**: 16.2% 17.0%
- **Staff number (average)****: 10,606 11,016

## Credit ratings

<table>
<thead>
<tr>
<th>Rating</th>
<th>Long-term</th>
<th>Short-term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moody's</td>
<td>Caal</td>
<td>NP</td>
</tr>
<tr>
<td>Standard &amp; Poor's</td>
<td>B-</td>
<td>B</td>
</tr>
<tr>
<td>Fitch Ratings</td>
<td>CCC-</td>
<td>C</td>
</tr>
<tr>
<td>DBRS</td>
<td>D</td>
<td>R-S</td>
</tr>
</tbody>
</table>

* Earnings / (losses) per share – Basic & diluted from continuing and discontinued operations
**Average personnel from continued operations
THE NBG SHARE

In 2018, the Athens Exchange (ATHEX) posted significant losses mainly because of political uncertainty, particularly in the second half of the year. NBG’s share presented greater volatility, its year high standing at €3.55 on 23.01.2018 and its year low at €0.93 on 27.11.2018, and its closing price on 31.12.2018 at €1.10.

NBG’s market capitalization as at 31 December 2018 stood at €1.0 billion vs €2.3 billion in the previous year. The total trading volume of shares stood at €1.4 billion, lower than the previous year (€2.1 billion), comprising 10.2% of the annual trading volume in the domestic stock market vs 8.7% in 2017.

At 23.07.2019, NBG’s market capitalization stood at €2.1bn, up 118% since the beginning of the year.

As at 31 December 2018, NBG’s share capital was divided into 914,715,123 common shares of a nominal value of €3.00 each. NBG in 2018 proceeded with a reserve split at a rate of ten (10) old common shares to one (1) new common share.

At the end of December 2018 NBG’s free float was broad-based, including circa 113,000 institutional and retail shareholders. As at 31/12/2018, NBG’s shareholder data indicate that the HFSF held 40.4% of its share capital, while 46.6% was held by international institutional and retail investors, and 8.5% by domestic retail investors. Excluding the HFSF’s shareholding, the participation of international institutional and retail investors stood at 78.2% while domestic retail investors stood at 14.3%.

SHAREHOLDER STRUCTURE

As at 31 December 2018, NBG’s share capital was divided into 914,715,123 common shares of a nominal value of €3.00 each. NBG in 2018 proceeded with a reserve split at a rate of ten (10) old common shares to one (1) new common share.

At the end of December 2018 NBG’s free float was broad-based, including circa 113,000 institutional and retail shareholders. As at 31/12/2018, NBG’s shareholder data indicate that the HFSF held 40.4% of its share capital, while 46.6% was held by international institutional and retail investors, and 8.5% by domestic retail investors. Excluding the HFSF’s shareholding, the participation of international institutional and retail investors stood at 78.2% while domestic retail investors stood at 14.3%.

NBG market capitalization up 118% since 1 Jan 2019.
Performance varied across the major economies, with expansionary fiscal policy in the US boosting real GDP growth to 2.9% yoy in 2018, from 2.2% in 2017 (Graph 1.1.1). By contrast, the euro area economy slowed down, with real GDP growing by 1.8% yoy, from 2.4% in 2017, as the particularly high contribution of net exports to overall GDP in 2017 (+0.8%) did not recur in 2018. In Japan, economic growth also lost momentum as private consumption and exports slowed, with real GDP growing by 0.8% yoy, vs 1.9% in 2017.
“2018 is expected to signal the end of the substantial and continued fiscal adjustment in the euro area”

**EURO AREA**

- Adopted a wait-and-see approach for 2018 to 2.25% - 2.5%.
- Raised the benchmark rate.
- TLTROs (09/19 – 03/21) Announced 2-year-maturity. 
- Ended QE in December 2018.

**USA (Fed)**

- Raised the benchmark rate for 2018 to 2.25% - 2.5%.
- Adopted a wait-and-see approach for 2019.

International oil prices recorded high volatility in 2018. Indeed, prices posted an upward trend up to October, due to the strong demand that accompanied the dynamism in global growth, sanctions on Iran, and reduced output in Venezuela. Thereafter, however, growing doubts for the prospects of global growth, in view also of heightened trade tensions, had a negative impact on prices. Overall, the price of crude oil declined to USD 53/barrel by the end of 2018, vs USD 67/barrel at the end of 2017, having lost approximately 20%. However, in terms of average annual prices, oil rose by 30% yoy in 2018 to USD 71/barrel, from USD 54/barrel in 2017. On the back of these developments, inflation in the advanced economies accelerated to 2.0% (average annual change) in 2018 vs 1.7% in the previous year.

Monetary policies in the advanced economies remained supportive, though to a smaller extent than in 2017. The Fed raised the benchmark policy interest rate by 100 basis points cumulatively to the range of 2.25% - 2.5% through to December 2018 (Graph 1.1.2) and reduced its balance sheet by USD 372bn to USD 4.08 trillion. However, in January 2019 the Fed adopted a wait-and-see approach with regard to subsequent interest rate hikes, in view of the volatile economic environment. Furthermore, the process of downsizing its balance sheet will end in September, when it will reach a level of around USD 3.7 trillion. On the other side of the Atlantic, the ECB ended its asset purchase program (QE) in December 2018, having made purchases of a net value of EUR 2.7 trillion. (Graph 1.1.2) and reduced its balance sheet by USD 373bn to USD 4.08 trillion. However, in January 2019 the ECB kept unchanged its main refinancing operations rate at 0.0%, the marginal lending facility rate at 0.25%, and the deposit facility rate at +0.4%. In order to continue supporting the economic activity, the ECB expects to hold interest rates at their current levels “at least through the end of 2019”, while in March 2019 it announced seven new Targeted Long-term Refinancing Operations (TLTROs) with a maturity of two years, which will take place from September 2019 through March 2021. Finally, the Bank of Japan held its short-term policy rate at -0.1% and continued the aggressive expansion of its balance sheet, mainly through purchases of Japan Government bonds and equity exchange traded funds (“ETFs”), as it targets 10-year Japanese government bond yields to remain around zero percent under its “yield curve control” framework (within a divergence range of +/-20 bps).

2018 is expected to signal the end of the substantial and continued fiscal adjustment in the euro area, which began in the wake of the financial crisis of 2008/2009 and led to a marked improvement in public finances. Indeed, the fiscal deficit contracted to 0.6% of GDP in 2018 vs 1.0% in 2017, mainly reflecting lower interest payments on debt, while it is forecast to increase slightly to 0.8% in 2019. On the other side of the Atlantic, the federal government budget deficit increased to 3.8% of GDP in 2018 from 3.5% in 2017, and is expected to increase further to 4.2% in 2019 (Graph 1.1.3), reflecting household and business tax cuts, and increased spending.

**Euro area’s fiscal deficit**

- 1.0% of GDP in 2017
- 0.6% of GDP in 2018
- 0.8% of GDP in 2019 (projected)

**US fiscal deficit**

- 3.5% of GDP in 2017
- 3.8% of GDP in 2018
- 4.2% of GDP in 2019 (projected)

---

**European Central Bank (ECB)**

- Kept its main refinancing operations rate unchanged at 0.0%.
- Ended QE in December 2018.
- Announced 2-year-maturity TLTROs (09/19 – 03/21).
The performance of the economies and banking sectors of the SEE was descent in 2018.

The growth rate of the SEE is estimated to have reached 4.0% in 2018 — 2.1 percentage points higher than the Euro-28 — buoyed by strong domestic and external demand. Private consumption remained the key growth driver, mainly as a result of improving labor market conditions, increased credit to households, and expansionary income policy. On another front, exports of goods and services maintained momentum, despite the slowdown in the economic activity of the euro area, the largest trading partner of the SEE.

Not surprisingly, despite stronger exports, the current account deficit widened to a multi-year high (albeit manageable) of 4.5% of GDP in 2018 on the back of strong domestic demand and, to a lesser extent, unfavourable global oil price trends. It is encouraging, however, that the quality of the financing of the current account deficit remained sound. Indeed, foreign direct investments (which do not imply debt creation) financed the greater part of the current account deficit (estimated at 58.8% in 2018).

Amid a favourable operating environment, the fundamentals and the performance of the SEE banking sector continued to improve in 2018. Indeed, available published data for 2018 indicate that NBG’s SEE banking sector profitability grew to €1,678m in 2018 vs. €1,268m in 2017. This performance was mainly underpinned by lower provisions for bad loans, due to the decline in the ratio of problematic loans to total gross loans (at 5.2% and 5.0% in North Macedonia and Romania, respectively, at the end of 2018, vs 6.3% and 6.4% in the previous year). The downward trend in non-performing loans reflects strengthening economic activity and, to a large extent, significant write-offs and sales of non-performing loans encouraged by central banks. Additionally, the capital adequacy ratio remained strong (ranging between 16.5% in North Macedonia and 19.7% in Romania at the end of 2018). The improved asset quality and solvency bode well for a strengthening recovery in lending activity going forward, in view of the region’s low financial penetration rate (loan-to-GDP ratios ranged between 26.0% in Romania and 49.3% in North Macedonia in December 2018), especially to households (credit to households as a percentage of GDP ranged between 14.2% in Romania and 24.1% in North Macedonia in December 2018), and solid liquidity ratios (in the Group’s SEE operations, the average loan-to-deposit ratio stood at 79.0% in December 2018).

Key growth driver: private consumption
Momentum maintained by: exports of goods and services
The solid performance of the economies and banking sectors of the SEE is expected to continue in 2019

Economic growth in the SEE is expected to slow to 3.8% — remaining, though, higher than the long-term potential growth rate of 3.5%. Specifically, in North Macedonia, the growth rate is expected to accelerate to 3.8% in 2019 from 2.7% in 2018, on the back of rising confidence domestically, following the agreement with Greece, in January, regarding the country’s name, which will permit North Macedonia to seek admission to NATO and the EU. In Romania, economic growth is expected to slow down to 3.8% in 2019, from 4.1% in 2018, due to weak external demand and unfavourable base effects stemming from the high growth of private consumption in the previous year.

However, there are risks to the positive outlook for our SEE activities, which are mainly related to a potential escalation of tensions in international trade the possibility of a UK withdrawal from the EU without an agreement, and a sharp slowdown in China’s economic growth that may lead to tighter than anticipated liquidity conditions in international markets, and weaker than originally expected economic activity in the euro area – the major trading, investment and financing partner of the SEE. In Romania, the introduction of tax on banks’ financial assets as of 1 January and the increase in political tension between the President and the Government before the presidential elections in November, may also have a negative impact on the positive outlook.

The successful completion of the financial support program was accompanied by the specification of a new set of medium-term measures aiming at further reducing public debt servicing costs, and by the accumulation of a “liquidity buffer” by the Greek government, which was designed to cover entirely, if necessary, the sovereign financing needs of the Greek government. These developments, coupled with the country’s consistent fiscal over-performance, set the stage for mitigating the adverse impact of fiscal policy on economic activity over the coming years and, in effect, concentrating the attention of the market on the performance of the private sector and the enhancement of the economy’s structural competitiveness.
Against this backdrop, GDP increased by 1.9% yoy in 2018 from 1.4% in 2017, thus marking the highest growth in the past eleven years, as a result of growing exports and stronger private consumption. The main driving force behind this performance was the solid increase in exports of goods and services (8.8% yoy, at constant prices), which exceeded initial estimates for yet another year and, in fact, more than offset the 2.9% yoy growth in imports, with net exports contributing 1.8 percentage points to the annual change in GDP for 2018. Export performance deserves special mention, as it not only sustained, but also increased, its momentum in the second half of the year, despite the deteriorating economic conditions internationally, and especially in the country’s key trading partners (i.e. Italy and Turkey have maintained their position among the top three export markets for Greek goods, despite increasing volatility in these economies). Total exports of goods and services amounted to a new record high of 34.1% of GDP in 2018 from 31.9% in 2017 and 21.0% on average during the period 2000-2009, supported by the strong tourism activity, which overperformed initial estimates for the third consecutive year.

Throughout the course of 2018, the decline in uncertainty, combined with the stimulus from tourism and exports, gave support to employment, the profitability of competitive businesses, incomes and private consumption, the recovery of which became the second pillar of growth, posting annual growth of 1.0% in FY18. Moreover, consumer confidence remained on a steady upward trend throughout the year, and in early-2019, signalling a further boost in domestic demand in the first half of 2019.

### 1.2#THE GREEK ECONOMY

**2018: Critical year for the Greek economy**

Successful completion of the ESM’s 3rd Programme of financial support

- New medium-term measures for further reducing public debt
- Liquidity buffer to cover any sovereign financing needs of the government
- Stage set for mitigating the adverse impact of fiscal policy

GDP increased by **1.9%** yoy from **1.4%** in 2017— the highest growth in the past eleven years

**This momentum was mainly based on:**

1. healthy employment growth (2.0% yoy in 2018),
2. a small recovery in hourly wages, especially in more competitive sectors, after a multi-year contraction of more than 20% cumulatively over the last decade, and
3. an increase in spending by those households that had not faced financial difficulties, but had postponed certain spending plans, due to the increased uncertainty in previous years. It should be noted that the sub-indices of the consumer confidence survey of the European Commission, which reflect households’ intention for major purchases, in the near term and over a 12-month horizon, showed a remarkable improvement in the fourth quarter of 2018, rising to pre-crisis levels.
Competitive business activity strengthened in 2018, with value added increasing by 1.8% yoy (for the 2nd consecutive year) and total pre-tax profitability of the Greek corporate sector by 2.2% yoy over the same period, and by 4.5% yoy in Q4.18 (the highest rate since Q1:2008). The above developments are noteworthy, if we consider the high rate of closed or essentially inactive businesses.

The improvement of the economic sentiment in 2018 and early 2019 reflects, in addition to increased consumer confidence, the combined strong performance of services, manufacturing and retail trade sectors. Manufacturing production increased by 2.0% yoy in 2018, for the 5th consecutive year, supported by the strong increase in production in the, essentially, export-oriented sectors of beverages, pharmaceuticals, basic metals, petroleum products and chemicals. In addition, Greece Manufacturing PMI in February 2019 remained at a level that implies further output growth – for the 21st consecutive month – closing at 54.2 from 54.1, on average, in FY.18. In fact, the Greek PMI in the period between September 2018 and February 2019 exceeded the corresponding euro area PMI, for the first time since August 2009.

“Developments in competitive business activity are noteworthy if we consider the high rate of closed or essentially inactive businesses”
Labor market conditions improved further in 2018, with employment increasing – for the 5th consecutive year – by 2.0% yoy, on average, and unemployment declining to 18.0% in December 2018 from 20.8% in December 2017. Furthermore, new jobs created in 2018 correspond, almost entirely, to salaried jobs and full-time employment, underscoring the fact that, along with the pickup in average hourly wages, the quality of labor market recovery is gradually improving.

Against this backdrop, the Greek real estate market showed consistent signs of revival, with house prices rising by 2.5% yoy in Q4.18 – the strongest annual pace in almost 11 years – and by 1.5% yoy in FY.18, gradually responding to improving macroeconomic conditions. The Athens area outperformed the market average (4.2% yoy in Q4.18 and 2.4% yoy in 2018), supported, inter alia, by a pick-up in foreign demand for premium properties and tourism-related demand (mainly for renting). In this vein, prices of commercial spaces (average of retail and office prices) increased by a solid 5.3% yoy, on average, in the first half of 2018, with office and retail prices increasing by 7.4% yoy and 3.1% yoy, respectively, in H1.18. As in the case of the residential market, the Athens area commercial real estate market average in H1.18 (increase in office and retail prices of 8.4% yoy and 4.9% yoy, respectively, latest available data). In this context, residential construction rose by 17.4% yoy in 2018, posting its first annual expansion in a decade and signalling the end of the longest adjustment cycle in the market.
The current account deficit increased to 2.9% of GDP in 2018, widening by 1.1% of GDP compared with 2017. This deterioration, mainly, reflects the widening in the deficit of the balance of goods, including oil (by 1.2% of GDP), and the widening in the deficit of the primary income account (by 0.5% of GDP) -- including, inter alia, net interest, dividend and profit payments -- which offset the increase in the surplus in the services balance (by 0.5% of GDP), with the latter reflecting the improvement in tourism, transportation and other services. Notably, tourism exceeded expectations in 2018, with revenue increasing by 10.5% yoy (up by €1.5bn compared to 2017) and non-residents arrivals increasing by 10.8% yoy.

In the field of public finances, it is estimated that in 2018 Greece will exceed for a 3rd consecutive year the maximum target for the General Government primary surplus (3.5% of GDP) under the 3rd Support Programme and the Enhanced Surveillance Framework. This consistent fiscal overperformance provided the space for activating a limited fiscal stimulus package for 2019 (amounting to 0.5% of GDP), the first in 11 years, which will, in turn, support the domestic spending. The expansionary measures, mainly, include the granting of a housing allowance, a weighted average reduction in real-estate taxation ("ENFIA") by 10.0% yoy, a reduction in the tax rate of dividends to 10% from 15% and a reduction in social security contributions for specific categories of sole proprietors and farmers.

The General Government debt-to-GDP ratio is estimated to have reached 182.8% in 2018, including additional funding of 8.6% of GDP raised by the government in order to proactively accumulate an adequate cash buffer. According to the European Commission’s Debt Sustainability Analysis in February 2019, the gross public debt is projected to decline at a steady pace from 2019 onwards, decreasing to 152.4% of GDP in 2022 and 115.8% in 2030. Likewise, the gross financing needs as a percent of GDP are expected to remain within the predetermined sustainability limits over the medium to long-term horizon (15% and 20% of GDP, respectively).

The Greek government’s cash buffer is estimated to exceed the amount of €34 bn at the beginning of 2019 (including the issuance of government bonds in Q1 2019 of €5.0 bn), which is sufficient to cover, if necessary, the financing needs of the Greek government till 2023, assuming the achievement of the medium-term fiscal targets, even without additional government bonds issues.
The Greek banking system remained in a deleveraging mode, for the 8th consecutive year, with credit to private sector declining by 1.1% yoy in December 2018 from -0.8% yoy in December 2017. Credit to corporations stabilized in December 2018, with a limited number of business sectors, such as the agricultural sector, the tourism and the real estate market, recording positive credit flows (annual increases in lending of 4.1%, 3.6% and 2.1%, respectively). Loans to households decreased by 2.2% yoy in December 2018, with housing loans declining by 2.8% yoy and consumer loans by 0.8% yoy in December 2018. However, the bank lending survey data for Q4.18 showed a substantial increase – although from a very low starting point – in the estimated demand for housing and consumer loans. Domestic private sector deposits rose by €7.9bn in 2018 (reaching €134.5bn), a. €5.8bn from household deposits, b. €2.1bn from corporate deposits.

In 2018, the Greek government held its first exit on the markets after the completion of the 3rd Programme, with the issuance of a new 5-year benchmark bond, which, in fact, attracted greater interest from long-term investors than the bond issues of the previous two years. The Hellenic Republic raised €2.5bn from this bond issue, at a re-offer yield of 3.6%. This was followed by the successful issue of a new 10-year bond, on 5 March 2019 – which was the first issuance of a bond with such a duration since 2010 and the second after the completion of the 3rd Programme – raising €2.5bn against offers totalling €11.8bn, at a re-offer yield of 3.9%. However, the Greek bond market and, generally, the Greek assets valuations remain very sensitive to increased volatility and, especially, to any fluctuations in the financial markets and the risk premiums internationally.
ANTICIPATED DEVELOPMENTS – OUTLOOK

The positive trends in the Greek economy are expected to continue in 2019, despite the deteriorating global conditions, supported by:

1. higher private consumption, which should be buoyed by an increase in the households’ disposable income, due to a further increase in employment and hourly compensation, which are supported by the 11% increase in the national minimum wage as of February 2019,

2. a healthy, albeit weaker, export growth, due to a slowdown in external demand,

3. an expected increase in investment activity, on the back of increased profitability, increased capacity utilization levels and the underperformance of investment in 2018,

4. a mild fiscal loosening (0.5% of GDP),

5. continued support from inflows of portfolio investments and foreign direct investment attracted by very low domestic asset valuations -- especially in the real estate, financial and transport sectors -- following a very strong performance in 2016-2018 period, and

6. increased probability of a gradual normalization in monetary policy by the ECB for a more protracted period than originally expected in late 2018.

The above factors, along with the deep restructuring that has taken place in the Greek business sector and the strengthening of domestic demand, are expected to favour the diffusion of the economic recovery across a significant number of business entities and households, as well as support the increase of credit demand and banking activity in general. In addition, the acceleration of investment activity and a further increase in high quality employment creation are expected to support productivity and per capita income. Also, the gradual recovery in economic activity, in conjunction with the enhanced fiscal efficiency, could increase the scope for applying more efficient and targeted social cohesion policies.

However, downside risks still surround the baseline scenario relating mainly to the very gradual improvement in domestic liquidity conditions and the still vulnerable financial position of a significant number of business entities and households, following the multiyear crisis, in conjunction with the usual procrastination regarding investment decisions in an election year. In addition, a further downgrade in the outlook for the global economy could weigh on Greece’s economic performance, as well as, on financial market conditions in 2019.
2.1 RETAIL BANKING
2.1#RETAIL BANKING

Retail Banking Division aims to:

• grow and manage the Premium and Retail clientele, design and implement the service model, as well as to define the product offering and pricing policy for the specific clientele segments,

• design, develop, implement and define the pricing policy for deposit, investment and bancassurance products and services for the Bank,

• The Premium Banking customer base consists of ~210,000 customers with funds under management totalling €15.1 billion, and loans totalling €571 million, maintaining a cross-selling ratio of 3.9 and reaching a Net Promoter Score of 59.

• The customer base of retail customers of special interest consists of ~865,000 customers with funds under management totalling €9.5 billion and loans totalling €4.4 billion, maintaining a cross-selling ratio of 3.2 and reaching a Net Promoter Score of 57.

Key figures

• Market shares, in respect of total deposits, posted a reduction (-0.40 percentage points, from 26.3% to 25.9%), while the various individual categories presented fluctuations: -0.30 percentage points in sight and current accounts, +0.19 in savings accounts, and -0.45 in time deposits.

• As regards the deposit mix, the Bank maintained its comparative cost advantage vs competition (time to demand deposits: 0.42 to 1 vs 0.65 to 1 for other banks).

In 2018, the Bank implemented projects in line with its strategy, with a focus on providing upgraded customer services, assisting the work of the Branch Network, maintaining liquidity, and reducing the overall cost for the Bank.
2.1 RETAIL BANKING

CUSTOMER-FOCUSED SERVICE MODEL

The first stage of implementation of the customer-centric model in branches, which concerned change in the network’s organisational structure, was continued through to completion. As regards the implementation and operation of the customer-oriented model, the relevant unit of the Bank undertook a number of additional actions and initiatives with a view to supporting the Network and improving customer experience, including:

- Design and implementation of targeted promotional actions
- Commencement, through the application of Campaign Management, of automatic and personalized communication with customers through alternative channels (email, SMS) for the provision of information and the promotion of selected products.

DEPOSIT, INVESTMENT AND BANCASSURANCE PRODUCTS

As part of efforts to maintain its liquidity, to provide optimum and integrated services to its customers, to modernize products and their marketing model, and to reduce the relevant cost for the Bank, NBG focused on the following areas of action:

- New products focused on customer needs
- The development of a System for the creation and management of Deposit Products.
- The development of a System for the monitoring of fees (Basic Rates & Charges, special Rates & Charges, special customer terms).
- Micro-Investor Program and three new mutual funds
- The design of new investment products and programs, including the Micro-Investor program and the three Mutual Funds.
- The incorporation of Bond products and Capital Plus products in the Investment Platform.
- The implementation and incorporation of the legal framework relating to the implementation of MiFid II (Law 4514/2018) in the IT systems.
- Alignment with the institutional and regulatory framework of the Payment Services Directive (PSD II), the Payment Account Directive 2014/92/EU (PAD), the Insurance Distribution Directive (IDD), and the General Data Protection Regulation (GDPR).
- Absorption of Bancassurance to enhance the promotion of bancassurance products
- Absorption of NBG’s Bancassurance subsidiary, so as to enhance the promotion of bancassurance products.

myNBG platform

As regards the myNBG platform, the first stage of the project has been implemented and the control procedure for the proper operation of the platform has been completed, so that in the first half of 2019 the platform can be implemented on a pilot basis in the branch network.

The functionality of phase 1 includes basic customer-focused CRM functions, the servicing of core business products and services (account, debit card, Internet Banking), integration of day-to-day operations of the branch network (target-setting, promotional actions, clientele), servicing of cards and i-bank, automatic production of the forms for every banking operation performed in a redesigned uniform display of the information provided, and targeted proposal for new products or services per customer (“next best offer”).

Meanwhile, NBG has started preparations for the implementation of Phase 2 and the updating of its specifications on the basis of current needs and changes in customer service.

In 2018, 56 promotional campaigns relating to customer management and tickler files of insurance products per customer segment were implemented through NBG’s branch network. In addition, Retail customer lists were processed and delivered to the branch network for further processing on a monthly basis, with a view to better monitoring and thereby improving customer service.

First stage of the project implemented

Control procedure for proper operation of the platform completed

Preparations for implementation of Phase 2

56 promotional campaigns implemented in 2018
**2.1#RETAIL BANKING**

**CUSTOMER ANALYTICS**
Within the context of its transformation plan, the Bank made further improvements to its customer analytics infrastructure with the development of models for the determination of the next best offer, and with the creation of churn prediction models (for predicting the likelihood of customer flight to competition).

Moreover, new customer subsegmentation models were developed and new predictive models for the implementation of targeted promotional actions in a series of products and services were offered by the Bank.

**CAMPAIGN MANAGEMENT SYSTEM - CMS**
A new Campaign Management System (CMS) was launched and a group of individuals was trained to manage the said system.

The CMS infrastructure is used to design and implement every kind of communication with the customer at many and differing stages of the customer relationship (so-called “customer communication journeys”) via all of NBG’s available channels.

**RETAIL MIS**
More than 20 new reports to the Management, the network and the Retail Banking product units were prepared.

The specific reports contributed to more efficient provision of information to Management, thus facilitating the decision-making process with a view to increasing profitability, reducing costs and improving customer service.

Specifically, weekly reports to the Management relating to the results of promotional actions to targeted customers via the branch network and other channels ensure better monitoring of their processing and results.

*go4more*
In 2018, the growth rate of members within the context of the program remained high, with over 20,000 new users monthly, while the number of merchants joining the program increased by 14%.

Within the year, NBG set up the option to recommend go4more to a third person, rewarding the member with go4more reward points, the award of bonus points for carrying out transactions through the i-bank pay app, and also the option to transfer points from one member to another.
OUTLOOK REGARDING THE PROGRESS OF BUSINESS IN 2019

In 2019, additional projects have been scheduled in line with the Bank’s strategy. Specifically:

1. Creating a smaller and more targeted clientele

Further enhancement of the customer-oriented service model through the re-definition of customer segments’ perimeter, leading to smaller, more targeted and easily manageable clientele and the design and implementation of discrete service model and product offering per customer segment and sub-segment.

2. Creating an infrastructure to schedule meetings with customers

Introducing the infrastructure via the new CRM myNBG platform that enables meeting scheduling with the customer, so as to upgrade the service level and support sales.

3. Leveraging analytics

Leverage analytics to facilitate front-office activity, drive sales (next best offer, customer value, needs identification and sales tool) and design targeted campaigns based on customer behavioural models.

4. Developing new third-party sales channels

Leverage third party sales channels to conduct large scale campaigns through external telemarketing and digital channels for targeted BTL campaigns.

5. Installing the myNBG platform in all branches

The installation and use of myNBG platform by the entire NBG branch network, with the completion of phase 1 as well as the delivery and review of phase 2. Moreover, our aim is to train users so as to facilitate the expansion of the platform across all the main customer management operations.

6. Categorization of clientele

The completion of Customer Segmentation (categorization of clientele) in order to align the entire NBG clientele with the new customer-oriented model.

7. Implementing electronic ID and electronic signature

The implementation of eID which is related to eIDAS (electronic ID) and e-signature. In 2018, in collaboration with the Athens Stock Exchange, the University of the Aegean and Helex, NBG received a subsidy from the European Commission while, in 2019, the specific project should be launched.

8. Expanding the Customer Analytics infrastructure

The expansion of Customer Analytics with the development of Text analytics for the use of unstructured information included in texts exchanged between the customer and the Bank as well as the development of the Target Operating Model for the use of Analytics throughout the Bank.

9. Expanding the Campaign Management infrastructure

The expansion of the Campaign Management System infrastructure by connecting it to the new internet and mobile banking platforms and setting up more than 30 new automated communication flows with customers.
2.1 #RETAIL BANKING

The improvement of banking business processes, by reducing the number of steps and forms required and the development of new functions for the improvement of customer experience.

10 Improving banking business processes

The development of new and the replacement of existing products in line with the Bank’s strategy, with a focus on increasing liquidity and market share, as well as the servicing of deposit, investment and bancassurance needs of customers.

11 Developing new products

The implementation of the open architecture model with a view to selling Mutual Funds of third-Party Providers to Retail customers via the Branch Network.

14 Implementing the sale of mutual funds of third-party providers via the Branch Network

The inclusion of investment products in the Investment Platform.

13 Investment Platform

The offering of investment products, including Mutual Funds, through Internet Banking.

12 Offering mutual funds through Internet Banking

The increase of liquidity and broadening of revenues by upgrading the services provided and commissions income.

16 Upgrading services provided and commission income

Further upgrading of systems related to deposits and fee-based operations, as part of the effort to simplify processes, improve customer service and reduce costs.

17 Further upgrading systems related to deposits

The redesign of i-bank Alert service and the development of new alert packages.

19 Redesigning the i-bank Alert service

Further development of the go4more loyalty program, by enhancing the network of associates, changing the point collection system at supermarkets and loans, and by means of targeted promotional actions to specific customer categories, as well as the collection and redemption of points within the context of a specific product and redemption option via the e-commerce platform.

20 Further development of the go4more loyalty program

Streamlining and simplification of pricing structures, with a view to enhancing profitability, taking into consideration market conditions (competition, Greek economy and other) and the institutional and regulatory framework.

18 Streamlining and simplifying pricing structures

The introduction of "on demand reporting", in all its Retail Banking operations, enabling each unit to produce its own reports from a single source, so as to have a complete and detailed view of the portfolio at customer level.

15 Introducing on-demand reporting

Other product options include push notification in every transaction, geolocation, within the context of which targeted clientele that has activated the said service (location service) can receive notifications and personalized messages from the application as regards the nearest merchants or new offers, as well as the merchant portal, through which the merchants will receive reports and be able to set up campaigns.
In 2018, NBG further enhanced its position in the rapidly growing market of card payments. In both card issuance and acquiring, NBG posted strong results, growing business volumes, further enhancing its commercial footprint and increasing substantially its market share against competition. Specifically:

**IN ITS ROLE AS CARD ISSUER, NBG:**

- Holds a market share of 26.2% in the domestic market (vs 25.5% in 2017)
- Manages a portfolio of 5.2m cards, with annual turnover of €7.1bn (increase of 20.8% vs 2017)
- Holds a dominant position in the market for debit and prepaid cards, with a share of 30.2% & 46.6% respectively

**IN THE CARD ACQUIRING MARKET, NBG:**

- Holds a market share of 21.8% in the domestic market (vs 20.4% in 2017)
- Manages a wide network of partner companies that reach almost 172k
- Has an annual turnover of €6.4bn in 2018 (up +22.8% vs 2017).

In addition, with a view to further enriching its product offering, NBG designed and launched in 2018 2 new, cutting-edge and innovative products.

**It launched the new Debit Visa**

Moreover, as part of its efforts to penetrate and cover the rapidly growing market for luncheon vouchers, NBG is the first banking institution to offer the specially designed prepaid meal voucher for businesses that wish to offer luncheon vouchers as an employee benefit.

**It now offers prepaid meal vouchers**
The Bank has been steadily gaining pace in new loan disbursements across all retail segments. Focus is being given to improving operations, digitizing processes and redesigning customer journeys by solidifying the accumulated experience over good and bad times. At the same time we are leveraging existing strong relationships with main market players that will help source additional business in the areas of small businesses and consumer lending. The Bank has also made considerable penetration in the agri-business sector occupying distinctively the 2nd place and has established a strong brand in the start-up business world.

New Consumer Loans have increased 19% in 2018 compared to the previous year. Consumer Loans is an indirect business channel taking place via established retailers. Whether in cars, electronics or household goods, NBG has a leading market share in consumer lending. The Bank has established two new exclusive partnerships for 2018 (FORD & PLAISIO), with a few more expected to commence in 2019. Online automated decision engines have substantially improved service levels and new microloans are delivered swiftly to the customer.

New Small Business Loans have increased by 4% yoy in 2018.

NBG aims at increasing its market share in small business lending from an estimated c15% to a level of close to 25%.

The European Investment Fund “Easi”, a microlending initiative aimed at very small businesses, was launched in May 2018, followed by a digital online version launched in September 2018, positively affecting on new applications.

New Mortgage Loans have increased 58% compared to 2017.

Mortgages are the main theme of a holistic transformation initiative targeted at curing operational inefficiencies and making the mortgage lending product of NBG the agile and competitive proposition in the market.

Real estate agents have started registering fresh demand for credit and they are expected to contribute significantly in the post-recession mortgage market and the development of NBG’s business.
ASSET MANAGEMENT
NBG Asset Management, a wholly owned subsidiary of NBG Group, is the first mutual fund management company established in Greece. Set up in 1972, NBG Asset Management manages private and institutional client funds, made available to customers through the Bank’s extensive branch network. The Company’s objective is to achieve competitive returns in relation to domestic and international competition.

As of 31 December 2018, total assets under management in mutual funds and discretionary asset management amounted to €1.4bn, with NBG Asset Management maintaining a market share in mutual funds in Greece of 13.2% (Source: Hellenic Fund and Asset Management Association—report of December 31, 2017). The number of clients serviced by NBG Asset Management are in excess of 39,000, including 65 Institutional investors.

In addition to mutual fund management, NBG Asset Management offers the following services for institutional and private investors:

- Discretionary Portfolio Management
- Investment Services
- Advisory Services
- Administration and Safekeeping of UCITS units

It also offers a range of financial products and services that cover the needs of:

- Social Security / Pension Funds
- Insurance companies
- Corporates

The 16 mutual funds of NBG Asset Management cover a wide range of investment categories (Equity, Bond, Balanced, Money Market and Fund of Funds) in Greece and International markets. Such wide spectrum of investment products gives great flexibility to investors who wish to build their personal investment plan according to their investment profile and objectives through mutual fund portfolios with a high degree of diversification.
In 2018, based on our long-term experience and know-how, we expanded our clientele in portfolio management for institutional investors, through the addition of 3 professional-pension funds, two (2) based in Greece and one (1) in Cyprus, with related assets under management of €43.7m.

In April 2018, we launched the FCP NBG International Dynamic Allocation fund to NBG’s branch network. This fund is dedicated to both retail and institutional investors and aims to achieve positive long-term returns, mainly from capital appreciation, while providing current income through investing in a diversified portfolio world-wide (equites, bonds, real estate, commodities, etc.).

Despite the adverse financial environment internationally, the returns achieved both in the UCITS under management and in the segregated asset management services through the expansion of both Private and Institutional Clients - Pension Funds.

For 2019 and subject to a sustained economic recovery in Greece, NBG Asset Management expects an increase in its assets in UCITS under management and in the segregated asset management services through the expansion of both Private and Institutional Clients - Pension Funds.

At the same time, in cooperation with NBG Investment Products Division, three new funds, are currently designed and are being introduced in 2019. Those funds will ensure a wide diversification covering both the European and other major international equity and bond markets and will involve escalating risk levels.

In alignment with the Bank’s strategy and its Transformation Plan, NBG’s Private Banking (PB) Division has implemented several initiatives to facilitate cross-selling and client transfer between business segments alongside its efforts to gain share of wallet from the market.

In this context, we envisage to increase our net assets under management (AUM) substantially in the medium term, achieving return on assets (RoA) close to the existing portfolio average in less than 1 year.

Effectively, this implies a sizable increase in fee income generation, given that these assets currently reside in cash or near cash asset classes.

Following the successful cost containment efforts over the last two years, PB is now actively part of the Bank’s transformation plan, targeting at updating its systemic infrastructure to include substantial electronic onboarding and client servicing capabilities, as well as a number of other actions related to the introduction of new client mandates and the formation of a more client friendly business execution environment.

In addition, we are strengthening our co-operation with the Corporate and Shipping business segments through common initiatives and the adoption of a rigorous mutual recommendations framework, in an effort to extend our client reach and fully exploit synergies.
2.2 BUSINESS BANKING

2018 has been a year of significant reorganization and reformulation of the business strategy and priorities of the Corporate & Investment Banking Division (CIB), following the division’s organization restructuring at the end of 2017 through the establishment of specialized service pillars to corporate clients.

The CIB’s customer portfolio mainly comprises the major Greek business groups and is spread across three segments: a) energy and metals, b) services, telecoms, retail trade, and technology, and c) construction and infrastructure.

The main objective of the CIB is to provide clients with top quality products and services acting as their main partner bank, to facilitate their growth plans, to fully meet the needs of customers in respect of credit and non-credit products and services, and generate value for both sides of the banking partnership, thereby strengthening in sustainable fashion the revenues and profitability of the Bank.

In this context and leveraging its new structure, the substantial expertise and know-how of its people and state-of-the-art tools and business methods, in 2018 the CIB focused on the following objectives:

- The targeted reformulation of the strategy per customer, stepping up customer-focused coverage and optimizing synergies with NBG’s specialist product teams, thereby broadening the scope of cooperation with selected customers and increasing market share
- Optimum utilization and development of personnel with a view to fostering best possible performance in every job role, providing opportunities for career development and creating an environment that generates motivation and professional advancement
- Detailed mapping and targeting of needs and opportunities per sector as well as per individual customer, offering solutions for credit and other needs, and playing a leading role in major transactions
- Effective management of risks through timely initiatives and using the know-how and experience of the people in the division
- Provide assistance by qualified employees of the division to the working groups of the all-important Transformation Programme of the Bank
- Significant reorganization in 2018
- Targeted reformulation of the strategy per customer
- Increasing market share
- Optimal utilization of personnel
- Effective management of risks
- Expanding cooperation with selected customers
- Improving cross-selling
With specific reference to 2018, the following may be noted:

- **COOPERATION WITH** selected customers has expanded, especially in the energy and infrastructure sectors, while the CIB has played a key role in helping these customers to achieve their strategic goals.
- **THERE HAS BEEN** a significant increase in net lending – despite tight credit conditions in the market – and a broadening of NBG’s market share in serving the credit and non-credit customer needs covered by the CIB's operations.
- **THE CIB’S PORTFOLIO** presented growth reflecting improved cross-selling and the creation of the right conditions for sustainable growth of income and profitability for 2019.
- **WE HAVE STEPPED** up training for the division’s staff and cooperation with the various product divisions of the Bank by holding workshops and setting up joint working groups.

### TARGETS 2019

- **To further expand** and deepen partnerships across the entire range of products and services offered to our customers, with a particular focus on strengthening commission income.
- **To further grow** the corporate portfolio, increasing the share of banking cooperation on a selective basis, and forging sustainable growth of revenues and profitability.
- **To be the leading player** in major development transactions, and generally support sustainable investment projects that generate value for our customers and the economy as a whole.
- **To further improve** our clients’ experience of working with NBG as their banking partner, optimize response times, streamline procedures, and effectively centralize functions and delivery.
- **To maintain top-class** levels of risk management.
- **To remain committed** to advancing NBG’s Transformation Programme and the rapid deployment of the actions and strategic targets set out therein.

### STRUCTURED FINANCING

Following a long period of loan deleveraging, 2018 was a dynamic year for the Structured Financing division of Corporate and Investment Banking. Specifically, the total disbursed loan book under management stood at €878m, up by 55% or €325m yoy.

Under the Bank’s Transformation Programme, the new organizational model of the division focuses on the financing of projects in the following business sectors:

1. Energy Project Finance
2. Real Estate Finance
3. Concessions Project Finance & Advisory
4. Leveraged Acquisition Finance

Increase of the total disbursed loan book by 55% to €878m
Reorganization under the bank’s Transformation Programme
Financing projects in the sectors of energy, real estate, infrastructures, concessions, PPPs, consultancy services and mergers & acquisitions
The aforementioned structural reorganization has contributed substantially to the improvement of the division’s operations and the achievement of its business targets, allowing for the targeted channeling of the Bank’s liquidity to transactions of strategic importance for the Greek economy. Some key examples of these credit facilities are listed below:

€354m for the acquisition of a 66% stake in “Hellenic Gas Transmission System Operator S.A.” (DESFA) by the consortium composed of the European energy companies “SNAM S.p.A”, “Enagas S.A.” and “Fluxys S.A.;” the undertaking, structuring and management of which was exclusively undertaken by NBG.

circa €150m for projects related to the country’s Renewable Energy Sources (RES) and Infrastructure

During the same period, the following projects were completed:

- circa €641m for the financing of the 20-year extension of the concession agreement of the Athens International Airport, in which NBG has undertaken a leading role, contributing on a primary basis 50% of the total amount.
- The initial structuring and approval of a loan of up to €161m to a special purpose company of GEK Terna Group, currently being established, for the financing of part of its participation in the investment consortium “International Airport of Heraklion Crete S.A.”

Disbursements in total or in part, depending on the business nature of the aforesaid transactions, should be carried out within 2019.

The division remains committed to achieving its financial targets, thus supporting NBG’s credit expansion plans, as well as the Bank’s efforts to effectively deploy its liquidity and enhance its profitability. 2019 is expected to be an equally dynamic year, with a focus on the following development axes:

1. The promotion of investments in the country, mainly in the Energy sector, including the construction of primary energy structures (e.g. an offshore floating unit for the reception, storage and regasification of LNG in Alexandroupolis and the electrical connection between Attica and Crete) and the development of the secondary acquisition of existing projects concerning mainly RES, as well as strategic Mergers & Acquisitions at project and company level.

2. Active financing support for scheduled Infrastructure projects that are critical for the interconnection of the country, with the most important being the North Road Network of Crete (BDiAK) and Egnatia Odos, as well as the upgrade of the Ports of Piraeus and Thessaloniki.

3. The active contribution of the Bank to the development of Tourism Infrastructure, with the flagship being the redevelopment of the old Athens airport in the area of Elliniko.

Since December 2011 and following the establishment of an Urban Development Fund (UDF) with NBG, the Bank has undertaken the management of European structural funds under the Joint European Support for Sustainable Investment in City Areas - JESSICA Initiative.

In 2018, the Bank took part in the tender held for the selection of administrators for the new financing tool “Infrastructure Fund”, which is a program similar to JESSICA, focusing on promoting investments in RES, increasing energy efficiency, protecting the environment and urban development.
LENDING TO MEDIUM-SIZED BUSINESSES

NBG reported a significant increase in lending to medium-sized enterprises in 2018, tapping the accelerating credit demand of Greek businesses and providing tangible support to the Greek economy.

This reflects the improving financial environment, but mainly the Bank’s long-term strategy to ensure a steady flow of liquidity to businesses that continue to invest in competitiveness and innovation, while promoting extroversion. At the same time, the Bank participated in favourable business financing programs in cooperation with European organizations, such as the European Investment Bank and the European Investment Fund, through which approximately €319m were disbursed to eligible businesses in 2018.

In particular, NBG signed an agreement with the European Investment Bank (EIB) for a total amount of €200m, disbursing €85.5m in 2018 through the issuance of a covered bond to finance the investment and business plans of SMEs and MidCaps under the “NBG Covered Bonds Loan for SMEs and MidCaps” program, which is still available in 2019. In this way, the Bank has actively helped Greek businesses to reduce their financing costs, thus enhancing their competitiveness.

In addition, further to a previous agreement concluded in 2017, NBG completed two programs (NBG Loan for SMEs and MidCaps I & II) by disbursing €80m to SMEs and MidCaps on favourable terms, while offering additional interest rate bonus to those businesses that contributed to maintaining and increasing employment for young people under 25 through the “Young Employment” initiative.

At the same time, in cooperation with the European Investment Fund and the European Fund for Strategic Investments (EFSI), the Bank allocated for the second consecutive year €147.5m to SMEs.

For 2019, NBG maintains its focus on providing credit to healthy, export-oriented medium-sized businesses. Special emphasis is placed on business sectors such as tourism, logistics, pharmaceutical manufacturing (particularly generics), Agro-food with domestic and export orientation, as well as packaging. In addition, the Bank provides financing to companies that aspire to become leaders in their industries.

In this context, the Bank aims to enhance the financing tools available to businesses, expanding its cooperation with the European Investment Bank, the European Investment Fund and the Hellenic Fund for Competitiveness & Development. NBG will also focus on the development and marketing of new products and services, targeting at enhancing business access to programs with favourable financing terms, while offering tailor-made solutions that meet businesses’ financial needs.

CORPORATE KEY ACCOUNTS

IDENTITY

NBG’s Corporate Key Accounts unit provides tailored and personalized support for key NBG corporate clients, who do not have credit facilities with the Bank, serving as their key link with the Bank (one-stop-shop) through an integrated service framework.

Our customer-centric approach aims at building close and long-term relationships with strategic customers that help strengthen NBG’s position in the domestic market, boosting the Bank’s liquidity and profits.

CLIENTELE & MARKET

NBG’s Key Accounts unit handles the Bank’s relationships with legal entities of the narrower and broader public sector, as well as with private sector legal entities that are not financed by NBG.

Our clientele includes almost all pension funds, ministries and many public organizations of high social significance, such as the Manpower Employment Organization (OAED), Local Authority Organizations (OTA), universities, bodies of the Church and Armed Forces, as well as private sector organizations non-funded by NBG (e.g. clubs, associations, federations, companies etc.).

NBG plays a leading role in serving the needs of the aforesaid clientele in the domestic market, as it manages 4,000 customers whose funds correspond to 10.3% of NBG’s total deposits.

The breakdown of Key Accounts customers per category on the basis of the annual average deposit balance (2018) is as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Deposits as % of NBG Total deposits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Organizations</td>
<td>10.8%</td>
</tr>
<tr>
<td>Health Organizations</td>
<td>4.6%</td>
</tr>
<tr>
<td>Local Authorities</td>
<td>12.4%</td>
</tr>
<tr>
<td>Education Institutions</td>
<td>8.5%</td>
</tr>
<tr>
<td>Private Companies</td>
<td>7.4%</td>
</tr>
<tr>
<td>Public</td>
<td>7.8%</td>
</tr>
<tr>
<td>Other</td>
<td>3.1%</td>
</tr>
</tbody>
</table>

The breakdown of Key Accounts customers per category on the basis of the annual average deposit balance (2018) is as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Deposits as % of NBG Total deposits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security Funds Collaboration with all (100%) of the Security Funds</td>
<td>43.6%</td>
</tr>
<tr>
<td>Public Organizations Collaboration with all (100%) of the Public Organizations</td>
<td>10.8%</td>
</tr>
<tr>
<td>Church</td>
<td>2%</td>
</tr>
<tr>
<td>Health Organizations Collaboration with 35% of Hospitals</td>
<td>4.6%</td>
</tr>
<tr>
<td>Local Authorities Collaboration with 35% of Kallikratic Municipalities &amp; almost 50% of Prefectures in Greece</td>
<td>12.4%</td>
</tr>
<tr>
<td>Education Institutions Collaboration with 70% of Higher Education Institutions</td>
<td>8.5%</td>
</tr>
<tr>
<td>Private Companies</td>
<td>7.4%</td>
</tr>
<tr>
<td>Public</td>
<td>7.8%</td>
</tr>
<tr>
<td>Other</td>
<td>3.1%</td>
</tr>
</tbody>
</table>

*...serving as a key link in providing tailored, personalized support to key corporate clients who do not have credit facilities with the Bank...*


NBG’s leading position in the specific market is reflected in the level of both deposits, as well as transaction volumes, while in 2018 the Bank strengthened further its position, according to collections and payments data. Specifically, NBG’s market share among Greek banks in payment transactions concerning payrolls, pensions and other benefits by public entities to beneficiaries’ accounts held with NBG through the interbank system reached 37% for 2018, up 10% y-o-y in terms of transactions compared to an increase of 1% for peers in total, thus generating additional liquidity for NBG (source: DIAS MIS).

In addition, collection transactions in the interbank system totalled €14.4bn in 2018 (up 5.7% y-o-y) (source: DIAS MIS).

Notably, 56% of the said collection transactions were carried out via NBG’s alternative channels (internet, phone, mobile banking, ATMs, APS), posting a 7% y-o-y increase. This reflects, inter alia, NBG’s efforts to encourage its customers to use alternative channels, improving banking experience through the convenient, rapid, direct and safe execution of transactions, while also reducing operating costs for the Bank, since man-hours are freed up in the Branch network.

**STRENGTHS & OPPORTUNITIES**

Our dynamic penetration in the specific market goes hand-in-hand with our customer-centric approach, our ability to provide tailor-made banking products and services to key customers, as well as our swift and efficient management of customers’ everyday needs and strategic choices.

In 2018, emphasis was placed on promoting low-cost and value-added services to customers through the use of new technologies. Moreover, leveraging on its expertise, in-depth knowledge of the market and continuous monitoring of the developments in the institutional and regulatory framework, the Bank offers substantial support to customers in their efforts upgrade and modernize their operations through innovative solutions that are in the best interest of both the client and the Bank.

**INNOVATIVE ACTIONS & ACHIEVEMENTS**

NBG participated decisively in the development of new types of customer service, which in 2018 were incorporated in existing products, applications and services, in the Bank’s effort to promote cross-selling.

Our achievements in 2018 concern the following action areas:

- **Digitization of banking operations reducing sharply the cost of transactions** (by over 90%), while offering customers flexibility, speed and security in carrying out transactions through:
  - The Bank’s participation in or contribution to the digitization projects and redesign of procedures and transactions (e.g. payments) deployed in the operating environment and the systems of the specific clientele (e.g. OAED, TEAPASA).
  - Offering state-of-the-art tools and systems for the execution of electronic transactions used or supported by NBG for the digital processing of payments by the said clientele (e-commerce, host-to-host interface through up and running APIs, System for Online Third-Party (bilateral) Service, POS applications customized for payments with online, real-time updates etc.).
  - Use of Barcode Readers at NBG branches and i-bank Spots for the debt collection for Public entities and private companies (e.g. Hellenic Cadastre, EFKA, INTERAMERICAN).
  - Utilization and customization of existing applications (e.g. Secure FTPs), as well as required contracts and legalization documents, so as to meet customers’ requirements under the latest institutional and regulatory standards at EU level.
  - Use of new cutting-edge tools relating to CSR actions, thereby helping to enhance the social profile of the Bank, as well as social prosperity:
    - Purchase of special equipment necessary for specific customer categories supporting and growing critical aspects of their operations (e.g. sponsorships for the supply of medical equipment at a significant number of hospitals)
    - Launch of Crowdfunding programs via Act4Greece, the first such kind of crowdfunding platform in the country (e.g. “White Butterflies” Foundation)
    - Expansion of the pioneering ibank pay application in services enabling the easy and direct participation of users in supporting various public-benefit programs

- **Innovation**
  - **Integrated service**
  - **Customer-centric approach**
  - **Cross-selling**
  - **Specialization**
  - **Personalization**
  - **Instant service**
  - **Efficiency**
  - **Organization**
  - **Flexibility**
  - **CSR actions**
Accordingly, the main medium-term targets are as follows:

- Proposals to universities across the country to participate in the Bank’s initiatives and actions for the purpose of encouraging and developing start-ups (e.g., Be Finnovative business accelerator program) and Innovation & Technology competitions.
- Participation of NBG experts as mentors or team advisors in programs aiming to enhance entrepreneurship (Be Finnovative, Hackathons).

**STRATEGY & TARGETS**

Our strategy for the next 3 years is aligned with the NBG’s Transformation Programme across the entire range of operations, with a view to advancing the level of service for key account customers and strengthening the Bank’s leading role in the specific market.

Within this context, the Bank deploys new technologies, implements automation and service optimization procedures, promotes initiatives and innovative proposals by NBG executives, recognizes and adopts state-of-the-art banking trends worldwide, whilst maintaining interest and awareness regarding the needs of its customers and the community in general.

Last, the provision of high value-added services coupled with specialized banking products helps to build and secure long-term relationships, as well as to attract and safeguard the funds of a distinguished and demanding clientele.

Accordingly, the main medium-term targets are as follows:

- Cost containment, increase in revenues & customer acquisition
- Asset retention & improved liquidity
- Efficient system utilization & processes automation
- Customer experience optimization via a targeted cross-selling strategy
- Corporate brand enhancement by directly addressing customer needs

**SHIPPING**

In 2018, financial conditions improved further, reflecting the positive international economic environment, the improvement of the Greek economy, as well as the progress in the restructuring and management of part of the loan book.

During the course of the year, with a focus on quality and financial health, the Bank expanded its customer base by attracting new names in the Greek shipping industry, primarily in the markets of dry bulk and tankers. In addition, the Bank further leveraged the potential of its existing, high-quality clientele, expanding already successful partnerships.

According to year-end 2018 figures, the balance of the NBG’s active portfolio stood at around €1.7bn, representing almost 15% of the Bank’s domestic corporate portfolio. The said portfolio included 233 vessels under finance mainly in the markets of dry bulk (50%) and tankers (42%). The Bank’s exposure to the coastal shipping segment, container ships and other specialized types of vessels is small (less than 8%).

Regarding the age structure of the portfolio, as at 31.12.2018 26% of the total portfolio was secured by ships aged up to 5 years, while 66% of the portfolio by ships aged up to 10 years, with the average age of the portfolio amounting to circa 12 years.

In coastal shipping, relatively higher fuel prices in 2018 vs 2017 affected EBITDA and net profits of the larger players in the shipping industry. During the course of the year, the mergers and acquisitions announced in 2017 were rolled out, with a view to reforming the sector and restructuring bank borrowing.

As regards the various individual freight markets, in 2018 conditions in bulk carriers improved, with returns peaking in mid-2018 and the freight market following a corrective trend, which continued during the first two months of 2019. Future prospects in the market of dry bulk remain positive for the current year, albeit weaker yoy, as extraordinary events or geopolitical parameters affecting the balance between supply and demand are creating uncertainty especially for capesize vessels.

The market of crude tankers entered a corrective trend, which continued during the first two months of 2019. The outlook of this shipping market for 2019 is positive, albeit at lower levels compared to the last quarter of 2018. Changes in the regulatory framework regarding the operation of ships and environmental protection are still under way and are expected to impact shipping markets over time. The Bank monitors closely the expected impact on the shipping industry from the proposed measures on reducing sulphur dioxide...
2.2 BUSINESS BANKING

Developments in coastal shipping and freight markets

- Relatively higher fuel prices affected EBITDA in coastal shipping
- Prospects in the dry bulk market remain positive
- Significant recession in the market of crude tankers in the 9 months of 2018, reversed in Q4

emissions as of 11.2020, also following technological developments regarding the gradual replacement of fossil fuels by more environment-friendly ones for ship propulsion.

In 2019 the Bank will continue to focus on good quality expansion of its active shipping portfolio at levels of pricing and collateral quality that enhance the Bank’s profitability, while ensuring at the same time the smooth servicing of new loans.

GLOBAL TRANSACTION SERVICES (GTS)

Within 2018, Global Transaction Services (GTS) has provided the market with €2.4bn of credit instruments and €384m of liquidity through Trade Financing.

Cross-border guarantees’ volume has been increased by €132m, supporting Greek entities’ participation in international bids and strategic projects. Furthermore, Export Letters of Credit (LcS) have increased by €474m, while GTS Trade Finance clientele has increased to 44,600 clients. The Bank maintains a leading market share in Import and Export products by SWIFT Traffic, as well as in local payments.

GTS’s investment in the new Trade Finance systems has entered roll-out Phase 2. A new customer front-end application has also become available since the end of last year, fully integrated in internet banking and back-end application.

In the context of the Bank’s strategy for improving operational efficiency and utilizing GTS’ expertise, the centralization of domestic letter of guarantees processing has been initiated. In parallel, GTS has launched the Digital signature project, aiming to improve customer experience and offer fast track services.

We consistently exploit and innovate structured solutions under International Trade Facilitation Programs (TFPs), enabling Greek corporates to access alternative financing channels with favorable cost.

As a result, NGB Trade Finance continues to gain global recognition from clients and business partners across all industries. Supported by industry Experts, Analysts, and Greek companies’ (Corporates & SMEs) votes in Euromoney Trade Finance Survey 2019, we were granted 2 Awards: Market Leader, and Best Service in Greece. NGB Trade Finance has also been named for 6 times “Best Trade Finance Bank” by the internationally acclaimed “Global Finance” magazine.

GTS Payments is implementing Swift Global Payments Innovation (GPI), which will be operational within 2019, offering transparency and on-time tracking in cross-border payments. During 2018, significant automation in Payment operations has been achieved to address the increasing transactions’ volume. Towards this direction, GTS has finalized the new system for exceptions and investigations, which underpins GTS operations strategy.

Leveraging on NGB’s competitive strengths, GTS plan to engage stronger cross-unit partnerships, under the Bank’s transformation pillars and initiatives, to target new clients and to further penetrate existing customers’ share of wallet and improve profitability.

BROKERAGE

NGB Securities serves as a benchmark for the provision of integrated and innovative investment services in Greece. The company aims at providing investment services tailored to the needs of its clients.

Despite the improved macroeconomic environment and the increased profitability of the companies listed in the Athens Stock Exchange (ATHEX), the ATHEX General Index recorded a downward trend throughout 2018, declining by 24% yoy.

Against this backdrop, trading activity in ATHEX remained at low levels in 2018, with the average daily turnover dropping further to €35m.

The Company’s share in the ATHEX stood at 9.6% and was ranked 4th among brokers for 2018.

NGB Securities continued to operate as a market maker in all listed derivatives and key equities in terms of capitalization, having gained high market shares and strong quality assessments, providing continuous liquidity and serving the wider market. Specifically, the Company held fourth place in terms of total derivative market share for the FTSE/ASE25 Large Cap Index, at 11%, and second place in Options on the said index, with a share of 19.0%. In addition, it held solid rankings in most Futures trading.

In 2018, the Research Division of NGB Securities was ranked by the Athens Exchange as one of the Best Country Research Teams in Greece, on the basis of

Clients have increased to 44,600

Leading market share in Import and export products

- €2.4bn of credit instruments in 2018
- €384m of liquidity through trade financing
- Increase of €474m in export letters of credit
- Increase of €132m in the volume of cross-border guarantees

Increases in credit products

- Increase of €132m in credit instruments
- Increase of €2.4bn in credit products
- Increase of €132m in export letters of credit

Global recognition of NGB Trade Finance

- Received two awards in 2019 – Market Leader and Best Service in Greece
- Named 6 times as Best Trade Finance Bank by internationally acclaimed Global Finance magazine

Global Payments Innovation (GPI)

- NGB Payments is implementing Swift GPI, which will be operational within 2019, offering transparency and on-time tracking in cross-border payments.
- Significant automation in Payment operations has been achieved to address the increasing transactions’ volume. Towards this direction, GTS has finalized the new system for exceptions and investigations, which underpins GTS operations strategy.

Research

- NGB Research continues to provide valuable insights and analysis to clients, maintaining a leading market share in Import and Export products.
- NGB Research has received numerous awards and rankings, including being named 6 times as Best Trade Finance Bank.

In 2018, the Research Division of NGB Securities was ranked by the Athens Exchange as one of the Best Country Research Teams in Greece, on the basis of...
of “Greek Research” international survey conducted by EXTEL. The Division further enhanced the quality of its work by focusing both on more regular briefing of investors and targeted analyses.

The past year marked a milestone for the industry, due to the implementation of the European Directive MiFID II. For NBG Securities, this directive triggered a series of changes that included, among others, the redesign of internal governance processes, the update of analysis products and services, as well as the renewal of our communication with clients, investors and the market.

Having successfully completed a series of actions in the context of NBG’s Transformation Programme, in 2019 NBG Securities aims to enhance its competitiveness through initiatives such as:

- Further exploiting synergies with NBG and achieving economies of scale
- Accelerating its digital transformation, focusing on alternative channels / services: over the coming months, a state-of-the-art app for mobile trading is due to be launched, while a brand new web trading app should also become operational

Such initiatives are expected to be implemented within an improved investment environment, as the outlook for the stock market is positive. The gradual restoration of confidence and the revival of investor interest in the Greek market in 2019 will be based on the following factors:

- further improvement in the country’s macroeconomic conditions
- total lifting of capital controls
- upgrading of the country’s credit rating by international agencies
- improvement in the banking sector’s overall performance (reduction of NPEs and attainment of business goals)
2.3 # NPE MANAGEMENT

CORPORATE SPECIAL ASSETS MANAGEMENT

ORGANIZATIONAL STRUCTURE

The Special Assets Unit (SAU), established in June 2014, is an independent and centralized unit, with end-to-end responsibility for the management of Large Corporate, SME, Shipping and SBL (exposure with NBG above €150K) NPEs.

SAU ORGANIZATIONAL CHART

SAU organizes its operations into four units.

- Large Corporate
- SMEs (SME and Shipping)
- Small Business (SMEs, SMES, SBLs)
- Control and Operational Support

SAU has direct reporting line to the CEO while SAU’s supervisory body is the Arrears and NPL Management Board (ANPLMB).

SAU ORGANIC ACTIONS FOR THE REDUCTION OF NPEs

Significant progress has been made during the last years towards addressing the issue of corporate NPEs in order to support the recovery of distressed, but cooperative and viable borrowers. The main initiatives can be summarized as follows:

- Tailored made restructurings aiming to reduce the debt repayment obligations to sustainable levels
- Assessment of alternatives to reduce the bank debt, without, however, forgiving a possible future upside, achieved through debt-to-equity transactions, convertible bonds, issuance of preferred shares or through profit participating bonds
- Debt-to-asset transactions or amicable asset sales aiming to reduce bank debt through the proceeds from the sale of non-core assets, usually as a part of a holistic solution of the obligor with the Banks

SAU uses a number of different forbearance, resolution and foreclosure measures, following international best practices, but tailored to the current economic and legal environment in Greece. Appropriate tools to measure the viability of debtors, fully integrated into the IT environment of the Bank, as well as net present value (NPV) analysis for the prioritization of alternative modification solutions are also used. An internal Management Information Systems (MIS) unit supports decision making and monitors performance.

Figure ... Corporate Portfolio – Restructuring options

CORPORATE PORTFOLIO—RESTRUCTURING OPTIONS

<table>
<thead>
<tr>
<th>SOLUTION TYPE</th>
<th>POSSIBLE SOLUTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Short-term restructuring</td>
</tr>
<tr>
<td>B</td>
<td>Long-term restructuring</td>
</tr>
<tr>
<td>C</td>
<td>Operational restructuring</td>
</tr>
<tr>
<td>D</td>
<td>Debt-to-equity</td>
</tr>
<tr>
<td>E</td>
<td>Collateral sale and repossession</td>
</tr>
<tr>
<td>F</td>
<td>Settlement</td>
</tr>
</tbody>
</table>

Actions to manage corporate NPEs

- Personalized restructuring
- Debt-to-equity transactions
- Issuance of convertible bonds
- Debt-to-asset transactions
- Further improvement of interbank cooperation

SAU DEDICATED LEGAL TEAM

SAU DEDICATED REAL ESTATE TEAM

"There are seven independent SAUs responsible for managing the portfolio of non-performing business loans"
Joint initiative of the four systemic banks

- Constituted of the heads of the participating banks’ SAUs
- Aims to resolve corporate cases
- Monitors the implementation of proposed solutions

Total SAU portfolio under management amounted to €5.5B on 31 December 2018, of which 46% corresponds to denounced balances.

A. COLLABORATION WITH THE OTHER BANKS

The two main interbank efforts to facilitate the timely management of corporate NPEs are the NPL Forum and the Solar Project.

1. NPL FORUM

The four Systemic Banks have established the Non-Performing Loans Forum (“NPL Forum” aiming to resolve corporate cases though the agreement of solutions acceptable by the Banks and the obligors. At the same time, the NPL Forum monitors the performance, as well as the smooth and timely implementation of the agreed solutions.

The NPL Forum is constituted of the heads of the corporate workout units from each of the participating Bank.

2. COMMON SME INITIATIVE (SOLAR PROJECT)

In May 2017 the four Greek Systemic Banks launched Project Solar, a breakthrough servicing initiative to define a common management framework for SME NPEs. Project Solar aims to enhance the effectiveness and efficiency of SME NPE management across the Greek banking system.

A servicer with international experience in projects of similar characteristics was appointed who has the mandate to manage a pool of common non-performing SME exposures of the four systemic Greek banks.

The initial portfolio under management amounts to €1.7B, of which €0.4B (175 debtors) belong to NBG’s SME NPE portfolio.

Project Solar is expected to have mainly the following benefits / objectives:

- Maximise NPE reduction and value creation
- Cost and time efficiency
- Provide access to enhanced capabilities, facilitating sustainability of Greek SMEs
- Enable asset deconsolidation through a possible future securitization

During the first months of this innovative effort, the servicer has submitted recovery plans and real estate valuations for the majority of debtors. Within 2019, the strategy for the whole portfolio is expected to be reviewed and approved by the competent committees.

Solar Project

- Joint initiative of the four systemic banks
- Servicer appointed to manage SME non-performing exposures
- Initial portfolio under management at €1.7Bn
- €0.4Bn belong to NBG’s SME NPE portfolio
- Recovery plans for the majority of debtors
2.3 NPE MANAGEMENT

B. DENOUNCED PORTFOLIO MANAGEMENT

The Bank denounces a loan contract when a borrower is in default and is non-cooperative and/or non-viable. The denunciation of a contract can also be decided due to the bankruptcy or dissolution of the debtor’s company or initiation of legal actions against the borrower by other creditors. Although the primary strategy for the denounced portfolio is the recovery through the liquidation of collateral, settlement solutions are also available, even after the denouncement through amicable and viable arrangements.

To further strengthen its collection performance, the Bank proceeded with the following actions:

- Creation of a taskforce, which analyzes the portfolio, determines priorities in deployment of the necessary actions for liquidation of collaterals, coordinates the actions with legal and other involved divisions and monitors their timely implementation.
- Internal procedures were optimized in order to minimize the time between the denunciation of a contract and the liquidation of the collateral.
- Appropriate internal processes were created and committees were established to assess the possibility of acquiring properties amicably or through public auctions, taking into account the value and marketability of the properties.
- It was decided to offer amicable settlement solutions, based on collateral recoveries and debt forgiveness (release of collaterals against cash payment, voluntary sale, debt-to-asset swap).

In 2018, SAU expedited auctions of 1,873 properties, of which 1,381 were held and 596 of those were successful.

SAU INORGANIC ACTIONS FOR THE REDUCTION OF NPES

The NPE Management Strategy includes several projects aiming to an expedited reduction of NPES through inorganic actions. The actions concerning SAU are summarized in the following:

- Unsecured Portfolio Sale (project Earth): initiated in Q4 '17 and completed in May 2018, project Earth related to the disposal of a portfolio of non-performing unsecured retail and small business loans in Greece of an outstanding principal amount of c.€2.0B.
- Secured Portfolio Sale (project Symbol). A new project has been initiated in H2 2018 aiming at the reduction of NPES through sale of secured portfolio, consisting of 46% SMEs and 54% SBLs based on the legal claim, of a total outstanding principal amount €180B. The project is currently being finalized.

RETAIL COLLECTIONS MANAGEMENT

Established at the outbreak of the financial crisis in 2010, Retail Collections (RC) is an independent and centralised unit focused on the management of delinquent, non-performing and denounced retail loans.

At the end of December 2018, RC had a total of 1,225 dedicated full-time employees (FTEs), including outsourced personnel, managing approximately €13.1bn of mortgage loans, consumer loans, credit cards and micro business loans (i.e. small business loans to entities with exposure <€150K) that are 14 days past due or current, yet classified as Forborne Non Performing Exposures (FNPE).

RC leverages all possible channels to reach clients in financial difficulty and work with them towards finding viable solutions. Such channels include:

- Call centers (Internal Collections Center and Debt Collection Agencies)
- NPL Hubs
- Law offices (12 external law offices with country-wide coverage and 1 internal law office)
- Postal services
- Mail
- Alternative channels (sms, web site, etc.)

When managing retail delinquent loans, the following five main stages can be identified:

- The Collections stage, where the aim is to convince delinquent debtors to repay their past due amounts and return to current status, without resorting to offering restructuring solutions.
- The Restructuring stage, where NPL Hubs, non-hub branches and the Internal Collections Center consult with delinquent clients to identify a viable restructuring solution.
- The Legal Stage, where an internal or external law office proceeds with legal actions, to convince non-cooperative clients to co-operate, or to liquidate the collateral if an amicable solution with the debtor could not be reached.
- Management of all customers protected under the provisions of Law 3869.
- Bad debts sale.
The Collections stage, where the aim is to convince delinquent debtors to repay their past due amounts and return to current status, without resorting to offering restructuring solutions.

The Restructuring stage, where NPL Hubs, non-hub branches and the Internal Collections Center consult with delinquent clients to identify a viable restructuring solution.

Management of all customers protected under the provisions of Law 3869.

Bad debts sale.

In 2018, the Bank established 42 specialized branches within regular bank branches, namely ‘NPL Hubs’, which are geographically dispersed so that they can service >70% of the Bank’s retail NPL portfolio. The 230 FTEs currently deployed in NPL Hubs are fully dedicated to NPL management and well trained in order to distinguish between cooperative clients and strategic defaulters. NPL Hubs employees consult with cooperative clients to find a viable solution customized to their needs and encourages them to reach an extra-judicial settlement, thus avoiding the lengthy and uncertain court trial process for L.3869 cases. They are equipped with the same collection support system (Qualco Collections System) which is used by the rest of the channels and are rewarded on a quarterly basis for the restructuring volume and cash collections achieved.

The Legal Stage, where an internal or external law office proceeds with legal actions, to convince non-cooperative clients to co-operate, or to liquidate the collateral if an amicable solution with the debtor could not be reached.

Establishment of NPL Hubs

In 2018, the Bank established 42 specialized branches within regular bank branches, namely ‘NPL Hubs’, which are geographically dispersed so that they can service >70% of the Bank’s retail NPL portfolio. The 230 FTEs currently deployed in NPL Hubs are fully dedicated to NPL management and well trained in order to distinguish between cooperative clients and strategic defaulters. NPL Hubs employees consult with cooperative clients to find a viable solution customized to their needs and encourages them to reach an extra-judicial settlement, thus avoiding the lengthy and uncertain court trial process for L.3869 cases. They are equipped with the same collection support system (Qualco Collections System) which is used by the rest of the channels and are rewarded on a quarterly basis for the restructuring volume and cash collections achieved.

In the last quarter of 2017, RC rolled out a fully revamped remediation strategy, which consists of two pillars; the first envisages the offering of a viable restructuring solution to clients, including significant interest and capital haircuts for clients with high LTV and in severe financial difficulty through a restructuring product called “Split & Freeze”. The second pillar entails legal actions up to liquidation of property for non-cooperative clients, with the exception of a small and well-defined segment of vulnerable clients.

“Split & Freeze” (S&F) is a new split-balance type of restructuring offered to clients with mortgage loans and secured consumer loans, whereby an amount of 20-60% (according to the borrower’s affordability) of the balance to be restructured remains frozen for 15 years. The haircut offered is conditional on the prompt repayment of the remaining part of the loan and amounted to approximately 28% in 2018. This restructuring product has grown in importance accounting for the majority of all mortgage restructuring performed in 4Q18 (chart 2.3.1). S&F exhibits significantly improved risk performance on a vintage basis after 4Q17 (chart 2.3.2), as it provides a viable solution for both the client, as well as for the Bank, given that the haircut offered remains below the level of provisions for the vast majority of cases.

“Split & Freeze” Restructuring

It offers significant write-offs of interest and capital.

It concerns mortgage and secured consumer loans.

20-60% of the balance to be restructured remains “frozen” for 15 years.

It provides a viable solution for both the customer and the Bank.

It accounted for the majority of mortgage restructuring in 4Q18.
Auctions planned for non-cooperative clients ramped up over the course of 2018 (chart 2.3.3). With the exception of 1Q18, when most auctions were cancelled due to the notaries’ abstention, ~60% of all auctions planned were held and of those, ~60% were successful. Application to L.3869 and amicable restructuring settlements are the most significant reasons for canceling a planned auction, while limited third party buying interest still reduces the success rate of auctions.

RC has put increased emphasis on the management of clients under Law 3869 in 2018. A cross-bank project initiated by the HBA NPL Committee developed a centralized database for clients in the initial stages of the Law 3869 process and a simulation tool to predict the final court decision. The four systemic Banks agreed on the rules for assigning the role of the “Leader” to the bank with the highest secured exposure, to negotiate with the client on behalf of all systemic banks. A predetermined offer for restructuring unsecured exposures was also agreed. The early results of this effort are very encouraging, with the majority of clients expressing interest in an out-of-court settlement.

Finally, RC completed a large unsecured bad debts sale in 2018, selling ~€1.9B of unsecured consumer and small business loans (project Earth). More bad debts sales are planned for 2019, including sales of secured small business loans and unsecured loans of clients under L.3869.
In 2018, the Branch Network continued to play a key role in the implementation of the strategic priorities of the Bank: enhancing liquidity, cleaning up the loan book and providing quality customer service (both retail and corporate).

As at 31 December 2018, the Bank had a total of 460 Branches in Greece, 44 Transaction offices, 5 Agencies and 8 i-bank stores, thus offering wide geographic and population coverage to more than 6 million customers.

In 2018, the rightsizing of NBG’s network gained pace, with the merger of 43 branches that is expected to be completed this year. Under the Bank’s Transformation Programme, our aim is to optimize the Bank’s regional footprint and specifically, to streamline the operations of the Network, ensure our presence in areas of significant economic activity and save resources.

In 2018, the Bank focused on optimizing the operations of its Branch Network as well as upgrading the quality of customer service through the incorporation of new technologies in bank processes enabling more digital transactions, the improvement of internal practices and the adoption of innovative solutions.

With the aim of optimizing the operations of the Branch Network the following steps were taken:

1. Implementation of a customer-centric model, with target-setting per customer segment (Retail, Premium, Business)
2. Establishment and operation of well-staffed special teams at selected Branches (Debt Settlement Centres) for the effective settlement of retail debt
3. Design and pilot implementation of a new operational model for business customers at selected Branches all over Greece
4. Launch of centralized business and retail loan management operations so as to free up time for the staff in Branches
5. Launch of the Galaxy program to decongest the Branch Network of hardcopy records and support central safekeeping and digitalization

**NBG’s Physical Branch Network in 2018**

**“In 2018, the rightsizing of NBG’s network gained pace”**

**Merger of 43 branches to be completed in 2019**

The aim is to optimize the Bank’s regional footprint

Upgrading the quality of customer service by incorporating new technologies

Optimizing Branch Network operations
In 2019, under the Bank’s Transformation Programme and aiming at further improving the operational efficiency of the Branch Network and customer service, the following measures will be rolled out:

- Completion of the Branch Network restructuring programme
- Upgrading the layout of Branches through targeted spatial interventions and the establishment of an “image” officer at each Branch
- Establishment and promotion of a customer-centric culture throughout the Branch Network
- Implementation of a new operating model for business customers at selected Branches throughout Greece
- Further modernization of the operation of the Branch Network through the adoption of cutting-edge solutions aimed at providing better quality services to customers:
  - Developing i-bank corners offering online transaction channels within the Branch Network to achieve faster customer service and reduce congestion at cash desks
  - Upgrading the innovative “i-bank pass” service to “i-bank pass plus” so that NBG customers can schedule online their visits to Branches for banking services other than cash-desk transactions
  - Further enhancing alternative transaction channels and actively encouraging customers to use them on the basis of a targeted strategy per type of customer and transaction
  - Expanding the use of the digital signature for applications and contracts beyond teller posts
  - Designing an electronic platform for uploading and managing customer verification documents

Measures to be implemented in 2019:
- Completion of the Branch Network restructuring programme
- Upgrading the branch layout and image
- Establishment and promotion of a customer-centric culture throughout the Branch Network
- Implementation of a new operating model for business customers at selected branches
- Further modernization of the operation of branches

Targeting at upgrading the quality of customer service, the following measures were taken for the Branch Network:

- Target to increase the rate of migration of cash transactions to alternative channels (68.5% in 2018)
- Expansion of the use of the e-signature platform to counters at all Branches, enabling the electronic storage of transaction vouchers, while reducing printouts and hardcopies
- Introduction of cutting-edge electronic systems recording customer satisfaction during their visit to the Branch (increase of the satisfaction index by 5% in 2018)
- Expansion of the use of barcode scanners to counters at all Branches to speed up the payment of bills
### ALTERNATIVE NETWORKS

A key pillar of the Bank’s Digital Strategy is to support the customer-centric business model, placing special emphasis on designing smart digital solutions that meet modern customer needs, and providing high-quality transaction experience across all online channels.

In addition, a key priority is to strengthen innovation and maintain competitiveness of the Bank in an environment where new technologies and changes in the international regulatory framework increase the competition coming from new players, such as companies operating in the emerging financial services industry using new technologies (FinTech) and small retail banks established in the last few years providing exclusively online services (Challenger Banks).

### MAIN DEVELOPMENTS AND ACHIEVEMENTS

The Bank’s Digital Channels Division includes online channels, ATMs/APS and the Contact Center.

#### RAPID GROWTH OF i-BANK INTERNET & MOBILE BANKING

- **80%** of transactions was executed through ATMs, APSs, Internet and Mobile Banking
- **24%** increase of active Internet Banking users in 2018
- **51%** increase in active Mobile Banking users in 2018
- **40%** increase of active Internet Banking users in 2018
- **136%** increase in transactions through the i-bank Pay application
- **24%** increase in active Internet Banking users
- **11%** transactions increase in mobile banking
- **103%** increase of active i-bank statements

#### i-BANK SECTOR

**i-bank Internet Banking & i-bank Mobile Banking Service:** Over the last five years, the fourfold increase in the use of i-bank Internet Banking and the tenfold increase in the use of Mobile Banking confirm that Bank customers are well aware of the benefits of digital banking. The upward trend continued in 2018, with active Internet Banking users increasing by 24% and transactions by 11%, while active i-bank Mobile Banking users recorded an increase of 51%, performing 74% more transactions in 2018 vs the previous year.

**EASI loan application through Internet Banking:** A typical example of the Bank’s strategy for the achievement of a comprehensive digital customer journey is the provision of microcredit up to €25,000 to micro-businesses (Easi guarantee program) via i-bank Internet Banking. Interested businesses, professionals/sole proprietors and self-employed can submit their applications directly through Internet Banking without visiting a Branch and follow online the entire processing of their application through to approval.

**i-bank Pay:** NBG is the only bank offering an electronic wallet for instant payments either person to person (P2P) or person to business (P2B), which is linked to the go4more reward program. With a modern user interface offering an exceptional user experience, making ongoing improvements in the application and targeted offers throughout the year, i-bank Pay posted a 136% increase in transactions and gained international innovation awards. Specifically, i-bank Pay was awarded first prize in Best Mobile Payments Initiative at the International Banking Technology Awards 2018, and the distinction of Highly Commended in the same category at the Paytech Awards 2018, organized in London by Informa.

**Alipay:** In 2018, the Bank offered its customers the option to receive payments at i-bank POS (Points of Sale) through China’s largest online payment platform, Alipay, thus increasing their outreach and sales to thousands of tourists from Asia. Merchants who are customers of the Bank and operate in tourist areas made use of this unique service, which in just a few months is already available through 103 commercial points in Greece.

**i-bank statements:** In 2018, the Bank continued its intensive efforts to promote i-bank statements in order to replace printed credit card and mortgage/consumer loan statements with an electronic notification to the customer. By the end of the year, printed statements of more than 570,000 customer accounts had been replaced by e-statements, contributing to the protection of the environment and the digital education of customers, while saving substantial costs for the Bank.

**Open banking APIs:** Continuing to lead the way in structural developments in the market, NBG swiftly recognized the value of open APIs (Application Programming Interface) in its strategic planning. For this reason, NBG is the first bank in Greece to provide to its API partners controlled access to its applications, in line with international open banking trends. As part of this strategy, NBG has developed several API categories, which are available on NBG’s portal (developer portal).

Among these products is the i-bank Pay API, which is already used by Cosmote. By linking to NBG’s API, the Cosmote application can display the balance and transactions, allowing the charging of the prepaid card it has made available directly to Cosmote customers. In addition, NBG has already entered business partnerships with major software designing companies in Greece for Enterprise Resource Planning (ERP) systems. By linking each ERP with the corresponding API, the business customer has the option to instantly access balances and bank
2.4#NETWORK STRATEGY

Greater use of ATMs and APS

The Bank had 1,467 ATMs at the end of 2018 and 143 APS (Automated Payment Systems)

89.5% of cash withdrawals were made at ATMs

29% increase in the value of ATM deposits

125% increase of the value of transactions via APS

Market share of 33% for ATM withdrawals and 32% for ATM deposits

Upgrade of software platform for ATMs

Strengthening of security measures in the ATM network

Installation of self-service kiosks for internet banking

account transactions in real time, make transactions on bank accounts, pay suppliers, make bulk payments, carry out offsetting entries from corporate banking accounts, etc. Last, in collaboration with Worldbridge and Epsilon Net, NBG has developed the new i-bank Pay B2B service powered by PayByBank, which provides a comprehensive and reliable invoicing mechanism for business-to-business transactions. The customer is able to pay against balance through any channel of the DIAS interbank system, with automatic reconciliation of invoice payments. By using this service, invoices can now be paid easier, faster, with enhanced reliability, flexibility of management, and broader range of information.

i-bank Pay Spots: A 23% increase in transactions was also posted in dynamic small retail stores throughout Greece, which support the i-bank Pay Spot service for easy and instant payment of more than 150 types of bills to the Greek State and other organizations. The network includes 1,500 points and is constantly expanding.

ATM SECTOR (AUTOMATED TELLER MACHINES)

ATMs: By the end of 2018, the Bank had 1,467 ATMs (753 on-site and 714 off-site), thereby offering an extensive network covering even the most remote areas of the country. It is noteworthy that even though NBG represents 26% of the total ATM market, its market share of transactions conducted through ATMs is larger (33% withdrawals and 32% deposits). The effective management of the ATM network by the Bank is also confirmed by the high rate (85%) of cash deliveries made to off-site ATMs.

ATMs were the main channel used by customers for cash withdrawals (89.5%) of withdrawals in 2018 were made at ATMs vs 10.5% from branches), while deposits increased significantly compared to the previous year, both in number (+23%) and in value (+ 29%). This performance was also backed by the fact that NBG runs 803 ATMs that can be used for cash deposits without envelope (both on-site and off-site), 22 of which also allow the recycling of banknotes.

APS: In 2018, NBG’s network included 143 APS (Automated Payment Systems) enabling 23 different types of payment. The value of the transactions carried out via APS rose by 125% compared to the previous year.

Smart Safes: NBG launched its new Smart Safes service for the management of its corporate customers’ collections. By installing these special type devices at a monthly fee, companies are able to manage their deposit balances with absolute safety and instant availability. During 2018, 7 smart safe posts were installed, while another 18 are expected for 2019.

Self-Service Kiosks: The Bank has installed in selected branches new types of Internet Banking devices available to the public. At Self-Service Kiosks, customers can perform real-time transactions, which are available on i-bank Internet Banking platform, without subscription to the service and the use of the corresponding credentials. Access to these transactions is granted after identifying the customer through his/her card, in the same way as at ATMs. In 2018, two Self-Service Kiosks were installed in the new i-bank store in Syntagma Square, while in 2019 these devices are expected to be installed in another 18 branches of the Bank.

Infrastructure Upgrade: The Bank has installed integrated Multivendor software at all ATMs of NBG’s network, regardless of manufacturer, with a view to enabling comprehensive management and development of web transactions, as well as interactive communication with the customer. In addition, NBG launched the CX Marketing application to perform promotional activities through the ATM network to selected customers. In every campaign, a specific message is displayed on the screen to selected customers and the customer response is recorded. Within the year, two campaigns were launched, one to inform customers about the General Data Protection Regulation (GDPR) and one to promote i-bank statements. Both campaigns were very well received.

CONTACT CENTER

In 2018, the Bank’s Contact Center serviced more than 2.4m incoming calls from customers. It also contributed significantly to the sales targets of the Bank; the Contact Center team performed 320,000 outgoing calls to promote 50 campaigns for products and services of the Bank to selected customers.

With a view to upgrading customer services and effectively handling large volumes of operations, the Bank has deployed innovative automated services using a Voice Portal (181818) and Natural Language Understanding (NLU) software. In 2018, 47% of the requests for immediate receipt of Smart PIN cards (Self-Service PIN delivery) addressed to the Contact Center were served through the NLU, saving time both for the Contact Center and for clients, thus enhancing customer experience.
2.4 NETWORK STRATEGY

NEW PROJECTS

The revamped and highly competitive i-bank Internet & Mobile Banking services will be up and running by mid-2019, offering modern user interface and optimum user experience in line with international standards, new functionalities and value-added services for customers, such as the Personal Financial Management tool, which facilitates smart financial management, personalized cost categorization, and budgeting.

In addition, with a view to optimizing service experience and digital customer journeys, the Bank plans to provide new options, such as:

- Digital Customer Onboarding via mobile phone, so that a new or existing customer can open an account, get a debit card, and acquire Internet & Mobile Banking credentials without visiting a Branch.
- Access to Internet Banking for non-registered customers through their debit card.
- Document uploading platform to enable retail customers to update or change online their personal information (e.g. change of address or phone number) and corporate customers to send documents (e.g. legalization documents), without having to visit a Branch.

MEDIUM-TERM STRATEGIC TARGETS

The main objective of the Bank’s digital channel strategy is to further enhance transaction migration from physical to digital channels. By strengthening the digital engagement of customers and the migration of simple transactions from branches to electronic channels, we contribute to both improving customer experience and reducing costs.

Last year, a total of 80% of customer transactions was carried out through the Bank’s digital channels (ATM, APS, Internet & Mobile Banking). More specifically, 87% of transfers and 64% of payments were executed via electronic channels, while for their stock exchange transactions, customers preferred Internet Banking (58%) and the Contact Center (20%).

A key target is also to intensively adopt a “mobile first” strategy, given that the use of mobile phones is growing significantly every year, becoming the main channel of informing customers and executing simple everyday transactions. To this end, the Bank aims at increasing i-bank Mobile Banking users, enhancing mobile engagement with value added services and targeted notifications and offers, making services available first on mobile phones (such as the Personal Financial Management tool), as well as focusing on sales of simple banking and bancassurance products via mobile banking.

INNOVATION

NBG consistently leads the way in the development of new services and products for its customers, making use of new technologies and offering innovative solutions for the Greek market. In addition, the Bank is also investing in enhancing the start-up ecosystem in Greece, as well as disseminating innovation and improving the digital education of its customers.

“Be finnovative” program

In 2018 the 2nd round of the “Be finnovative” business acceleration program was completed. This specially designed program is aimed at students, professionals, business executives and anyone seeking to develop an idea or methodology into a viable business model in the growing FinTech sector. The program ran for 24 weeks in total and provided 8 selected teams and start-ups with specialized consulting and mentoring in business and technology by experienced professionals, bootcamps to enhance skills, and office space and other services free of charge. The program ended in May 2018 with a Demo Day, an open money award ceremony where all teams presented their solutions to the Bank’s executives and the investor community. Two of the teams, Kalepso, which has developed sensitive data re-encryption technology to provide additional cloud security, and Plustic, which provides digital voucher solutions for business staff, explored a pilot project with the Cyber Security & Data Governance Division and the Digital Channel Division of NBG, respectively.

In addition, in the framework of “Be finnovative”, NBG ran, from 30 November to 2 December 2018, its highly successful NBG i-bank #fintech3.0 crowdhackathon, a programming marathon focused on seeking innovative applications and business models in FinTech.

i-bank stores

The i-bank stores are cutting-edge e-banking venues equipped with the latest hi-tech infrastructures where all i-bank services are displayed, and customers can get to learn about the use and benefits of the digital banking experience.

In 2018, the i-bank stores network expanded with the addition of two new multipurpose venues, one in Xanthi and one in Syntagma Square in Athens. Furthermore, sales of the Bank’s leading products through the i-bank stores increased by 116% compared to the previous year. The Bank’s objective for the next year is to further increase sales of its cutting-edge products through the i-bank stores.

Innovation

Business acceleration programme “Be finnovative”

Customer training in i-bank stores

The Bank aims to further increase product sales through i-bank stores.
BASIC PRINCIPLES AND GOVERNANCE STRUCTURE OF THE GROUP RISK MANAGEMENT

Risk control and management plays a fundamental role in the overall strategy of the Group, aiming to both effectively manage the risks of the organisation and to align with the legal and regulatory requirements. The Group aims at adopting best practices regarding risk governance, taking into account all relevant guidelines and regulatory requirements, as set by the Basel Committee on Banking Supervision, the European Banking Authority, the European Central Bank, Single Supervisory Mechanism (SSM), the Bank of Greece, the Stock Exchange Commission legislation, as well as any decisions of the competent authorities supervising the Group’s entities.

2.5 RISK MANAGEMENT

Risk management at NBG has a structured and tiered approach, based on a number of governance bodies, internal policies and procedures, and controls framework.

The Board of Directors bears ultimate accountability for NBG’s risk position. It signs off on the risk strategy and risk appetite, and monitors the effectiveness of risk governance and management advised by its two specialised committees: the Board Risk Committee (BRC) and the Board Audit Committee. The Bank’s Executive Committee (ExCo) and other executive committees are in charge of day-to-day management actions and steer the business. The Group Chief Risk Officer (CRO) is a member of the ExCo. The CRO has direct access to the Board, has delegated decision-authority for executive matters over Risk and leads the Risk function. The Risk function has specialist teams per risk type. Risk function teams conduct day-to-day risk management activities according to policies and procedures as approved by the BRC, the ExCo and other executive committees. The perimeter is based on the industry standard three lines of defence model (please see below). Finally, the Risk function’s activities are supported by underlying systems and infrastructure, as well as risk culture. This risk culture is viewed as a core component of effective risk management, with the tone and example set by Board and senior management.

Hence, there are four layers relevant to Risk Management, all rolling up into the Board of Directors:

- The Board of Directors signs off on risk strategy and risk appetite
- The Board’s Board Risk Committee and the Board Audit Committee submit proposals
- The Bank’s Executive Committee and other executive committees are in charge of day-to-day management
- The Chief Risk Officer makes decisions on executive matters
OVERSIGHT AND APPROVAL
At the top of the house, the members of the Board are responsible for oversight and approval on governance structures of NBG, ensuring the right frameworks and policies are in place to ensure the bank can be effectively managed.

EXECUTIVE MANAGEMENT ACTIONS & SIGN-OFF
The Executive management layer (ExCo and other executive committees) decides on management actions, signs off on materials produced and reported, and actively steers the bank.

METHODOLOGY AND FRAMEWORK
Procedures and methodologies are in place to guide risk management, e.g. credit approval procedures, model development and validation, product assessments.

EXECUTION AND ANALYSIS
The execution layer is in charge of implementing the frameworks, models and policies set forth by the aforementioned layers, and provide the Board and the executive committees with relevant analyses and results to base their decisions upon.

THE BOARD RISK COMMITTEE
The Group has clearly defined its risk appetite and has established a risk strategy and risk management policies. Ultimately responsible for the development and application of this general framework of risk management at a Group level is the Board of Directors (the Board) and more specifically the Board Risk Committee (the “BRC”), also supported by the Audit Committee.

The BRC forms and submits for approval to the Board of Directors the risk appetite and risk strategy of the Group on an annual basis, and monitors their appropriate communication throughout the Bank. It also sets the principles, approves the policies that govern risk management and monitors the appropriate management of risk. The BRC has the responsibility to review reports and evaluate the overall risk exposure of the Bank and the Group on a regular basis, taking into account the approved risk strategy and the business plan of the Group, to develop proposals and recommend corrective actions for consideration by the Board regarding any matter within its purview. The proposals to the BRC are submitted by the Group Chief Risk Officer (CRO).

The Committee has two roles, namely it operates a) as the Board Risk Management Committee and b) as the Board Committee Responsible for Non-Performing Loans/Exposures (NPLs/NPEs) as prescribed by Art. 10 par. 8 of Greek Law 3864/2010, as in force.

The BRC convenes regularly at least on a monthly basis, as well as extraordinarily, whenever deemed necessary by its Chairman.

During 2018, the Committee convened thirteen times. In the context of its responsibilities and during the course of the year, the Committee was briefed in detail and on a regular basis on risk issues such as the IFRS 9 Credit Risk Models, the Stress Tests results, the Risk Appetite Framework project and the 2018 internal capital adequacy assessment process (“ICAAP”)/ internal liquidity adequacy assessment process (“ILAAP”) results. In addition, the Committee was extensively updated on issues related to NPL/NPEs.

Furthermore the Committee submitted to the Board of Directors for approval the NBG Group Recovery Plan 2018 as well as Policies related to the proper internal operations of the Group such as the ILAAP & ICAAP Frameworks, the updated Market Risk and Liquidity Risk Policies, IFRS 9 related Policies, the NPE Divestment Policy, the NPE & Forebearance Classification Policy, the Retail Credit Policy and the Credit Policy for the Corporate Portfolio. In addition, the Committee approved on a quarterly basis the Report to the Bank of Greece on the Management of Loans in Arrears and Non-Performing Loans, as per Bank of Greece Act 42.

Since 19 December 2013 the Committee has been composed exclusively of non-executive Board members, at least three in number, the majority of which (including the Chairman) are independent members of the Board of Directors. The Committee has recommended the appointment of the former senior independent director of the Bank’s Corporate Governance and Nominations Committee as the Chairman. The Committee functions as a Board sub-committee, and members of the Board of Directors serve as its ex-officio members.

In January 2017 the Committee Charter was amended, introducing the new dual role of the BRC, namely its operation a) as the Board Risk Management Committee and b) as the Board Committee Responsible for Non-Performing Loans/Exposures (NPLs/NPEs) prescribed by Art. 10 par. 8 of Law 3864/2010 as in force. The Committee Charter was further updated in February 2019 and is available on the Bank’s website www.nbg.gr (section: The Group / Corporate Governance / Board of Directors / Committees).

The Committee ensures a) the General Board has the擺設 risk management and monitors the risk strategy and the risk appetite, following recommendation by the Board's Corporate Governance and Nominations Committee. All members should have adequate knowledge and prior experience in banking and financial services, while at least one member should have solid risk and capital management experience, as well as familiarity with local and international regulatory framework. Also, in accordance with the provisions of Art. 76 of EU Directive 2013/36 all members of the Committee have appropriate knowledge, skills and expertise to fully understand and monitor the risk strategy and the risk appetite.

Composition of the Board Risk Committee
It is composed exclusively of non-executive Board members.

The majority are independent members of the Board of Directors.

The members and the Chairman are appointed following recommendation of the Board’s Corporate Governance and Nominations Committee.

All members should have adequate knowledge and experience in banking matters.

At least one member should have solid risk management experience.
The Group’s risk management is spread on three different levels, in order to create three lines of defense, traced as follows:

- **FIRST LINE:**
  The risk taking units (e.g. credit originating departments, Treasury) are responsible for assessing and minimizing risks for a given level of expected return by establishing and implementing internal rules and controls to the on-going business.

- **SECOND LINE:**
  The three Credit Units (under the CRO), which are independent of the credit granting departments, are involved in the approving procedure. They perform unbiased control of the undertaken risk and have the right of veto.

- **THIRD LINE:**
  The Internal Audit function of the Bank and the Group, which reports directly to the Board of Directors through the Audit Committee, complements the risk management framework, acting as an independent reviewer, focusing on the effectiveness of the risk management framework and control environment.

The duties and responsibilities of all lines of defense are clearly identified and separated, and the relevant Units are sufficiently independent.
OPRISK GOVERNANCE

The ORMF is supported by an appropriate organizational structure with well-defined roles and responsibilities which is based on the three lines of defense model. The ORM Governance aims to ensure that the entire Bank’s stakeholders, including the Board of Directors, Executive and Senior Management and Staff, manage operational risk within a formalized Framework aligned to business objectives and is compliant with the regulatory requirements.

Governance responsibility for operational risk management derives from the Board Risk Committee (BRC) that reviews and approves the Bank’s operational risk appetite and tolerance, is informed on material risks and exposures and sets the tone and the expectations of the Board.

Operational Risk Committee (ORCO) bears the responsibility for establishing and monitoring the ORM Framework as well as the aggregate operational risk exposures across the Bank, reporting to the BRC.

The Chief Risk Officer (CRO) promotes the development and implementation of a consistent Group ORM and provides overall vision and leadership for the function across the Group.

Group Operational Risk Management Division (GORMD) is in charge of managing and coordinating the ORMF implementation, setting appropriate standards, methodologies and procedures for operational risk assessment, monitoring and control, as well as for loss data collection. Furthermore, it regularly reviews the Group Framework in order to ensure that all relevant regulatory requirements are met.

GORMD also reviews and monitors NBG’s operational risk profile on an ongoing basis, focusing on the development, implementation and follow-up of the appropriate action plans, in order to ensure that all necessary risk mitigation steps and measures are in place. NBG’s Action Plans can be either mitigation measures, including insurance policies, designed to reduce the impact and losses generated by the occurrence of risk events, or proactive measures designed to prevent or reduce the probability of occurrence of risk events, by improving the control environment or other aspects of the business environment.

The Heads of each and every business/function (risk owners) are primarily responsible for the daily management of operational risk arising in their areas of responsibility.

Operational Risk Correspondents are assigned in each business unit acting as liaisons to the GORM Division. They are responsible for disseminating the ORM Policy to their Units, coordinating the internal ORMF implementation, assisting in the development of the culture of operational risk and communicating relevant information throughout to the GORMD.

GROUP RISK MANAGEMENT UNITS

A central role in the risk management framework, that is to identify, evaluate, manage, monitor and report risks undertaken by the Group, has been assigned to the three Group Risk Management Divisions, i.e. NBG Group Risk Control and Architecture Division (GRCA), NBG Group Financial and Liquidity Risk Management Division (GFLRM) and Group Operational Risk Management Division (GORMD), as well as the independent Model Validation Unit (MVU). These Units identify the risks of different portfolios and activities (including model risk), and supervise accordingly all subsidiaries operating in the financial sector.

The Credit Units, also under the CRO, supervise the credit departments of the financial institutions across the Group and participate in the approval granting bodies. Credit Units’ independence ensures an unbiased level control for credit risk undertaken. These Units are also responsible for developing and updating the relevant Credit Policies.

Analytically, the responsibility of the GRCA Division is to:

- Specify and implement credit risk policies emphasizing on rating systems, risk assessment models and risk parameters according to the guidelines set by the Board,
- Assess the adequacy of methods and systems that aim to identify, measure, monitor and report credit risk undertaken by the Bank and other financial institutions of the Group and periodically validate them,
2.5 RISK MANAGEMENT

- Calculate Regulatory Capital in respect to credit risk, coordinate calculation of the Internal Capital required in respect to all banking risks and prepare relevant regulatory and MIS reports.
- Establish guidelines for the development of assessment methodologies for Expected Loss (EL) and its components, i.e. Probability of Default (PD), Loss Given Default (LGD) and Exposure at Default (EAD) for each category of corporate and retail portfolio.
- Introduce best practices and standards for the development and calibration of all credit risk models at Group level.

Similarly, the responsibility of the GFLRM Division is to:
- Plan, specify, implement and introduce market, counterparty and liquidity risk policies, under the guidelines of the Board.
- Assess the adequacy of methods and systems that aim to analyse, measure, monitor, control and report the aforementioned risks undertaken by the Bank and other financial institutions of the Group and periodically validate them.
- Independently evaluate financial products, assets and liabilities of the Bank and the Group.
- Regularly handle issues relevant to market, counterparty and liquidity risks, under the guidelines and specific decisions of the Board Risk Committee and the Asset Liability Committee (ALCO).

In 2019, Group Operational Risk Management Unit was established as a separate Division. Its responsibility is to:
- Establish, oversee, support and continuously update and improve the Operational Risk Management Framework (ORMF).
- Ensure the development of policies, methods and systems for the identification, measurement and monitoring of operational risks and their periodic assessment and validation.
- Continuously monitor and review the Group operational risk profile providing adequate information to all stakeholders in compliance with regulatory requirements.

Specific functions such as the Legal Division, the Group Compliance, the Business Processes Division, the Group Cybersecurity & Data Governance Division and the Group Security Division cooperate with Group Operational Risk Management Unit providing appropriate tools, methodologies and oversight for the operational risks that fall under their mandate, ensuring that the said operational risks are properly managed.

Finally, the responsibility of the independent Model Validation Unit, that reports directly to the Group CRO, is to:
- Establish, manage, and enforce Credit Risk Validation Policy and Market Risk Valuation Policy; update them based on applicable regulatory guidance and requirements.
- Establish, manage, and oversee internal models’ annual validation cycle.
- Develop Model Risk Management guidelines and methodologies for the qualitative and/or quantitative assessment and measurement of the Bank’s Model Risk.
- Communicate and escalate model risk metrics to the Board, the Board Risk Committee, the Chief Risk Officer and the Senior Management.
- Provide results of regularly executed validation processes to Internal - External Auditors and SSM.
- Independently validate and approve new and existing models for credit and for market risk.
- Document material changes in model review reports.
- Annually recertify models and review results of ongoing monitoring.
The ongoing assessment of the Group’s risk profile is a key component of the risk management process and comprises a series of specific steps. Every type of risk is analysed and assessed on the basis of its specific characteristics and the qualitative features (policies, procedures, control mechanisms) applied in its management. A common component is the “internal capital” approach, which enables different types of risks to be captured under the same (and, therefore, comparable) terms, and also enables the risk profile of the Group to be expressed in a single measure (“total internal capital”).

The Internal Capital Adequacy Assessment Process (“ICAAP”) framework provides a list of the main risk categories and sub-categories covered by the ICAAP, as well as information regarding their definitions, risk management framework and the methodologies and models used for their assessment. Under ICAAP, the Group plans and monitors its capital adequacy by utilizing two quantification/estimation approaches for capital requirements:

- Regulatory capital, whereby regulatory rules are used to calculate the capital requirement.
- Internal capital, whereby internal methodologies are used to calculate the capital requirement.

Apart from the ICAAP Framework, NBG has also developed an ICAAP methodological manual to describe in detail the methodologies used by NBG Group for each material risk, aiming to measure internal capital requirements where quantification in the near-to-medium term is deemed possible.

### RISK PROFILE ASSESSMENT / RISK TAXONOMY

**1.** The Risk Control and Architecture Division is in charge of:
- Credit risk policy
- The assessment of the adequacy of credit risk measurement methods
- The calculation of regulatory capital for credit risk

**2.** The Operational Risk Management Unit is in charge of:
- The establishment and improvement of the ORM Framework
- The development of methods for identifying and measuring operational risks
- The continuous monitoring and review of the Group’s operational risk profile

**3.** The Financial Risk and Liquidity Risk Management Division is in charge of:
- The market counterparty and liquidity risk management policies
- The assessment of the adequacy of the methods for measuring these risks
- The conduct of independent evaluations of financial products
**2.5 Risk Management**

**INTERNAL CAPITAL ADEQUACY ASSESSMENT PROCESS (ICAAP)**

NBG Group has devoted substantial resources to the assessment of its capital adequacy, relating to both risk and capital management. The process is continuously developed and formalized so as to enhance business benefits and support the strategic aspirations of NBG Group.

ICAAP objectives are:

1. the proper identification, measurement, control and overall assessment of all material risks
2. the development of appropriate systems to measure and manage those risks
3. the evaluation of capital required to cover those risks (the "internal capital").

The term "internal capital" refers to the amount of own funds adequate to cover losses at a specified confidence level within a certain time horizon (both set in accordance with the risk-appetite framework).

The NBG Group has created an analytical framework for the annual implementation of the ICAAP. The framework is formally documented and describes the components of ICAAP at both Group and Bank level in detail. The framework comprises the following:

- Group risk profile assessment
- Risk measurement and internal capital adequacy assessment
  - Stress testing development, analysis and evaluation
  - ICAAP reporting
  - ICAAP documentation.

Both the Board and the Bank's Executive Committees are actively involved and support the ICAAP. Detailed roles and responsibilities are described in detail in the ICAAP Framework document. The Board's Risk Committee approves the adequacy assessment of all material risks to each relevant Business Unit/Group's Subsidiary, the Board's Risk Committee approves the adequacy assessment of all material risks to each relevant Business Unit/Group's Subsidiary, the BRC bears ultimate responsibility for the adequacy and proper execution of the ICAAP.

ICAAP's design and implementation Framework concerns the entire Group's material risks. The parameters taken into account are the size of the relevant Business Unit/Group's Subsidiary, the exposure per risk type and the risk methodology and measurement approach for each type of risk.

The identification, evaluation and mapping of risks to each relevant Business Unit/Group subsidiary is a core ICAAP procedure. Risks' materiality assessment is performed on the basis of certain quantitative (e.g. exposure as percentage of the Group RWAs) and qualitative criteria (e.g. established framework of risk management policies, procedures and systems, governance framework and specific roles and responsibilities of relevant units, limits setting and evaluation).

NBG Group has recognised the following risk types as the most significant within the ICAAP framework:

- Credit
- Market
- Operational
- Interest Rate Risk in the Banking Book (IRRBB)
- Concentration (Credit)
- Conduct (Operational)
- ICT (Operational)
- Model (Operational)
- Liquidity
- Business
- Strategic
- Reputational (Operational)
- Real estate
- Legal (Operational)
- Capital Access
- Pension.

The calculation of NBG Group "Total Internal Capital" consists of two steps: In the first step, internal capital per risk type is calculated on a Group basis. NBG Group has developed methodologies allowing the calculation of the required internal capital for quantifiable risks. These are reassessed on a regular basis and upgraded in accordance with the global best practices. In the second step, internal capital per risk type is summed up to yield the Group's "Total Internal Capital".

Capital allocation aims at distributing the
“Internal Capital” to the Business Units and Subsidiaries so that ICAAP connects business decisions and performance measurement.

For 2018 the Bank implemented the ICAAP by estimating the relevant internal capital for all major risk types at Group level. Calculations were based on methodologies already developed in the ICAAP Framework. Moreover, NBG Group conducted a bank-wide macro Stress Test exercise, relating to the evolution of its CET1 Funds under adverse scenarios (so as to ensure relevance and adequacy of the outcome with a realistic and non-catastrophic forward-looking view of downside tail risks).

In addition, a reverse stress test process has been conducted, where a threshold capital adequacy ratio has been set and then factors that could lead to a breach of this threshold have been identified. Reverse stress tests followed the methodology used to estimate internal capital required to cover against credit risk. Scenarios that could push the ratio down to this threshold were analysed.

It should be stressed that the Bank implements, monitors and uses the ICAAP aiming at achieving full compliance with the European Banking Authority and ECB guidelines and standards concerning ICAAP/ILAAP, the Supervisory Review and Evaluation Process (SREP) and Stress Testing.

Framework of ICAAP
It concerns all major risks
Identification, evaluation and mapping of risks for each business unit/Group subsidiary

INTERNAL LIQUIDITY ADEQUACY ASSESSMENT PROCESS (ILAAP)

The scope of ILAAP is to assess that the Group has adequate liquidity sources to ensure that its business operations are not disrupted, both in a going concern status, as well as under stressed conditions. Within ILAAP the Group evaluates its liquidity and funding risk in the context of a management framework of established policies, systems and procedures for their identification, management, measurement and monitoring.

The ILAAP is an integrated process, therefore it is aligned with the Group’s risk management framework and takes into account its current operating environment. Moreover, besides describing the Group’s current liquidity state, it further serves as a forward-looking assessment, by depicting the prospective liquidity position, upon the execution of the Bank’s Funding Plan. Finally, the ILAAP examines the potential impact of the realization of extreme stress scenarios, on the Bank’s liquidity position, ensuring that the Group can withstand such severe shocks and continue operating.

ILAAP
• It assesses whether the Group has sufficient liquidity sources
• It evaluates the liquidity prospects
• It is in line with the Group’s risk management framework
NEW DEVELOPMENTS WITHIN 2018

The responsibilities of Credit Risk expand to the extent that new requirements emerge from regulatory developments or business needs. Two major notable projects involved GRCA within 2018.

First, GRCA established a new Risk Appetite Framework. The objective of the Risk Appetite Framework is to set out the level of risk that the Group is willing to take in pursuit of its strategic objectives, also outlining the key principles and rules that govern the risk appetite setting. The RAF constitutes an integral part of the Group’s Risk & Capital Strategy and the overall risk management framework.

The RAF has been developed in order to better align business strategy, financial targets and risk management, and enable a balance between risk and return. It is perceived as a reference point for all relevant stakeholders within the Bank, as well as the supervisory bodies, for the assessment of whether the undertaken business endeavors are consistent with the respective risk appetite.

An effective RAF is fundamental to a strong risk management and governance framework. The RAF is not just a Key Performance Indicator (KPI) monitoring system; it constitutes an essential mechanism to support the Board’s oversight of the strategy execution within the risk boundaries that the Group is willing to operate. Through RAF, overall aspirations of the Board are translated to specific statements and risk metrics, enabling planning and execution, while promoting firm-wide thinking.

NBG has in place an effective Risk Appetite Framework that:
- is formed by both top-down Board guidance and leadership and bottom-up involvement of senior management and other stakeholders, and understood and practiced across all levels of the Bank;
- incorporates quantitative risk metrics and qualitative Risk Appetite statements that are easy to communicate and assimilate;
- supports Group’s business strategy by ensuring that business objectives are pursued in a risk-controlled manner that allows to preserve earnings stability and protect against unforeseen losses;
- reflects the types and level of risk that the Bank is willing to operate within, based on its overall risk appetite and risk profile, sets the guidelines for new products development, as well as the maximum level of risk that the Group can withstand, through the risk capacity;
- contributes in promoting a risk culture across the Group;
- is aligned with other associated key processes of the Bank, including:
  - a. Business plan / Budget
  - b. ICAAP / ILAAP
  - c. Recovery plan
  - d. NPE Strategy
  - e. Limit setting
  - f. Remuneration

Within this context, the RAF allows:
- to strengthen the ability to identify, assess, manage and mitigate risks;
- to facilitate the monitoring and communication of the Bank’s risk profile quickly and effectively.

The assessment of the Bank’s risk profile against the RAF is an ongoing and iterative process. With regards to the timing that the RAF update takes place (as part of the regular annual update process), the interaction with other key processes of the Bank is taken into consideration. Specific focus is placed to RAF’s interplay with the Business Plan, as the two processes feed into each other in certain cases the risk appetite is expected to act as backstop / constraint to the Business Plan, while for other cases, the Business Plan provides input for setting risk tolerance levels.

Secondly, following completion of the Early Warning Systems (EWS) regarding corporate and retail portfolio, the Bank is in the process of revisiting the pricing models used for both corporate and retail clientele, to more granularly reflect Funds Transfer Pricing (FTP) variables, operating cost, as well as collateral benefits from the client (fees, cross selling, deposits etc). Similarly, the models used for the calculation of Economic Value Added (EVA) are being enhanced.

The aim is to establish a well-defined risk-adjusted pricing framework that is based on fundamental pricing principles and is governed by relevant policies, robust methodologies and tools.
Finally, the bank in a continuous effort to improve its efficiency and the quality of the services provided, is planning to move to a more advanced credit risk models suite for the retail households’ portfolios. In that context, it was found necessary to upgrade the existing credit risk models infrastructure and to implement systems that will allow the Bank to cope with a constantly evolving technological and business environment. During last quarter of 2018 the Bank performed a thorough scoping analysis with the involvement of the responsible units and defined the set of models and the appropriate model architecture that will better facilitate that purpose. The new advanced credit risk models, will cover all the stages of the credit lifecycle, from new credit products or restructuring solutions offering, to the acceptance by the clients and the subsequent portfolio management. Leveraging on the above, the bank is planning to implement portfolio management strategies and solutions that will allow the customer offers’ optimization i.e. balancing profit and loss and offering products to the right clientele and at the right levels to secure credit risk and profitability targets are met. Accordingly, the development of the new restructure model suite will be the basis for the optimization of the restructuring process and the relative solutions offering.

Moreover, during the first quarter of 2019, Risk Management launched the development of a Risk Culture Framework. Risk Culture is defined as an institution’s norms, attitudes and behaviors related to risk awareness, risk taking and risk management, and the controls that shape decisions on risk. Risk Culture influences the decisions of management and employees during the day-to-day activities and has an impact on the risks they assume.

The objective of NBG is to establish a sound and consistent Risk Culture across all Units that is appropriate for the scale, complexity, and nature of the Bank’s business, in line with regulatory/supervisory requirements and in accordance with best business practices, based on sound, articulated values which are carefully managed by the leadership of the Bank.

The formulation of the Risk Culture Program will:

• take into consideration supervisory guidelines and expectations
• be based on the following foundational elements and assessment indicators:

Key benefits of this program are:

• Establishment of a sound Risk Culture Governance in the Bank;
• Enhancement of the Bank’s Risk Culture Framework;
• Development and implementation of a communication/training plan on risk awareness, risk taking, risk management and other risk related topics across all NBG Units,
• Integration of risk adjusted metrics in the Performance Management Framework of the Bank.

Moreover, during the first quarter of 2019, Risk Management launched the development of a Risk Culture Framework. Risk Culture is defined as an institution’s norms, attitudes and behaviors related to risk awareness, risk taking and risk management, and the controls that shape decisions on risk. Risk Culture influences the decisions of management and employees during the day-to-day activities and has an impact on the risks they assume.

The objective of NBG is to establish a sound and consistent Risk Culture across all Units that is appropriate for the scale, complexity, and nature of the Bank’s business, in line with regulatory/supervisory requirements and in accordance with best business practices, based on sound, articulated values which are carefully managed by the leadership of the Bank.

The formulation of the Risk Culture Program will:

• take into consideration supervisory guidelines and expectations
• be based on the following foundational elements and assessment indicators:

Key benefits of this program are:

• Establishment of a sound Risk Culture Governance in the Bank;
• Enhancement of the Bank’s Risk Culture Framework;
• Development and implementation of a communication/training plan on risk awareness, risk taking, risk management and other risk related topics across all NBG Units,
• Integration of risk adjusted metrics in the Performance Management Framework of the Bank.

The objective of NBG is to establish a sound and consistent Risk Culture across all Units that is appropriate for the scale, complexity, and nature of the Bank’s business, in line with regulatory/supervisory requirements and in accordance with best business practices, based on sound, articulated values which are carefully managed by the leadership of the Bank.
Credit risk is the risk of financial loss relating to the failure of a borrower to honor his/her contractual obligations. It arises in lending activities as well as in various other activities where the Group is exposed to the risk of counterparty default, such as trading, capital markets and settlement activities. Credit risk is the largest risk the Group faces. Credit risk control processes are conducted separately by the Bank and each of its subsidiaries.

The Group’s credit granting processes include:
- Credit-granting criteria based on the particular target market, the borrower or counterparty, as well as the purpose and structure of the credit and its source of repayment,
- Credit limits that aggregate in comparable and meaningful manner different types of exposures at various levels,
- Clearly established procedures for approving new credits as well as the amendment, renewal and re-financing of existing credits.

The Group maintains on-going credit administration, measurement and monitoring processes, including in particular:
- Documented credit risk policies,
- Internal risk rating systems,
- Information systems and analytical techniques that enable measurement of credit risk inherent in all relevant activities.

The Group’s internal controls that are implemented for the credit risk related processes include:
- Proper management of the credit-granting functions,
- Periodical and timely remedial actions on deteriorating credits,
- Independent, on-going assessment of the credit risk management processes by Internal Audit, covering in particular the credit risk systems/models employed by the Group.

Active credit risk management is achieved through:
- The application of appropriate limits for exposures to a particular obligor, a group of associated obligors, obligors that belong in the same economic sector, etc,
- The use of credit risk mitigation techniques (such as collaterals and guarantees),
- The estimation of risk adjusted pricing for most products and services,
- A formalized validation process, encompassing all risk rating models, conducted by the Bank’s independent Model Validation Unit.

Credit granting processes and controls

Credit-granting criteria
Credit limits
Clearly established procedures for approving new credits
Credit risk management policies
Internal risk rating systems
Internal credit risk management controls

2.5#RISK MANAGEMENT

ESTIMATION AND MANAGEMENT OF RISKS

CREDIT RISK

CREDIT GRANTING PROCESSES AND CONTROLS

Credit risk is the risk of financial loss relating to the failure of a borrower to honor his/her contractual obligations. It arises in lending activities as well as in various other activities where the Group is exposed to the risk of counterparty default, such as trading, capital markets and settlement activities. Credit risk is the largest risk the Group faces. Credit risk control processes are conducted separately by the Bank and each of its subsidiaries.

The Group maintains on-going credit administration, measurement and monitoring processes, including in particular:
- Documented credit risk policies,
- Internal risk rating systems,
- Information systems and analytical techniques that enable measurement of credit risk inherent in all relevant activities.

The Group’s internal controls that are implemented for the credit risk related processes include:
- Proper management of the credit-granting functions,
- Periodical and timely remedial actions on deteriorating credits,
- Independent, on-going assessment of the credit risk management processes by Internal Audit, covering in particular the credit risk systems/models employed by the Group.

Active credit risk management is achieved through:
- The application of appropriate limits for exposures to a particular obligor, a group of associated obligors, obligors that belong in the same economic sector, etc,
- The use of credit risk mitigation techniques (such as collaterals and guarantees),
- The estimation of risk adjusted pricing for most products and services,
- A formalized validation process, encompassing all risk rating models, conducted by the Bank’s independent Model Validation Unit.

CREDIT POLICY FOR CORPORATE PORTFOLIOS

The Credit Policies for the Corporate portfolios of the Bank and its Subsidiaries (“the Subsidiaries”) present the fundamental policies for the identification, measurement, approval and monitoring of credit risk related to the Corporate Portfolios.

The Credit Policy of the Bank is approved by the Board of Directors (BoD) upon recommendation of the Board Risk Committee (BRC) following proposal by the Group CRO to the BRC and the Executive Committee. The Credit Policy is reviewed on an annual basis and amended whenever is needed and at least every two years.

The Policy provides that any exception is approved by the BoD upon recommendation of the BRC following proposal by the Group CRO to the BRC and the Executive Committee. All exceptions and their justification are duly recorded and have either an expiry date or a review date.

The Credit Policy of each Subsidiary is approved by the competent local Boards / Committees, following a recommendation by the responsible Officers or Subsidiaries’ Bodies, according to the decisions of the Bank and the provisions of the Credit Policies. Each proposal must bear the prior consent of the Group CRO, or the Head of NBG’s Group International Credit Division in cooperation with the Head of NBG’s Group Risk Control and Architecture Division for issues falling under their responsibility. The subsidiaries’ Credit Policies are subject to periodical revision.

Any exception to the Credit Policies of the Subsidiaries is ultimately approved by the Group CRO, or the Head of NBG’s Group International Credit Division in cooperation with the Head of NBG’s Group Risk Control and Architecture Division for issues falling under their responsibility. The subsidiaries’ Credit Policies are subject to periodical revision.

Credit Policy for Corporate Portfolios

It is approved by the Board of Directors upon recommendation of the Board Risk Committee

Reviewed on an annual basis

Any exception is approved by the BoD upon recommendation of the BRC

All exceptions and their justification are duly recorded
2.5 # RISK MANAGEMENT

Credit policy for retail banking
It sets the minimum credit criteria
It is approved by the BoD following the opinion of the Board Risk Committee
It is subject to periodical review
Effective credit risk assessment and evaluation

Credit Policy for Retail Banking

The Credit Policy for the Retail Banking Portfolio sets the minimum credit criteria, policies, procedures and guidelines for managing and controlling credit risk undertaken in Retail Portfolios, both at Bank and Group level. Its main scope is to enhance, guide and regulate the effective and adequate management of credit risk, thus achieving a viable balance between risk and return.

The Credit Policy is communicated through the use of respective Credit Policy Manuals. The subject manuals are made to serve three basic objectives:

- to set the framework for basic credit criteria, policies and procedures,
- to consolidate Retail Credit policies of the Group, and,
- to establish a common approach for managing Retail Banking risks.

The Credit Policy is approved and can be amended or revised by the Board of Directors of the Bank following an opinion of the Board Risk Committee and after a proposal by the Group CRO and it is subject to periodical revision.

The Credit Policy of each Subsidiary is approved and can be amended or revised by the competent local Boards/Committees, following a recommendation by the responsible Officers or Subsidiaries’ Bodies, according to the decisions of the Bank and the provisions of the Credit Policies. Each proposal must bear the prior consent of the Group CRO, or the Head of NBG’s Group Retail Credit Division in cooperation with the Head of NBG’s Group Risk Control and Architecture Division for issues falling under their responsibility. The subsidiaries’ Credit Policies are subject to periodical revision.

NBG Group Retail Credit Division reports directly to the Group CRO. Its main task is to evaluate, design and regularly update the credit policy that governs the retail banking products, both locally and abroad. Furthermore, the Division closely monitors the consistent implementation of both credit policy provisions and credit granting procedures.

Through the application of Retail Banking Credit Policy, the evaluation and estimation of credit risk, for new as well as for existing products, are effectively facilitated. NBG’s top management is regularly informed on all aspects regarding the Credit Policy. Remedial action plans are set to resolve the issues, whenever necessary, within the risk appetite and strategic orientation of the Bank. Retail Banking Credit Policy is subject to regular reviews during which all approved policy changes are incorporated in the Policy Manual.

CONCENTRATION RISK

The Bank manages the extension of credit, controls its exposure to credit risk and ensures its regulatory compliance based on an internal limits system. The GRCAD is responsible for limits setting, limits monitoring and regulatory compliance.

The fundamental instruments for controlling Corporate Portfolio concentration are Obligor Limits (which reflect the maximum permitted level of exposure for a specific Obligor, given his/her Risk Rating) and Sector Limits. Any risk exposure in excess of the authorized internal Obligor Limits must be approved by a Credit Approving Body of a higher level based on the Credit Approval Authorities as presented in the Corporate Credit Policy. Both Obligor limits and Sector limits are subject to BRC approval on an annual basis.

Credit risk concentration arising from a large exposure to a counterparty or group of connected clients whose probability of default depends on common risk factors is also monitored, according to the Large Exposures and Large Debtors reporting framework.

Finally, within the Internal Capital Adequacy Assessment Process (ICAAP), the Bank has adopted a methodology to measure the risk arising from concentration to economic sectors (sectoral concentration) and to individual companies (name concentration).

CORPORATE PORTFOLIO – NBG

PORTFOLIO OUTLINE

Since the outbreak of the severe economic crisis in Greece the Business Units have put a lot of effort in (a) increasing the quantity and quality of collateral pledged and (b) reviewing most credit programs to improve repayment likelihood of corporate clients.

During 2018, the Corporate portfolio had been gradually deleveraging till the end of October, mainly due to write offs (€0.9Bn, including sales and liquidation). However, during the last two months of 2018, an increase of €458m was observed via new disbursement in good credit rated customers. Further credit expansion is anticipated during 2019. Subsequently, the asset quality breakdown (total NPEs <€5.0bn, from €5.8bn at the end of 2017) was affected in parallel.

Control of concentration risk
- Obligor limits
- Sector limits
- Approval by a higher-level body for exceeding limits
- The Board Risk Committee approves obligor limits and sector limits on an annual basis

<table>
<thead>
<tr>
<th>TABLE 1.2: NBG – CORPORATE PORTFOLIO – OVERVIEW</th>
</tr>
</thead>
<tbody>
<tr>
<td>in € m</td>
</tr>
<tr>
<td>FY2017</td>
</tr>
<tr>
<td>TOTAL CORPORATIVE PORTFOLIO</td>
</tr>
<tr>
<td>Cash Loans</td>
</tr>
<tr>
<td>LGS and LCs</td>
</tr>
<tr>
<td>Performing Loans</td>
</tr>
<tr>
<td>Accounting Provisions</td>
</tr>
<tr>
<td>Non Performing Exposures (NPE)</td>
</tr>
</tbody>
</table>

NBG – CORPORATE PORTFOLIO – OVERVIEW
The current unfavourable economic environment and the difficulties in timely repayment of existing debt obligations had led to a NPE ratio percentage for the total Corporate Portfolio holding on to levels above 35% until the end of 2017. Nevertheless, the stock of NPE exposures decreased by ~€870m (-15%), mainly due to the positive effect of write-offs, resulting in decreased NPE ratio, as at 31.12.2018, by 5.1%, compared to 31.12.2017 (35.7%).

Average ORR (Obligor Risk Rating) of new customers (or those with increasing balances) throughout the year is used as a proxy to measure the quality of portfolio inflows. Quality of new corporate loans was on a positive trajectory throughout 2017. In Mar 18 the upward tick is mainly due to the cash loans decrease of a good rated customer. However, during Jul 18 new money to new customers in shipping sector with good credit rating (rating 7) resulted in decreased ORR which reached 10.1 in Sep18. During the last quarter of 2018 and given the significant credit expansion in December, ORR continued stable around 10.0.

The Bank's Corporate Portfolio in 2018

Gradual deleveraging till the end of October, mainly due to write-offs
An increase of €458m during the last two months
Further credit expansion expected in 2019
Reduction of NPEs by approximately €870m
Decrease of NPE ratio by 5.1% to 35.7%

The table below illustrates the distribution, per model type, of outstanding corporate exposures and obligors:

<table>
<thead>
<tr>
<th>Rating Model</th>
<th>Exposure (in € m)</th>
<th>% performing exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate Rating Model</td>
<td>6,364.8</td>
<td>55.7%</td>
</tr>
<tr>
<td>Expert Judgement</td>
<td>1,679.8</td>
<td>14.7%</td>
</tr>
<tr>
<td>Slitting Criteria-Project Finance</td>
<td>1,426.7</td>
<td>12.5%</td>
</tr>
<tr>
<td>Slitting Criteria-Object Finance</td>
<td>1,606.1</td>
<td>14.1%</td>
</tr>
<tr>
<td>Moody’s / S&amp;P</td>
<td>318.4</td>
<td>2.8%</td>
</tr>
<tr>
<td>Non Rated</td>
<td>21.1</td>
<td>0.2%</td>
</tr>
<tr>
<td>In Regulatory Default (according to CRR Art.178/2013)</td>
<td>4,718.8</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>16,135.6</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The vast majority of obligors of the corporate portfolio are entities with full financial data and their distribution on the ORR Scale indicates sufficient dispersion without any high concentration (over 25%) in any rating grade.

Given the mapping between ORR and PDs, the exposure-weighted average PD (as per Pillar II PD scale) for performing corporate obligors on 31.12.2018 is estimated at 4.9%.

As per the chart below, collateral distribution per origination unit indicates that shipping facilities achieve the highest coverage (c. 93%, 4% higher than FY2017). On the contrary, the lowest collateral percentage is mainly presented in the Large Corporate portfolio. This is due to the fact that this specific portfolio monitors the major groups of the Greek economy, for which the Bank relies on their basic financial data, which confirm their strong financial position both on domestic and international market. The corresponding percentage for the entire corporate portfolio being was to 50%.
There is no significant concentration of risk in any industry.

More specifically, positive collaterals of Shipping Portfolio consist almost exclusively of Ships & Aircrafts though for the rest of the lending divisions Residential & Commercial Real Estate is the dominant collateral. In addition, Large Corporates shows the highest percentage of Financial Collaterals (48.2%) in the entire corporate portfolio.

SECTOR ANALYSIS

Turning now to the sectoral distribution of the Bank’s corporate portfolio, no significant concentration risk in any industry exists.

The sector presenting the largest balances is Transportation & Storage (14.1%) due to the ocean shipping exposures. Shipping remains an important sector of the Greek economy and NBG has historically been an active participant since the early 60s’ in the local market with long lasting relationship with the existing clients and conservative addition of new names in Bank’s clientele. The second largest sector (Wholesale Trade) reaches 10.7% of total exposures, being well diversified, since it is comprised of a large number of various trading activities.

FX LENDING

FX lending in NBG’s corporate portfolio is limited to the ocean shipping exposures, mostly contracted in USD as international trade rules dictate. The outstanding exposure denominated in USD reached €2,016m (approx. 12% of total balances), 78% of which consisting of Object Finance exposures (€1,575m). It should be also highlighted that these long-term investment loans, enjoy “natural FX hedging” since they are serviced through charters paid in USD with, additionally, ship owners retaining significant deposits in USD retention accounts, hence, the emanating FX risk is largely mitigated.

Apart from USD, there is a very small part (0.6%) of the corporate portfolio in CHF-denominated exposures (€102.1m - 25 customers). The respective 90+dpd ratio stands at 17.3%.

RETAIL PORTFOLIOS – NBG

There has not been any large credit expansion in the Retail Portfolios of NBG during 2018, with the number of new loan approvals for both mortgage and consumer loans remaining at a low level. The Bank tried hard to focus particularly on controlling delinquencies and managing troubled assets, both through collection efforts and modification programs. Retail Collections (RC) in collaboration with Retail Business Units designed and offered restructuring and rescheduling products with the aim to facilitate debt servicing and, consequently, control portfolio delinquencies. The project of the unsecured portfolio sale (consisted of Consumer loans, Credit Cards & SBs loans) which was initiated within Q4 17, was successfully completed according to the plan in 2018.

An overview of the Retail portfolio illustrates the quarter on quarter contraction of the retail portfolio’s volumes. Accounting Provisions have been increased (5.2%) due to the implementation of the International Financial Reporting Standard 9 (IFRS9) effective from 01.01.2018, and deleverage of the entire portfolio has been continued. One of the main contributors to the decrease of total exposures have been the write-offs (accounting, liquidations, sales).

Retail portfolios in 2018

• Mortgage and consumer loans remain at a low level
• Significant efforts to control delinquencies
• Contraction in the portfolio mainly due to write-offs
• Significant increase in accounting provisions (5.2%)
• Significant decrease of consumer credit NPE ratio to 45.4%
• Small increase of mortgage loans NPE ratio to 45.4%
2.5#RISK MANAGEMENT

Table 2.5.4: NBG – Retail Portfolios – Overview

<table>
<thead>
<tr>
<th>FY2017</th>
<th>Q12018</th>
<th>1H2018</th>
<th>Q32018</th>
<th>FY2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL CORPORATE PORTFOLIO</td>
<td>19,909</td>
<td>19,224</td>
<td>18,996</td>
<td>18,863</td>
</tr>
<tr>
<td>Performing Loans</td>
<td>10,828</td>
<td>10,545</td>
<td>10,425</td>
<td>10,231</td>
</tr>
<tr>
<td>Non Performing Exposures (NPE)</td>
<td>9,081</td>
<td>8,680</td>
<td>8,571</td>
<td>8,632</td>
</tr>
<tr>
<td>Accounting Provisions</td>
<td>4,037</td>
<td>4,411</td>
<td>4,386</td>
<td>4,376</td>
</tr>
</tbody>
</table>

Table 2.5.5: NBG – Mortgage Loans – Overview

<table>
<thead>
<tr>
<th>FY2017</th>
<th>Q12018</th>
<th>1H2018</th>
<th>Q32018</th>
<th>FY2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>MORTGAGE PORTFOLIO</td>
<td>16,055</td>
<td>15,900</td>
<td>15,812</td>
<td>15,680</td>
</tr>
<tr>
<td>Performing Loans</td>
<td>9,025</td>
<td>8,801</td>
<td>8,718</td>
<td>8,545</td>
</tr>
<tr>
<td>Non Performing Exposures (NPE)</td>
<td>7,030</td>
<td>7,099</td>
<td>7,094</td>
<td>7,135</td>
</tr>
<tr>
<td>Accounting Provisions</td>
<td>2,402</td>
<td>2,930</td>
<td>2,974</td>
<td>2,969</td>
</tr>
</tbody>
</table>

Mortgages

Consumer Credit

To face the growing amount of delinquencies, the Bank in 2018 was promoting and implementing modification programs with emphasis on a “Split balance” approach rather than on the “Loan-Term-Extension” criterion, in order to facilitate customers servicing their debt and to reduce loans in arrears and non-performing loans. The previous focus to offer solutions to customers facing financial difficulties implemented through the adoption of a so-called “fractional payment program” is still a viable solution, but the restructuring products “Split & Freeze” and “Split & Settle” have gained more ground as a significant long-term solution; share of “S&F”/“S&S on total restructuring amounts at c.50% in 2018, in comparison to a share of c.27% in 2017.

MORTGAGE LOANS

- They make up the largest portfolio (€15.5bn at the end of 2018)
- Stricter criteria implemented in 2018
- Reducing the riskiness of new production
- Restructuring programmes with the emphasis on “Split Balance” are gaining ground

FX LENDING

It should be stressed out that the exposure of the Bank to CHF-denominated loans is controlled. The largest share was disbursed in 2007-2010 and essentially no new CHF loans were granted since.

Consumer Credit Lending

The Consumer Credit portfolio (€3.2bn) consist of Consumer Term loans, Consumer Auto loans, Revolving facilities and Credit Cards. In 2018, total balance declined by c.18% compared to 2017, mainly due to large amount of write-offs and the successful completion of the Bank’s unsecured portfolio sale Project resulting in NPE reduction.
Shrinking for the fifth consecutive year
At €3.02bn in December 2018 (-12.2% yoy)
NPE ratio at 66%
Policy of adjusting approval criteria is continuing

SUBSIDIARIES

The standards for the risk undertaken by NBG’s subsidiaries as well as the framework for the estimation and measurement of the basic risk parameters for the Corporate and Retail portfolio are set by the NBG headquarters. The Bank also controls systematically and approves, when necessary, the credit assessment models developed by the subsidiaries.

BANCA ROMANEASCA (BROM)

BROM’s corporate balances continued to decline in 2018 (-23.3%), driving an increase in the 90+dpd rate to 33.1%, compared to 26.4% of the previous year-end. The 90+ delinquency ratio both in the Large Corporates Portfolio (defined as companies with turnover over €10m) and in SME Corporates Portfolio (companies with sales between €1m and €10m) increased during 2018 (22.4% vs 21.4% and 44.8% vs 33.8% respectively).

Fixed 90+ dpd ratio in both subsidiaries
STOPANSKA BANKA

The bank’s Corporate portfolio decreased during 2018 by 3.3% while 90+ balance decreased by almost 13% leading to a 90+ ratio of 19.7%, improved by 2.1% compared to year-end 2017. The composition of the Total Portfolio remained almost stable, with Large Corporates (with turnover over €4m) covering a little over 51% of the total.

NBG CYPRUS

The corporate portfolio of NBG Cyprus increased by 12.9% during 2018 (from €587m to €663m), with the most significant difference located in Large Corporate Portfolio (from €415m to €479m). Moreover, 90+dpd ratio decreased to 44.5% year-end 2018 from 50.5% year-end 2017. Portfolio segmentation, remained practically stable throughout 2018.

NBG MALTA

Corporate balances declined substantially in 2018 (-29.9%) with SME’s portfolio driving this aggravation since it covered more than 87% of total Corporate Portfolio in December 2018. Part of this decline is due to repatriation of loans to Greece. A significant decline in 90+dpd rate, compared to previous year, by 7.3% should be noted.
## RETAIL PORTFOLIO

An overview of the retail banking portfolios of NBG SEE Subsidiaries is presented below.

Retail volumes in SEE Subsidiaries increased by +2.8% in 2018; Stopanska’s retail portfolio increased by 7.7%, whereas BROM’s retail balances decreased by 1.8%. 90+ Ratio remained almost stable for both Subsidiaries with a very small increase in BROM’s 90+ dpd ratio (4.8% FY2018 vs. 4.4% FY2017). No significant amount of write-offs is observed.

### BANCA ROMANEASCA

Mortgage loans is the main retail market of BROM (70%), followed by Consumer Loans (28%). Mortgage portfolio exhibited a small decrease in 2018, whereas Consumer loans remained almost stable. SBLs balances increased slightly, but its share in the bank’s retail portfolio is minimal. BROM proceeded to write-offs of c.€1m in 2018.

### STOPANSKA BANKA

Stopanska’s ("STB") main retail market is Consumer Credit that includes consumer loans & credit cards with a share of 70.5%, followed by mortgage loans (21.9%) and SBL microloans (7.7%). In 2018, Consumer Credit portfolios’ balances remained almost stable, while mortgage and micro loans’ portfolio increased slightly.
Market risk management model
Approved by the Bank of Greece

Market risk assessment
Use of best practice and industry-wide accepted risk metrics

Calculation of VaR (Value at Risk)
• For the trading portfolio
• For the HTCS (Held-to-Collect-and-Sell) portfolio

The stressed VaR of the Bank’s trading portfolio is calculated on a daily basis

A framework of VaR limits has been established

**MARKET RISK**

**NBG**

The Bank uses market risk models and dedicated processes to assess and quantify its portfolio market risk, based on best practice and industry-wide accepted risk metrics. More specifically, the Bank estimates the market risk of its Trading and Held-to-Collect-and-Sell (“HTCS”) portfolios, using the VaR methodology based on the implementation of its risk platform, namely RiskWatch by Algorithmics (currently IBM). In particular, the Bank has adopted the variance-covariance (“VCV”) methodology, with a 99% confidence interval and a 1-day holding period. The VaR is calculated on a daily basis for the Bank’s Trading and HTCS portfolios, along with the VaR per risk type (interest rate, equity and foreign exchange risk). The VaR estimates are used internally as a risk management tool, as well as for regulatory purposes. For internal use, the Bank calculates the VaR of its Trading and HTCS portfolios, on a daily basis, using the latest 75 exponentially weighted daily observations to construct the VCV matrices. For regulatory purposes, the calculations apply only on the Trading portfolio and the VCV matrices are based on 252, equally weighted, daily observations. The risk factors, relevant to the financial products in NBG’s portfolio, are interest rates, equity indices, foreign exchange rates and commodity prices.

Additionally, the Group Financial and Liquidity Risk Management Division (“GFLRMD”) calculates the stressed VaR (“sVaR”) of the Bank’s Trading portfolio, which is defined as the VaR, where model inputs are calibrated to historical data from a continuous 1-year period of significant financial stress, relevant to the Bank’s portfolio. More specifically, VCV matrices dating back on January 2008, are calculated on a daily basis and the VCV matrix that corresponds to the maximum VaR of NBG’s Trading portfolio, over the entire period, is selected. Similarly to VaR, NBG calculates sVaR on a daily basis, using a 1-day holding period and 99% confidence level. Finally, the GFLRMD also calculates the VaR of the Bank’s portfolios on a daily basis, by applying the Historical Simulation approach, for benchmarking purposes.

The Bank has established a framework of VaR limits in order to control and manage the risks to which it is exposed, in a more efficient way. These limits are based on the Bank’s Risk Appetite, as outlined in the Risk Appetite Framework (“RAF”), the anticipated profitability of the Treasury, as well as on the level of the Bank’s own funds (capital budgeting), in the context of the Group strategy. The VaR limits refer not only to specific types of market risk, such as interest rate, foreign exchange, equity and commodities but also to the overall market risk of the Bank’s Trading and HTCS portfolios, taking into account the respective diversification between portfolios. Moreover, the same set of limits are used to monitor and manage risk levels on the Trading book, on an overall basis and per risk type, since this is the aggregation level relevant for the calculation of the own funds requirements for Market Risk, under the Internal Model Approach (IMA).

The operation of the market risk management unit as a whole, including the VaR calculation framework, have been thoroughly reviewed and approved by the Bank of Greece, as well as by external advisors. Also, the NBG’s Internal Audit assesses the effectiveness of the relevant internal controls on a regular basis. Furthermore, the adequacy of the market risk management framework, as well as the appropriateness of the VaR model used for the calculation of the Bank’s capital requirements, were successfully reassessed by the Single Supervisory Mechanism (“SSM”) during the on-site investigation in the context of the “Targeted Review of Internal Models” (“TRIM”), that took place in the last quarter of 2017. There were no major findings identified, while most of the findings reported were of the lowest severity. Based on the TRIM assessment report, ECB concluded in its final Decision that NBG may continue calculating the own funds requirements for general market risk with the internal model approach, which verifies the robustness of NBG’s Market Risk management model.

Finally, the GFLRMD has initiated a project for the implementation of the new regulatory framework for market risk under Basel IV, which is also included in the Bank’s transformation program.

The remaining subsidiaries of the Group bear minimal market risk and also taking into account the current divestment program, NBG Bank is the only Group entity with material risk of this type.

**TOTAL MARKET RISK**

The total VaR (99%, 1-day) of the Bank’s Trading and Held-to-Collect-and-Sell (“HTCS”) portfolios ranged between €70m and €201.9m during 2018, while the average for the year stood at €12.6m. As of December 31st, 2018, the total VaR was €13.5m (see below Chart 2.5.16).

The total VaR followed an increasing trend from the mid of the second quarter of 2018, with a drop between July and September, as shown below in the graph, mainly due to an increase in interest rate risk.

**CHART 2.5.16**

**NBG - TOTAL VAR (99%, 1-DAY)**

The total VaR and the VaR of the HTCS portfolios are depicted in Chart 2.5.16. The total VaR of the Bank’s Trading portfolio is depicted in daily terms as an average, high and low value for the year 2018, with the highest level being in August and the lowest in December, ranging from €13.5m to €201.9m. The VaR of the HTCS portfolios is given in daily terms from January 1st to December 31st, 2018, with the highest VaR of €201.9m in November and the lowest of €13.5m in January. The chart provides a visual representation of the total VaR and the VaR of the HTCS portfolios over the course of the year, highlighting the fluctuations and trends in the Bank’s market risk exposure.
**INTEREST RATE RISK**

The most significant type of market risk to which the Bank is exposed, is interest rate ("IR") risk which arises mainly from the interest rate, over-the-counter ("OTC") and exchange traded derivative transactions, as well as from the Trading and HTCS bond portfolios that it holds. Interest rate risk is quantified through IR VaR. The IR VaR (99%, 1-day) of the Trading and HTCS portfolios of NBG ranged between €6.8m and €19.7m during 2018, while the average for the year stood at €12.2m. As of December 31st, 2018, the IR VaR was €12.7m.

The evolution of IR VaR, as illustrated in the chart above, depends on the sensitivity of the Bank’s Trading and HTCS portfolios to key risk factors, namely the euro swap rates and the respective sovereign yields, as well as on the level of the respective volatilities.

The sensitivity of the Bank’s portfolios to the euro swap rates followed a decreasing path during the first semester of 2018, as a result of a change in the Trading book product mix. Moreover, the sensitivity of the Bank’s Trading book decreased sharply due to the deleveraging of the interest rate portfolio, in the fourth quarter of 2018. In parallel, the volatilities to key interest rate risk factors presented moderate fluctuations until mid-May, which combined with the decreasing levels of IR sensitivity led to a moderate decrease of the IR and Total VaR to increase. The VaR estimates peaked in the beginning of October and followed a decreasing path afterwards, still above the respective estimates at the end of the previous year.

**EQUITY RISK**

The Bank has a moderate exposure to equity risk, which arises from the positions it retains in stocks and equity derivatives. More specifically, the Bank retains positions in stocks and equity derivatives which are traded on the ATHEX and other European exchanges and are classified in the Trading and the HTCS portfolios. The positions held in the Trading portfolio are mainly used for hedging the equity risk that arises from the Bank’s equitylinked products offered to its clientele and to a lesser extent for proprietary trading. The equity VaR (99%, 1-day) of the Trading and HTCS portfolios of NBG ranged between €0.7m and €2.3m during 2018, while the average for the year stood at €1.3m. As of December 31st, 2018, the Equity VaR was €1.8m.

The equity VaR presented moderate fluctuations nearly until the end of the third quarter of the year, which were mainly attributed to the changes in the prices of the underlying equity indices and their respective volatilities. As a reference, the evolution of the volatility of the ATHEX Large Cap index is shown in Chart 2.5.19.

However, towards the end of the third quarter, the Bank increased its HTCS positions in stocks of EU financial institutions and in the FTSE/ATHEX-25, which subsequently led to higher VaR estimates, as shown below in the Chart 2.5.18.
Foreign exchange (FX) risk stems from the Bank’s Open Currency Position (“OCP”). The OCP primarily arises from foreign exchange spot and forward transactions. The FX VaR (99%, 1-day) of the Trading and HTCS portfolios of NBG ranged between €0.2m and €0.6m during 2018, while the average for the year stood at €0.3m. As of December 31st, 2018, the FX VaR was €0.3m.

The FX VaR remained at relatively low levels and presented minor fluctuations in 2018, as shown in Chart 2.5.20, due to the limited Open Currency Position of the Bank.

BACK-TESTING

The Bank performs back-testing on a daily basis, in order to verify the predictive power of the VaR model. In accordance with the guidelines set out in the Capital Requirements Regulation 575/2013, the calculations only refer to the Bank’s trading portfolio and involve the comparison of the hypothetical, as well as the actual daily gains/losses (“P&L”) of the portfolio, with the respective estimates of the VaR model used for regulatory purposes. The hypothetical P&L is the change in the value of the portfolio between days t and t+1, assuming that the portfolio remains constant between the two days. In the same context, the actual P&L is the change in the value of the portfolio between days t and t+1, including all the transactions and/or any realized gains/losses that took place in day t+1, excluding fees, commissions and net interest income.

Any excess of the hypothetical / actual losses over the VaR estimate is reported to the regulatory authorities within no later than five business days. There were three cases during 2018, in which the back-testing result exceeded the respective VaR calculation.

STRESS TESTING

The daily VaR estimations refer to "normal" market conditions. However, supplementary analysis is necessary for capturing the potential loss that might arise under extreme and unusual circumstances in the financial markets. Thus, the Bank conducts stress testing on a weekly basis, on both the Trading and HTCS portfolios, based on specific scenarios, depending on the risk factor type (interest rate, equity, exchange rate).

Foreign exchange risk

FX VaR (99%, 1-day) ranged between €0.2m and €0.6m in 2018.

It remained at low levels and presented minor fluctuations.

VaR model back-testing

Any excess of the hypothetical/actual losses over the VaR estimate is reported to the regulatory authorities.

In three cases during 2018 the back-testing result exceeded the VaR estimate.
Additionally, the following volatility stress test scenarios are defined and the Trading and HTCS P&L is assessed, on a daily basis.

**INTEREST RATE SCENARIOS**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Description</th>
<th>0-3 months</th>
<th>3 Months - 5 Years</th>
<th>&gt;5 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Parallel Curve Shift</td>
<td>+200 bp</td>
<td>+200 bp</td>
<td>+200 bp</td>
</tr>
<tr>
<td>2</td>
<td>Parallel Curve Shift</td>
<td>-200 bp</td>
<td>-200 bp</td>
<td>-200 bp</td>
</tr>
<tr>
<td>3</td>
<td>Steepening</td>
<td>0 bp</td>
<td>+100 bp</td>
<td>+200 bp</td>
</tr>
<tr>
<td>4</td>
<td>Flattening</td>
<td>+200 bp</td>
<td>+100 bp</td>
<td>0 bp</td>
</tr>
</tbody>
</table>

**Stock Market Indices**

-30% for all indices

**FX Rates**

EUR depreciation by 30% / EUR appreciation by 30%

Additionally, the following volatility stress test scenarios are defined and the Trading and HTCS P&L is assessed, on a daily basis.

**STOCK INDICES SCENARIOS**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>IR: normal +1bp, lognormal +1%, EQT, FX &amp; Comdty: +1%</td>
</tr>
<tr>
<td>2</td>
<td>IR: normal +5bp, lognormal +5%, EQT, FX &amp; Comdty: +5%</td>
</tr>
<tr>
<td>3</td>
<td>IR: normal +10bp, lognormal +10%, EQT, FX &amp; Comdty: +10%</td>
</tr>
<tr>
<td>4</td>
<td>IR: normal -1bp, lognormal -1%, EQT, FX &amp; Comdty: -1%</td>
</tr>
<tr>
<td>5</td>
<td>IR: normal -5bp, lognormal -5%, EQT, FX &amp; Comdty: -5%</td>
</tr>
<tr>
<td>6</td>
<td>IR: normal -10bp, lognormal -10%, EQT, FX &amp; Comdty: -10%</td>
</tr>
</tbody>
</table>

**OTHER SUBSIDIARIES**

**BANCA ROMANEASCA**

The bond portfolio of Banca Romaneasca consists of Romanian sovereign bonds, issued in local and foreign currency (RON and EUR, respectively) and are classified in the HTCS and the Held-to-Collect (HTC) portfolios. The bonds are mainly used for liquidity management purposes.

Romaneasca’s interest rate risk arises from its sovereign bond holdings in the HTCS portfolio. As of December 31st, 2018, the total value of the HTCS and HTC bond portfolios stood at €158.5m (€103.5m and €49.5m, respectively), in nominal amounts.

Moreover, Banca Romaneasca has a very limited exposure to FX risk, due to positions in major currencies. For the efficient management of FX risk, the subsidiary calculates the FX VaR of its portfolio on a daily basis, which as of December 31st, 2018, it stood at €29.2thou.

The bond portfolio of Stopanska Banka consists of T-bills and short term sovereign bonds, issued in local currency (MKD) or indexed to the EUR. The positions are classified in the HTCS and HTC portfolios and are mainly used for liquidity management purposes. The total value of the HTCS and HTC bond portfolios stood at €174.8m (€80.6m and €94.2m, respectively), in nominal amounts, on December 31st, 2018, of which 84% comprised of positions issued in MKD and 16% were positions indexed to the EUR.

**STOPANSKA BANKA**

The bond portfolio of Stopanska Banka consists of T-bills and short term sovereign bonds, issued in local currency (MKD) or indexed to the EUR. The positions are classified in the HTCS and HTC portfolios and are mainly used for liquidity management purposes. The total value of the HTCS and HTC bond portfolios stood at €174.8m (€80.6m and €94.2m, respectively), in nominal amounts, on December 31st, 2018, of which 84% comprised of positions issued in MKD and 16% were positions indexed to the EUR.

**INTEREST RATE RISK IN THE BANKING BOOK**

Interest Rate Risk in the Banking Book (IRRBB) is the current or prospective risk to the Bank’s capital and earnings arising from adverse movements in interest rates that affect the Bank’s Banking Book positions.

The main sources of IRRBB are the following:

- **Repricing risk**: it arises from timing differences in the maturity (for fixed-rate) and repricing (for floating-rate) of the Group’s assets, liabilities and off balance-sheet positions, which can expose the Group’s income and underlying economic value to adverse interest rate fluctuations;
- **Yield curve risk**: it arises from unanticipated changes in the slope and/or the shape of the yield curve, resulting in adverse effects on the Group’s income or underlying economic value;
- **Basis risk**: it arises from imperfect correlation in the adjustment of the rates earned and paid on different instruments with otherwise similar repricing characteristics;
- **Optionality risk**: it occurs when a bank’s customer or counterparty has the right, but not the obligation, to buy, sell, or in some manner alter the quantity and/or the timing of cash flows of an instrument or financial contract.
IRRBB is measured, monitored, and controlled by the Group Financial and Liquidity Risk Management Division ("GFLRMD").

Interest rate fluctuations affect the economic value of the Bank’s assets, liabilities, and off-balance sheet items, through corresponding changes in the cash flows’ amounts and discount rates and – therefore – their present value. Changes in interest rates also affect the Bank’s earnings by increasing or decreasing its Net Interest Income (NII) and the level of other interest rate-sensitive income and operating expenses. It is therefore important to examine IRRBB from these two complementary views, and quantify the effect of interest rate changes using both value and earnings measures.

NBG calculates the change in Economic Value of Equity (ΔEVE) as a measure of the Bank’s Balance sheet value vulnerability to interest rate changes. ΔEVE represents the change in the net present value of all cash flows in the Bank’s balance sheet under a set of interest rate stress scenarios. The EVE sensitivity metric is calculated over the remaining life of the Balance sheet, i.e. until all positions have run off, assuming no replenishment of expired transactions.

The effect of interest rate fluctuations on NBG’s EVE and NII metrics is assessed on a regular basis using a range of interest rate scenarios reflecting potential changes in the level and the shape of the interest rate yield curve (i.e. parallel moves, as well as steepening and flattening of the curve), as presented in the table below.

### Table 2.5.11 IRRBB – STRESS TEST SCENARIOS

<table>
<thead>
<tr>
<th>Scenario/Time bucket</th>
<th>0-3 Months</th>
<th>3 months - 5 years</th>
<th>&gt;5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>-200bps</td>
<td>-200</td>
<td>-200</td>
<td>-200</td>
</tr>
<tr>
<td>-100bps</td>
<td>-100</td>
<td>-100</td>
<td>-100</td>
</tr>
<tr>
<td>-50bps</td>
<td>-50</td>
<td>-50</td>
<td>-50</td>
</tr>
<tr>
<td>+50bps</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>+100bps</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>+200bps</td>
<td>200</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Steepening</td>
<td>0</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>Flattening</td>
<td>200</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

The effect of the eight stress test scenarios described above to NBG’s NII as of 2018 year end is presented in the table below.

### Table 2.5.12 NII SENSITIVITY

<table>
<thead>
<tr>
<th>ΔNII m €</th>
<th>-200bps</th>
<th>-100bps</th>
<th>-50bps</th>
<th>50bps</th>
<th>100bps</th>
<th>200bps</th>
<th>Steepening</th>
<th>Flattening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets</td>
<td>-66</td>
<td>-34</td>
<td>-17</td>
<td>145</td>
<td>295</td>
<td>596</td>
<td>325</td>
<td>281</td>
</tr>
<tr>
<td>Liabilities</td>
<td>20</td>
<td>11</td>
<td>6</td>
<td>-102</td>
<td>-204</td>
<td>-409</td>
<td>-214</td>
<td>-194</td>
</tr>
<tr>
<td>Derivatives</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>16</td>
<td>31</td>
<td>63</td>
<td>41</td>
<td>22</td>
</tr>
<tr>
<td>Subsidiaries</td>
<td>-6</td>
<td>-3</td>
<td>-1</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td>-2</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>-52</td>
<td>-26</td>
<td>-13</td>
<td>60</td>
<td>125</td>
<td>256</td>
<td>150</td>
<td>117</td>
</tr>
</tbody>
</table>

The results indicate an increasing ΔNII with increasing interest rates and vice versa, a result consistent with the composition of NBG’s Banking Book, since the majority of the interest rate sensitive assets are linked to floating rates.

NBG also monitors EVE sensitivity as a percentage of capital resources. The corresponding EVE reduction as a result of the eight stress test scenarios described above does not exceed the limits set by the prevailing Regulatory provisions and NBG’s Risk Appetite Framework.
2.5 RISK MANAGEMENT

COUNTERPARTY CREDIT RISK

NBG

Counterparty Credit Risk ("CCR") for NBG stems from Over the Counter ("OTC") derivative and other interbank secured and unsecured funding transactions, as well as commercial transactions, and is due to the potential failure of a counterparty to meet its contractual obligations.

The framework for managing CCR that pertains to Financial Institutions ("FIs") is established and implemented by the Group Financial and Liquidity Risk Management Division ("GFLRMD"). It consists of:

- Measuring the exposure to each counterparty, on a daily basis.
- Establishing the respective limits per counterparty.
- Monitoring the exposure against the defined limits, on a daily basis.

The methodology for measuring exposure to a FI depends on the characteristics of the transaction. Specifically, unsecured interbank placements and commercial transactions produce an exposure that is equal to the face amount of the transaction, whereas secured interbank transactions and OTC Derivatives create Pre-Settlement Risk, which is measured through each product’s Credit Equivalent Factors ("CEFs"), as described in the Counterparty Credit Risk Management Framework.

NBG seeks to further mitigate CCR by standardizing the terms of the agreements with counterparties through ISDA and GMRA contracts that encompass all necessary netting and margining clauses. Credit Support Annexes ("CSAs") have also been signed with almost all active FIs, so that net current exposures are managed through margin accounts, on a daily basis, by exchanging mainly cash or debt securities as collateral.

Additionally, due to NBG’s conservative profile, interbank transactions are carried out mainly with low and medium risk (investment grade) FIs, whose credit ratings range between AAA and BBB-. The exception pertains to the rest of the Greek banking sector, with which a separate framework is in place, in order to serve NBG’s business needs with domestic banks. To minimize CCR, interbank placements with Greek and foreign banks cannot exceed one week and three months, respectively, although almost all interbank transactions mature within the week.

The methodology, by which limits are allocated to each counterparty, is based on the Obligor Limit, as defined in NBG’s Corporate Credit Policy. More specifically, the maximum level of exposure per FI is equal to 70% of the Obligor Limit, while the remaining 30% is allocated to interbank transactions performed in funds. In limited cases, a differentiation of the above levels is allowed in order to facilitate exceptional operational needs, as long as the Obligor Limit is not breached.

The Obligor Limit is based on the (lowest) credit rating of the counterparty, as provided by internationally recognized rating agencies (mainly Moody’s and Standard & Poor’s).

The Bank has established a limit-framework that complies with the above rules, for both interbank and funded commercial transactions. Limits exist for each product type and are set at the respective counterparty’s Group level, as analyzed in the Counterparty Credit Risk Framework. Sub-limits are then allocated to the subsidiaries of each counterparty Group, in accordance with the business needs of the Bank.

The limit-framework is revised periodically, according to business needs and the prevailing conditions in the international and domestic financial markets.

Subsequently, all limits are monitored by GFLRMD on a daily basis.

OTHER SUBSIDIARIES

The rest of the Group’s subsidiaries have limited CCR, mainly through interbank transactions performed for liquidity purposes. Nonetheless, a limit structure, similar to that of NBG’s, is in place to ensure the efficient management of the respective risk. All interbank transactions are performed with FIs, which are located in low or very low risk countries and carry high credit ratings, with the exception of transactions with local or Greek banks. As in the case of NBG, the maximum tenor of interbank placements with other FIs (domestic and foreign) cannot exceed three months.

To an even lesser extent, the subsidiaries undertake counterparty risk through commercial transactions (funded or unfunded), which they manage through their respective limit framework.

All limits are monitored on a daily basis by the local subsidiary’s independent risk management, as well as by GFLRMD, which oversees all subsidiaries centrally.

ISSUER RISK

The Bank maintains a moderate portfolio in Greek and international corporate bonds. As of December 31st, 2018, NBG’s nominal positions in international and Greek corporate bonds stood at €233.3m. The portfolio of corporate bonds primarily consists of positions issued by energy companies (25%), financial institutions (23%), telecommunications (17%), construction companies (17%) and gaming companies (12%), while it includes smaller positions in beverage companies (4%) as well as in other sectors (7%), as presented in the chart below.

Counterparty limit

Maximum exposure per FI for interbank transactions is set at 70% of the Obligor Limit

At 30% for commercial transactions

The Obligor Limit is based on the (lowest) credit rating of the counterparty

Periodical review of the limits

Moderate portfolio in corporate bonds

Total value of €233.3m (31 December 2018)

9% consists of Greek and 11% of international issues

11% are medium-risk issues

41% consists of non-rated bonds
The credit quality breakdown shown in the chart below, indicates that 11%, or €25m of the portfolio, consists of medium risk (investment grade) issues, while non-rated bonds stand at 41%, or €96m, of the portfolio. Out of the entire portfolio, 89% comprises of Greek names and 11% of international issues.

COUNTRY RISK

Country risk is the current or prospective risk to earnings and capital caused by events in a particular country, which are at least to some extent, under the control of the government but not under the control of a private enterprise or individual. The main categories of country risk consist of sovereign, convertibility and transfer risk. Sovereign risk stems from a foreign government’s lack of capacity and/or unwillingness to repay its debt or other obligations. Convertibility and transfer risk arise when a borrower is unable to convert funds from local to foreign currency, in order to repay external obligations. Therefore, country risk stems from all cross-border transactions, either with a central government, or with a financial institution, a corporate or a retail client.

The on and off-balance sheet items, which potentially entail country risk are the following:

- participation in the equity of the Group’s subsidiaries, which operate in other countries;
- interbank secured and unsecured placements and risk that arises from OTC transactions, with financial institutions that operate abroad;
- loans to corporations or financial institutions that operate abroad, positions in corporate bonds of foreign issuers and cross-border project finance loans;
- funded and unfunded commercial transactions with foreign counterparties; and
- holdings of foreign sovereign debt.

In this context, NBG’s exposure to country risk arises from the participation in the Group’s subsidiaries operating abroad, the Bank’s holdings in foreign sovereign bonds and cross-border activities in the form of interbank/commercial transactions and corporate lending.

GFLRMD monitors country risk exposure, as defined above, on a daily basis, mainly focusing on the countries of South East Europe as well as on Egypt and Malta, where NBG Group has presence.

It should be noted though that, as per NBG’s divestment plan for all the major non-Greek banking subsidiaries, the sale of Banka NBG Albania and South African Bank of Athens was completed in 2018.

Country risk was lower as of 31 December 2018.

Thus, NBG’s country risk exposure as of December 31st, 2018, decreased compared to 2017 and stood at 1.8% of the Group’s total assets (vs 2.6% as of December 29th, 2017).
### 2.5 RISK MANAGEMENT

**Liquidity risk: Milestone year for NBG's liquidity profile**

- The first Greek bank to disengage itself from the ELA (November 2017)
- The first Greek bank to restore LCR and NSFR liquidity metrics
- Increase of deposits by €3.5bn to €42.2bn
- NBG’s covered bonds were upgraded to investment grade
- Tapped the international secured financing markets for €3.4bn
- Blended cost of funding at 0.46% (Dec-17 Mar-18 June-18 Sep-18 Dec-18)

**LIQUIDITY RISK**

After the successful disengagement from the ELA in November 2017, where NBG was the first Greek systemic bank to achieve this goal, 2018 was another milestone year for NBG’s liquidity profile, since it managed to restore both Basel III liquidity metrics (LCR and NSFR) within the regulatory limits, once again ahead of all the Greek systemic banks. This development clearly marks NBG’s leading position in the liquidity front and ensures the ability of the Bank to fund the recovering Greek economy and contribute to a healthy balance sheet.

More specifically, on December 31st 2018, the Bank’s customer deposit balance stood at €42.2 billion, a significant increase of €3.5 billion compared to the respective figure as of December 31st 2017. Notably, about half of this increase pertains to retail deposits that are considered the most stable type of customer deposits. Moreover, during the same period, the Bank managed to further decrease its reliance on ECB funding by €0.5 billion, reducing its total exposure to Eurosystem funding, through the TLTRO, to €2.25 billion, the lowest level since the beginning of the crisis. In addition, NBG’s covered bond issuances received an investment grade rating, and thus are considered eligible collateral for ECB’s Main Refinancing Operations, another major achievement and vote of confidence for the Bank.

Throughout 2018, the international secured financing markets continued to be open for NBG, which the Bank tapped for €3.4 billion, approximately at the same level as in 2017, while the divestment of foreign subsidiaries, namely NBG Albania and SABA contributed marginally to NBG’s liquidity position in the amount of €0.1 billion. All of the above resulted in a blended cost of funding for the Bank at 0.46%, by year end decreased by about 4bp, compared to 2017.

The evolution of NBG’s main funding sources throughout 2018 is shown in the chart below:

**LIQUIDITY COVERAGE RATIO**

The Liquidity Coverage Ratio (LCR) refers to the liquidity buffer of HQLAs that a Financial Institution holds, in order to withstand net liquidity outflows over a 30 calendar-day stressed period and is defined as follows:

\[
\text{LCR} = \frac{\text{Liquidity Buffer}}{\text{Net Liquidity Outflows (0-30 days)}}
\]

Thus, LCR intends to capture the liquidity capacity of an FI over a 30 calendar day stressed period. More specifically, LCR measures whether an FI holds sufficient, unencumbered, HQLAs to replenish the net outflows that could face under a sudden liquidity shock, triggered by a combination of idiosyncratic and market-wide stressed scenarios, such as:

- a significant credit rating downgrade
- a run-off of customer deposits
- a significant loss of wholesale funding
- a significant impairment of the securities pledged as collateral
- additional collateral needs, due to margin calls

Higher Liquidity Coverage Ratio (LCR)

- Restoration in July is among the most significant achievements in 2018
- On 31 December it reached a historically high level of 128%
- It has since stabilized at that level
In the context of the Basel III liquidity requirements, the Net Stable Funding Ratio ("NSFR") is a long term liquidity metric which aims at controlling excess maturity transformation risk and capturing funding risk. It encourages an FI to limit excessive reliance on short-term, unstable funding sources and use more stable and longer term liquidity sources to fund its on and off-balance sheet assets.

The NSFR compares the amount of "Available Stable Funding" to the amount of "Required Stable Funding" and requires that an FI holds this ratio at a minimum level of 100%, on an ongoing basis. The NSFR is defined as follows:

\[
\text{Net Stable Funding Ratio} = \frac{\text{Available Stable Funding}}{\text{Required Stable Funding}} > 100\%
\]

In parallel with the LCR restoration, NBG managed to also restore the NSFR, during 2018. More specifically, following the restoration of the LCR in July 2018, the Bank’s NSFR exceeded the regulatory threshold of 100% for the first time in September 2018, confirming the positive momentum for NBG’s liquidity position. As such, the NSFR stood at 107%, the highest level since its inception, on December 31st 2018.

The evolution of the Bank’s NSFR during 2018 is presented below:

A detailed analysis of both LCR and NSFR evolution is presented in the 2019 ILAAP report.

### CHART 2.5.25
**EVOLUTION OF LCR IN 2018**

### CHART 2.5.26
**EVOLUTION OF NSFR SOLO IN 2018**

#### ADDITIONAL LIQUIDITY MONITORING METRICS

Further to the liquidity ratios mentioned above, the Bank calculates additional liquidity monitoring metrics ("ALMM"), as per the Basel III / CRD IV regulatory requirements, on a monthly basis. These tools further enable the Bank to identify and monitor key aspects of its liquidity and funding risk. The ALMM include the following:

- the concentration of funding by counterparty, which shows the top ten largest counterparties from which funding obtained exceeds a threshold of 1% of total liabilities,
- the concentration of funding by product type, which is focused on the total amount of funding received from each product category that exceeds a threshold of 1% of total liabilities,
- the prices for various lengths of funding, which provides information about the average balances of the new funds, obtained in each reporting month, distributed in time buckets, and their respective "Funds Transfer Pricing" (FTP) spread,
- the roll-over of funding, which displays the volume of funds maturing and new funding obtained, on a daily basis over a monthly horizon, and
- the concentration of counterbalancing capacity by issuer, which illustrates the 10 largest holdings of unencumbered central bank eligible assets (excluding unencumbered collateral eligible for ELA funding)

The maturity ladder is intended to capture the contractual maturity mismatch of the institution’s balance sheet in various time buckets. The maturity mismatch indicates the liquidity needs that an institution could potentially face at each time band, based on the assumption that the contractual outflows will occur at the earliest possible time. Thus, the metric seeks to gauge the extent to which an institution relies on maturity transformation.

With respect to the first metric above, the Public Sector Entities and more specifically the ‘Ministry of Finance’ and the ‘Greek Public Social Security’ are included in the...
Finally, the Bank's liquidity adequacy is thoroughly evaluated in the 2019 ILAAP report. Within ILAAP, the Bank provides a broad analysis with regard to the identification, measurement and monitoring of the main liquidity and funding risks, under the current environment. Moreover, the Bank's liquidity prospects and challenges are further examined with a forward looking perspective, under a baseline scenario that incorporates the assumptions introduced in the Bank's Business Plan, as well as under a number of stressed scenarios, intended to assess whether the Bank maintains an adequate buffer to withstand highly unlikely, but plausible liquidity shocks.

**OPERATIONAL RISK**

Operational risk (OR) is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. OR includes legal risk, but excludes strategic and business risk, but it also takes into consideration the reputational impact of operational risk.

The main subcategories of Operational Risk are:

- **Legal risk**, which is defined as the risk of being sued or being the subject of a claim or proceedings due to non-compliance with legal or statutory responsibilities and/or to inaccurately drafted contracts. It also includes the exposure to newly enacted laws as well as to changes in interpretations of existing laws.

- **Compliance risk**, which is the current or prospective risk to earnings and capital arising from violations or non-compliance with laws, rules, regulations, agreements, prescribed practices, or internal policies and code of conduct.

- **Conduct risk**, which is the current or prospective risk of losses arising from an inappropriate supply of financial services, including cases of wilful or negligent misconduct.

- **Information & Communication Technology risk**, which is the risk of loss due to breach of confidentiality, failure of integrity of systems and data, inappropriateness or unavailability of systems and data or inability to change IT within a reasonable time and costs when the environment or business requirements change. This includes security risks resulting from inadequate or failed internal processes or internal/external cyber-attacks or inadequate physical security.

- **Model risk**, which is the potential loss that may occur, as a consequence of decisions that could be based on the output of internal models, due to errors in the development, implementation or use of such models. A model refers to a quantitative method, system or approach that applies statistical, economic, financial or mathematical theories, techniques and assumptions to convert input data into quantitative estimates. Models produce estimates of uncertain quantities with varying precision and accuracy, depending on their objective, assumptions, input data quality and underlying model structure.

**OPERATIONAL RISK MANAGEMENT FRAMEWORK**

NBG Group recognizes the importance of OR and has established a high quality, effective framework, namely the Operational Risk Management Framework (ORMF), for its management across all Group operations, since 2007.

Operational risk management is integrated into the day-to-day business, adding value to the organization, based on the following elements:

- The Risks and Controls Self-Assessment (RCSA) process, alongside with the assessment of the relevant control environment, its purpose is establishing a formal procedure for the identification, assessment, monitoring and mitigation of potential operational risks within a business entity.

- The Loss Collection process, as well as the maintenance of a sound and consistent loss database; OR losses are collected at a Group level. All organizational entities of the Bank, as well as all Greek and foreign subsidiaries are responsible for recording operational incidents or/and losses following certain guidelines, under a standardized methodology.

- The determination, update and monitoring of Action Plans; these are all the necessary steps and measures intended to mitigate/reduce operational risks.

- The definition and monitoring of Key Risk Indicators; Their purpose is to assist in the identification and monitoring of potential risk exposures, by acting as early detection/warning indicators by identifying issues that cause risk events to arise.

- The Scenario Analysis, a systematic process of obtaining expert opinions, based on reasoned assessments of the likelihood and impact of plausible severe operational losses.

- The Training Initiatives and Risk Culture awareness. Op Risk Group fosters awareness and knowledge of operational risk at all levels of the organization.

All the above components, improve the control environment and strengthen NBG Group’s OR culture, while generating a positive reputational impact.

**RISK CULTURE, TRAINING INITIATIVES & REPORTING PROCESS**

The Group always seeks an enduring risk culture outcome. In terms of operational risk, the bank aspires to reach an operational risk intelligent culture status. This implies that everyone in the organization understands the bank’s approach to operational risk, takes personal

---

**NBG – LIQUIDITY – FUNDING CONCENTRATION BY COUNTERPARTY (€ m)**

<table>
<thead>
<tr>
<th>No</th>
<th>Top Counterparties</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>European Central Bank</td>
<td>2,250</td>
</tr>
<tr>
<td>2</td>
<td>Ministry of Finance, Hellenic Republic</td>
<td>1,800</td>
</tr>
<tr>
<td>3</td>
<td>Commerzbank AG</td>
<td>1,372</td>
</tr>
<tr>
<td>4</td>
<td>The Royal Bank of Scotland plc</td>
<td>885</td>
</tr>
<tr>
<td>5</td>
<td>Greek Public Social Security</td>
<td>643</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>6,950</strong></td>
</tr>
</tbody>
</table>

---

### Table 2.5.14

<table>
<thead>
<tr>
<th>No</th>
<th>Top Counterparties</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>European Central Bank</td>
<td>2,250</td>
</tr>
<tr>
<td>2</td>
<td>Ministry of Finance, Hellenic Republic</td>
<td>1,800</td>
</tr>
<tr>
<td>3</td>
<td>Commerzbank AG</td>
<td>1,372</td>
</tr>
<tr>
<td>4</td>
<td>The Royal Bank of Scotland plc</td>
<td>885</td>
</tr>
<tr>
<td>5</td>
<td>Greek Public Social Security</td>
<td>643</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>6,950</strong></td>
</tr>
</tbody>
</table>
2.5#RISK MANAGEMENT

responsibility to manage this type of risk and encourage others to follow their example. The bank’s management system and behavioral norms aim to encourage personnel to make the right risk-related decisions and exhibit appropriate operational risk awareness behavior.

The Group fosters training, awareness and knowledge of operational risk at all levels of the organization including executive and senior management. OR personnel undergoes a continuous training in operational risk that includes selected readings, conferences and appropriately designed courses.

During 2018, the reporting process was further enhanced through amending and fully automating the process for calculating capital requirements for operational risk.

The RCSA exercise was conducted in 2018 and covered all Group entities.

i. Risks & Control Self-Assessment Process (RCSA)

The RCSA is a bottom-up self-assessment process conducted annually. Potential high-risk areas are highlighted and risk mitigating measures are identified through workshops, aiming to evaluate risks specific to the countries and business sectors where NBG Group operates. Risk assessment is complemented by the assessment of the control environment. The Group has in place all necessary mechanisms for the appropriate collection and management of OR loss events that occur at the Bank and Group Level. This process is a critical step for the operational risk management.

OR loss events are mapped to the processes they stem from. This approach allows the identification of significant loss events per process and thereby help identify processes with significant operational risk exposure. Direct operational losses that have a negative financial impact on the Bank’s financial statements are mainly collected through the loss collection process. However, although the emphasis is primarily placed on the collection of direct losses, risk owners are encouraged to report all losses/incidents including near misses, (i.e. events with no financial loss as well as operational risk gains), for risk management purposes. OR loss events resulting in credit or market risk losses are also reported, but are appropriately flagged.

The OR correspondents are mainly responsible for the continuous collection of all losses above €1,000 arising from OR loss events in the Open Pages platform. ORGMD is responsible for the timely loss event reporting, and the performance of quality assurance exercise for the completeness of the loss database, the correct and accurate classification of each event reported on the loss database.

The implementation of the ORM Framework aims to strengthen the Group’s OR profile. In this context, the key pillars of ORMF provide all necessary elements that enable the senior management to obtain a clear view of NBG Group’s profile.

In 2018, NBG, continued with the successful implementation of the Bank’s restructuring plan. The most significant event was the ceasing of its operations in Albania and South Africa through the sale of its subsidiaries Banka NBG Albania Sh.A and The South African Bank of Athens LTD (S.A.B.A.) respectively.

The OR correspondents are mainly responsible for the continuous collection of all losses above €1,000 arising from OR loss events in the Open Pages platform. ORGMD is responsible for the timely loss event reporting, and the performance of quality assurance exercise for the completeness of the loss database, the correct and accurate classification of each event reported on the loss database.

ii. Loss Data Collection

The Group has in place all necessary mechanisms for the appropriate collection and management of OR loss events that occur at the Bank and Group Level. This process is a critical step for the operational risk management.

OR loss events are mapped to the processes they stem from. This approach allows the identification of significant loss events per process and thereby help identify processes with significant operational risk exposure. Direct operational losses that have a negative financial impact on the Bank’s financial statements are mainly collected through the loss collection process. However, although the emphasis is primarily placed on the collection of direct losses, risk owners are encouraged to report all losses/incidents including near misses, (i.e. events with no financial loss as well as operational risk gains), for risk management purposes. OR loss events resulting in credit or market risk losses are also reported, but are appropriately flagged.

The OR correspondents are mainly responsible for the continuous collection of all losses above €1,000 arising from OR loss events in the Open Pages platform. ORGMD is responsible for the timely loss event reporting, and the performance of quality assurance exercise for the completeness of the loss database, the correct and accurate classification of each event reported on the loss database.

The Group fosters training, awareness and knowledge of operational risk at all levels of the organization including executive and senior management. OR personnel undergoes a continuous training in operational risk that includes selected readings, conferences and appropriately designed courses.

During 2018, the reporting process was further enhanced through amending and fully automating the process for calculating capital requirements for operational risk.

The RCSA exercise was conducted in 2018 and covered all Group entities.

iii. Key Risk Indicators (KRIs)

KRIs are used to monitor the operational risk profile and alert the organization on impending problems, in a timely manner. They enhance the bank’s risk culture and trigger risk mitigating actions. The ORGMD has developed a new KRI Framework and has established and monitors a number of KRIs, which track changes in the operational risk profile within a given period.

KRIs are selected and developed by business entities in cooperation with ORGMD. When a KRI is established, the source of the data, the collection frequency and the thresholds are defined. Data sources include, among others, the Compliance, Legal, Human Resources and Cyber Security Divisions, which provide ORGMD with the relevant information on a periodic basis. Among the indicators monitored there are KRIs related to Conduct Risk, Information Security and others linked to Risk Exposure in general. Once the thresholds are breached, the process of investigating the related risk, establishing a control environment and subsequently creating action plans, is initiated. All KRIs are subject to review at least on an annual basis in order to match the risk appetite and profile of the Bank.

iv. Scenario Analysis (SA)

The SA is a systematic process of obtaining expert opinions, based on reasoned assessments of the likelihood and impact of plausible severe operational losses.

A scenario assessment project involving all senior management of the Bank was initiated in 2019. ORGMD created a list of different scenarios indicating possible significant operational risk exposures and these cases were assessed following a prescribed process and methodology through appropriately designed working sessions.
Recognizing the vital significance of a strong and effective Compliance & Corporate Governance framework in maximizing the long-term value of the Bank and protecting the interests of customers, shareholders, and employees, and all stakeholders in general, National Bank of Greece places special emphasis on further upgrading and strengthening its compliance function on an ongoing basis, so as to ensure that the Bank is appropriately and effectively shielded.

Accordingly, in order to ensure that the Bank is aligned with the national, European and international legislative and regulatory framework, that it complies with the requirements of the supervisory authorities, and adopts best practices in the operations of the NBG Group, Compliance Units monitor the due implementation of the applicable regulatory framework, and the incorporation of any changes thereto, while providing relevant guidance and support to Bank and Group Units. To this end, policies and procedures for the management of compliance and corporate governance issues are being adopted and reviewed on an ongoing basis at a Group level.

In 2018, the Greek banking system continued to face challenges, shaping an operational environment where the Compliance Functions played a key role in terms of managing matters that emerged throughout the year and the Bank’s alignment with the constantly changing regulatory environment.

A. Key developments related to the Division’s responsibilities – Compliance Projects according to regulatory requirements

In 2018, the Group Compliance & Regulatory Affairs Division focused on issues related to consumer/investor protection, data protection, management of customer complaints, compliance monitoring and communication with supervisory authorities, aiming at the timely adjustment of the Bank to the
2.6#REGULATORY COMPLIANCE

“What issues did the Bank focus on in 2018?”

Consumer/investor protection

Data protection

Management of customer complaints

Compliance monitoring

Communication with supervisory authorities

Adaptation to the new regulatory framework

Compliance with the requirements set out by MiFID II

Implementation of the Insurance Distribution Directive (IDD)

Compliance with the new European General Data Protection Regulation (GDPR)

Appointment of a Data Protection Officer (DPO) of the Bank and a Deputy DPO

new legal and regulatory provisions and in order to mitigate any risks relating to potential compliance breaches (compliance risk). Specifically, in 2018, increased emphasis was placed on the Bank’s compliance with the following requirements:

Monitoring the implementation of the NPL management framework by the Bank and its performance with regard to NPL resolution

The protection of individuals with regard to the processing of personal data and the free movement of such data (GDPR: General Data Protection Regulation)

The distribution of insurance products (Insurance Distribution Directive - IDD)

PSD II: the Payment Services Directive in the internal market and interbank fees for card-based payment transactions

Key investor information documents relating to packaged retail and insurance-based investment products (PRIIPs).

The ratios and indices used as benchmarks for financial instruments and financial contracts or to measure the performance of investment funds (Benchmarks Regulation - BMR).

Compliance with the applicable regulatory framework:

• The setting up of committees and working groups for the purpose of informing borrowers of the Bank's compliance with the applicable regulatory framework.

• Developing a relevant training course for all NBG employees.

• Appointing a Data Protection Officer (DPO) of the Bank and a Deputy DPO;

• Updating the Policy on Personal Data Processing and other policies of the Bank so as to comply with the new framework;

• Participating in the preparation of the Code of Conduct of the Hellenic Bank Association for the processing of personal data;

• Developing a relevant training course for all NBG employees.

With a view to the Bank’s ongoing compliance with the applicable regulatory framework regarding the management of NPLs (including, for example: Executive Committee Act no 42/2014, CICB 116/2014, CICB 195/2016, and Law 4354/2015, as amended), a specific strategy is being pursued regarding the reduction and management of NPLs and NPEs. Specifically, in the context of the sale and transfer of selected claims to Credit Servicing Firms under Law 4354/2015, as applicable, the Group Compliance & Regulatory Affairs Division assisted the relevant Units by the active participation of its executives in every related task so as to ensure compliance of the Bank with the applicable regulatory framework. In particular, guidance was provided on how to handle issues regarding data processing of natural persons involved in the claims, and on the content of letters and press releases to inform borrowers so as to ensure compliance with the relevant provisions of the legislative framework.

The Division's responsibilities included the monitoring of the operations of the Compliance Units at the Bank’s subsidiaries and review of updates made to their Policies, the implementation of MiFID II rules, and the performance of central internal controls on branch procedures.

KEY AREAS OF FOCUS FOR THE DIVISION IN 2018

Profound changes were introduced relating to the protection of personal data, investment services, insurance products, as well as in the area of payments. The Group Compliance function was responsible for the coordination of the overall compliance activities, including the adoption of new policies and procedures, and the revision/updating of contractual documents and other documents of the Bank. In addition, the competent Units of the Bank and the Group were provided with relevant instructions and guidance.

Specifically, to ensure compliance with the regulatory requirements set out by MiFID II, particular emphasis is placed on compliance with governance requirements for financial instruments and the provision of proper information to customers when providing investment and ancillary services. In this context, specific information is collected from the customer in order to be able to include the customer in a specific target market and thereafter offer him specific financial instruments that are compatible with the needs, characteristics and objectives of the relevant target customer market.

Note, moreover, that in accordance with the provisions of Law 4583/2018 which incorporated the IDD Directive into Greek law, credit institutions are from now on defined as insurance intermediaries who, in the context of the distribution of insurance products are required to provide advice to their customers. To this end, the Bank assesses accordingly the needs and requirements of its customers to formulate a reasoned proposal to each customer for the offering of insurance products.

It may be noted also that as of 25.5.2018 the new European General Data Protection Regulation (EU) 2016/679 (GDPR) entered into force, laying down a single legal framework for the protection of personal data in all EU Member States. The new framework introduced a set of requirements for Data Controllers, arising in particular from the enhanced principle of transparency in the collection, processing and maintenance of data, as well as the new principle of accountability, according to which the Data Controller shall be responsible for, and shall be able to demonstrate compliance with, all the principles governing data processing.

In view of the above, with the participation of the Group Compliance & Regulatory Affairs Management Division, specific measures were taken for the Bank’s compliance with the provisions of GDPR, including:

• The setting up of committees and working groups to establish compliance of policies, processes and technological infrastructure of the Bank with the GDPR;

Compliance of the Bank with the regulatory framework

Content of letters informing borrowers to ensure compliance

Participation of executives of the Compliance Division in every related task
2.6#REGULATORY COMPLIANCE

Moreover, the Group Compliance & Regulatory Affairs Division, as a liaison between the supervisory authorities and the Bank continued to monitor the timely submission of a series of regular and ad hoc reports to the competent authorities.

Training

As in previous years, during 2018 a number of training programs were held in collaboration with NBG Group HR Development Division. Through seminars and e-learning programs, particular emphasis was placed on issues concerning consumer protection and protection of personal data, as well as on the certification and certification renewal of staff engaging with investment services and participating in insurance distribution. In addition, special e-learning seminars were developed to ensure staff understanding and proper implementation by the Bank’s employees of the requirements derived under MiFID II and GDPR framework.

At the same time, officers of the Compliance & Regulatory Affairs Division continued to participate in training activities and seminars of the Bank, including:

• In addition, the personnel of the Compliance Function is trained on a regular basis on regulatory developments by attending seminars run by the Bank or third parties.

Further it is worth mentioning the participation of managers and employees of the Group Compliance Divisions in the 1st Compliance Conference, which took place in 2018.

It dealt with 6,050 complaints and 787 requests in 2018.

It included new regulatory guidelines in e-learning courses.

It strengthened collaboration with business units.

SECTOR FOR GOVERNANCE OF CUSTOMER ISSUES

The Sector for Governance of Customer Issues aims at investigating customer complaints, so as to propose a solution through transparent, impartial and fair procedures, to identify trends and to generate proposals for the improvement of the Bank’s products and services, while providing training and support to front-desk staff, and promoting best practices with regard to the handling of complaints.

INVESTIGATING COMPLAINTS

• Responding to issues raised by the customer to ensure quality customer service and efficient resolution of any problems
• Reducing legal, regulatory and operational risk, as well as the risk of reputation
• Compliance with the applicable regulatory framework

IMPROVING THE QUALITY OF THE BANK’S PRODUCTS/SERVICES

• Avoiding recurring complaints
• Qualitative and quantitative analysis of grievances
• Submitting proposals for improvement to Business Units

IMPROVING CUSTOMER EXPERIENCE

• Developing a business culture which recognizes the value of complaints as a source of information and an opportunity to restore trust between NBG and its customers
• Staff Training
• Enhancing cooperation with Business Units of the Bank to raise awareness in compliance matters

IN-CLASS SEMINARS

Credit Academy
Branch Manager Training
Institutional and Regulatory Framework in the Capital Market
Pilot seminars on the new customer-oriented model of Branches
Training Premium Banking Officers on key compliance issues
Introduction to the regulatory framework for new employees
Specially designed seminars for the implementation of MiFID II and impact assessment with regard to personal data

E-LEARNING

Data Processing (in line with GDPR)
Combating Money Laundering and Financing of Terrorism
Code of Ethics
AML/CFT in the insurance sector
Institutional and Regulatory Framework in the Capital Market
2.6#REGULATORY COMPLIANCE

In 2018, the Sector dealt with 6,050 customer complaints and 787 requests. The complaints that the Sector addressed can be broadly categorized as follows:

Within a particularly challenging environment, the Sector endeavors to provide effective solutions to customer issues, seeking always to maintain a healthy bank-customer relationship, while at the same time looking to keep legal, regulatory and operational risk to a minimum so as to safeguard the good reputation of the Bank.

With a view to reinforcing front-desk staff and developing a business culture in respect of effective handling of complaints, the Sector ensured that e-learning courses were updated with the inclusion of a series of new regulatory guidelines; and it strengthened collaboration with the relevant Business Units, providing relevant assistance to customer relationship officers.

B. Key developments affecting the Division - Projects in which the Division participates

The Group Compliance & Regulatory Affairs Division works with other Bank Units, providing clarifications and advice so as to ensure ongoing compliance with regulatory requirements and leverage opportunities arising from developments in the context of the Bank’s digital transformation.

Cloud Outsourcing

It is worth noting that the growing interest in solutions regarding cloud outsourcing in the banking sector prompted the European Banking Authority (EBA) to issue relevant recommendations. Within this context, the Bank is exploring business opportunities under this changing regulatory framework.

The Division provides advice and support to Bank Units regarding the use of cloud services so as to ensure smooth and rapid transition of the Bank in the digital age.

eIDAS

Moreover, Regulation (EU) No 910/2014 on electronic identification and trust services for electronic transactions in the internal market (eIDAS) is an important step toward the integration of the digital single market, given that:

• it lays down rules for trust services, in particular electronic transactions;
• it establishes a legal framework for electronic signatures and electronic seals.

In view of the above, the Division will examine the implementation of the

Regulation and the best use of the opportunities it offers with respect to the following:

Through the above projects, the Bank aims at:

• increasing the level of security of electronic transactions;
• reducing operational costs and increasing the efficiency of business processes;
• achieving environmental benefits as a result of the reduction of paper use

Projects in which the Compliance Division participates

Cloud Outsourcing

eIDAS

PSD 2

Certified digital signature of contracts

• eIDAS - Digital certificates
• eIDAS - Digital seals
• Loan agreements, credit cards, settlements

PSD 2

In addition, the revised Payment Services Directive (PSD2) provides the legal foundations for a more integrated internal market for electronic payments within the EU and aims to improve the existing EU rules on electronic payments. It takes into account emerging and cutting-edge payment services, such as Internet and mobile payments, and introduces new models for interactive services.

 Accordingly, the Division provides ongoing guidance and support in
Objectives for 2019

To ensure continued compliance of the Bank with the regulatory framework

To implement existing policies and procedures

To reduce the response time to customer requests/questions/complaints

To upgrade related computer systems

The Bank’s endeavor to exploit these opportunities and adapt to this rapidly evolving environment, developing its business models while ensuring compliance with the new regulatory requirements.

C. Plan for 2019 – Strategy and Targets

The main objectives of the Division for 2019 are to ensure continued compliance of the Bank and the Group with the legal and regulatory framework and international best practices within an ever-evolving regulatory environment; provide effective and efficient support to the Bank’s ongoing Transformation Program; provide compliance-related assistance and guidance to the various units of the Bank and the Group; and deal with requests of the supervisory authorities.

In addition, the Compliance Division will continue its task of monitoring international trends and developments in the regulatory framework, and assist the Bank in its digital transformation.

Key components of the Division’s mission include, inter alia, monitoring the degree of implementation of existing policies and procedures, ongoing monitoring of transactions and procedures at branches, training of the Bank’s staff on regulatory compliance issues, ensuring harmonization of the Bank with matters related to consumer protection and data privacy, and enriching existing – and developing new – monitoring scenarios.

To carry out these tasks, numerous factors must be taken into account that play a fundamental role in enabling effective implementation of our strategy. Accordingly, the following actions are making a decisive contribution to the achievement of our objectives:

- continuous and systematic review and monitoring of developments in the legal and regulatory framework, the guidelines set by the authorities, and other useful sources of guidance
- provision of guidance and clarification in matters relating to compliance by the Bank’s units with the regulatory framework and adjustments that should be made involving their internal procedures
- use of appropriate tools and specialized software (investment in information technologies) so as to ensure the Division’s more effective operation through business automation
- communication with supervisory and other authorities and bodies, and responding to regulatory requests regarding compliance-related matters
- training of staff in the Compliance Division and participation in specialized seminars and workshops

With a view to exercise proactive control and ensure timely compliance with the current regulatory framework, the Division will continue to be involved in the process of designing and placing new products and their related promotional activities in the year ahead.

Furthermore, a series of actions for 2019 has been designed and set in motion aiming at enhancing the Customer/Bank relationship by further reducing the response time to customer requests/questions/complaints, upgrading related computer systems, and enriching proposals for improvements backed by risk and cost data for the issues under consideration.

2.7 INTERNAL AUDIT
2.7 INTERNAL AUDIT

INTERNAL AUDIT

• The Chief Audit Executive (CAE) reports to the Chairman of the NBG Audit Committee and the CEO of NBG on a regular basis.
• Special focus and priority are placed on areas of greatest risk.
• An internationally recognized audit methodology in compliance with COSO principles is used.
• A single online platform is used to effectively manage audit activities.

NBG Internal Audit is an independent unit of the Group ensuring operations reflect our values and corporate culture and delivers our socially responsible banking strategy. Serving as the third line of defense, the internal audit function provides the Board of Directors and the Audit Committee with independent assurances regarding the quality, adequacy and effectiveness of the systems and related framework of internal control, risk management and corporate governance. The Chief Audit Executive (CAE) reports to the Chairman of the NBG Audit Committee and the CEO of NBG on a regular basis and has unrestricted access to both.

NBG Internal Audit covers, through a risk-based approach and with unrestricted and timely access to all data and staff of the organization, all entities and activities of NBG Group through on-site audits evaluating the efficiency and efficacy of internal control, risk management and corporate governance systems and processes, the compliance with applicable regulatory framework and supervisory requirements, as well as the reliability of financial and operating information. Special focus and priority is placed on areas of greatest risk. Executive management is responsible for ensuring that issues raised by the audit function are addressed within an appropriate and agreed timeframe.

NBG Internal Audit and Group IAU’s use:

• a common audit methodology, which is in compliance with the Committee of Sponsoring Organizations of the Treadway Commission (COSO) 2013 principles and the International Internal Auditing Standards of the Institute of Internal Auditors (IIA);
• an information systems audit methodology that is based on the Control Objectives for Information and Related Technologies (COBIT) framework of the Information Systems Audit and Control Association (ISACA);
• a common web-based platform, which allows for the effective management of the audit activities and provides: (i) real-time monitoring of the audit activities across all subsidiaries, (ii) information sharing among the Group’s internal auditors and (iii) standardization of the audit methodology. Audit efficiency and effectiveness is monitored through established key performance indicators and internal quality reviews.

As of 31 December 2018, NBG internal Audit employed 147 people with in-depth knowledge and experience in banking and audit, who are independent of the audited activities and not involved in the design, selection, implementation or operation of specific internal control measures.

Each year, internal audit prepares an annual audit plan, which is performed at the Group level, ensuring synergies and better coverage of audit areas. The 2018 audit plan covered risks related to NPE management, ICAAP & ILAAP processes and internal risk models, the implementation of strategic IT projects and new regulations (IFRS 9, MiFID II, GDPR), as well as anti-fraud. For this year, the audit plan will cover the following risks:

• Corporate banking and NPE Management
• ICAAP & ILAAP processes and internal risk models.
• IT and cyber risk
• Organizational structure simplification, process re-design.
• Anti-fraud and continuous auditing

In 2018, NBG Internal Audit underwent a full external quality assessment for the period 2013-2017, as required by IIA standards. The reviewer concluded that NBG Internal Audit “Generally Conforms” (highest possible IIA rating) to the international standards for the professional practice of internal auditing and was benchmarked among peer organizations as a very mature audit unit with a score of 4.44/5.

Enhanced use of technology is a strategic objective for NBG’s internal audit function. During 2018, Group Internal Audit finalized the implementation of its new Continuous Audit and Fraud Detection software platform that incorporates multiple audit scenarios, run on a daily basis. The software incorporates artificial intelligence and fuzzy-logic techniques and its audit coverage is planned to be expanded on additional business areas in the following years. The common audit web-based platform is also scheduled for significant upgrade at the end of 2019.

Other strategic goals include audit methodology evolution (use of data analytics and key risk indicators, incorporation of productivity recommendations in audit reports) and staff empowerment (through training, certification and career development).

A key development is the establishment of a Group Internal Control Coordination Committee, which will be coordinated by the Group CAE and has, as key objectives, the specification of a common control methodology and the centralized risk monitoring, testing and reporting.
The Group Corporate Governance and Corporate Social Responsibility Division's primary Role is to ensure that NBG Group has in place robust and effective corporate governance arrangements with a view to both promoting long term sustainability, and creating value for the benefit of NBG shareholders, as well as protecting the interests of all stakeholders, and promoting continuation and further enhancement of the Group’s historical contribution to the Economy and Society.

Considering the new era which NBG Group is entering given the significant strategic transformation initiatives progressing, the Group reshaping coming as a result of the Restructuring Plan, and the developments in the Greek economic environment, the Division’s Strategy for 2018 mainly focused on:

1. Maintaining best in class corporate governance, enabling prudent and efficient decision making and oversight of the Group’s activities.
2. Offering governance advice and facilitating the Group’s strategic transformation, in alignment with best practice and regulatory provisions.
3. Managing governance risk in the era of innovation and digitalization.
4. Maintaining a robust internal control system that is capable of protecting the Group from any sort of compliance or reputational risk.
5. Contributing to the reinvention of corporate culture and preservation of ethical conduct at all times.
6. Guiding initiatives on corporate social responsibility, sustainable development, sustainable finance, and environmental protection.
The role of Corporate Governance and Corporate Social Responsibility Division

In this context and with the aim to successfully implement its strategic goals, a number of initiatives and actions were carried out:

Aiming at facilitating NBG Board of Directors’ sound and effective operation, the Division constantly monitored Corporate Governance developments and trends and provided its support to the Bank’s Board of Directors, its Committees and the Secretary of the Board on issues of corporate governance and of effective functioning of governance bodies.

In this context, the Ethics & Culture Committee of the Board was established in 2018, to ensure application of the highest standards of ethics and integrity throughout all the Bank’s activities.

Moreover, with a view to the further enhancement of the Board’s performance by expanding the Directors skills and competences, and in compliance with the “Training Policy for Board Members”, a number of training and development sessions were organized in 2018 (Corporate Governance, Artificial Intelligence), as well as planned for the upcoming year (Corporate Governance, Bitcoin, Blockchain).

On a Group level, and in order to ensure the adoption of a unified governance framework, thus ensuring coherence & efficiency, the “NBG Group Governance Policy” was adopted which sets the main corporate governance principles and provisions concerning, among others, Group companies’ governance bodies, cooperation with NBG, internal control system, regulatory requirements etc.

Moreover, in an effort to further strengthen the Bank’s whistleblowing awareness, the existing “Whistleblowing Policy” of the Bank was revised by extending its scope to cover any internal policies & procedures; and further enhancing the existing arrangements implemented by NBG regarding confidentiality, anonymity, protection against retaliation and training.

It is noteworthy that during 2018, the Bank received a significant number of prestigious awards and distinctions for its Corporate Governance practices.

Best Corporate Governance in Greece for the Year 2018” award by Capital Finance International (CFI):

For the third consecutive year, the Bank has been awarded the Best Corporate Governance - Greece by the internationally recognized company Capital Finance International (CFI.co), whose activity is supported by international organizations and organizations such as the Organization for Economic Cooperation and Development (OECD), the European Bank for Reconstruction and Development (EBRD) and the United Nations Conference on Trade and Development (UNCTAD). The award was followed by a review by CFI.co of the corporate governance practices that the National Bank has adopted, with the Bank receiving excellent reviews from the organization.

Corporate Excellence Awards 2018:

NBG has been awarded the title “The Bank with Best Corporate Governance Greece 2018”, within the framework of the “Corporate Excellence Awards 2018”. The Corporate Excellence Awards 2018 are selected by CV Magazine and are based solely on the pooled analysis of both qualitative and quantitative research.

Greek Business Responsibility Awards 2018:

Awarded the Silver Award for the Corporate Governance Framework, which has been adopted in the Private Business Sector in the context of the “Greek Business Responsibility Awards 2018”.

“Bravo Governance 2018” Award in the context of the “Bravo Sustainability Awards 2018”:

The Bank received the Bravo Governance 2018 Award for the corporate governance framework it has adopted by the Bravo Sustainability Awards 2018. "Bravo Sustainability Awards" are organized by the QualityNet Foundation, the Network of Responsible Organizations and Active Citizens, in collaboration with the Sustainable Greece 2020 Initiative, to highlight and reward the “best practices” implemented in Greece and to help promoting sustainable development, social cohesion, as well as the development of standards of responsible behavior and the improvement of quality of life.

Taking into account the transformation process in progress, and its significance for the Bank, maintaining model governance arrangements will be at the top of the Division’s Agenda for 2019, considering the merits a robust and effective corporate governance framework has in safeguarding NBG’s good operation and reputation, as these can be seen, among others, in improved decision making processes, strategic direction, cohesion, effectiveness in implementation of strategy and facilitation of swift responsiveness and adaptability to change.
THE GREEK INSURANCE MARKET IN 2018

In 2018, insurance penetration (gross written premiums as a percentage of GDP) stood at 2.1% in 2018.

Against this background, Ethniki Insurance maintained its leading position in the Greek insurance market, with a share of 15.2% of gross written premiums (including investment products), while succeeded in increasing its overall turnover by 2.3% to €600.8m, including investment products.

Ethniki Insurance is well positioned to tap the growth potential of the Greek economy, while maintaining its leading position in the domestic market, increasing its turnover and exploiting the opportunities that arise in the years ahead.

COMMENTS ON RESULTS

The Company recorded profit before tax of €63.1m in 2018 from €74.2m in 2017, which incorporated though profits from non-recurring activities.

LIFE INSURANCE

In the Life Insurance lines of businesses, profits before tax increased to €24.5m in 2018 vs €22.2m in 2017, which incorporated though profits from non-recurring activities.

GENERAL INSURANCE

In 2018, the non-life Insurance lines of business remained profitable, with profit before tax reaching €38.6m in 2018 vs €36.9m in 2017, an increase arising mainly from the property insurance business.

More specifically, the moto insurance business posted a decline, with profit before tax standing at €19.1m vs €21.1m in 2017, reflecting lower average premium and the increase in the number of large claims incurred.

The profit of the property insurance business also increased to €19.0m vs €16.5m in 2017, benefited mainly by the change in reinsurance treaties.

Other non-life insurance lines of business also improved, posting profit of €0.5m vs a loss of €0.7m in 2017.

The key financial data of Ethniki Insurance are as follows:

<table>
<thead>
<tr>
<th>KEY FINANCIAL DATA</th>
<th>2018</th>
<th>2017</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Assets</td>
<td>3,454</td>
<td>3,444</td>
<td>0.30%</td>
</tr>
<tr>
<td>Equity</td>
<td>804</td>
<td>807</td>
<td>-0.40%</td>
</tr>
<tr>
<td>Profit before tax</td>
<td>63</td>
<td>74</td>
<td>-14.90%</td>
</tr>
</tbody>
</table>

More specifically, individual life gross written premiums, including unit-linked contracts, recorded a small increase yoy, reaching €346m in 2018, while group life gross written premiums (excluding DAF & NBG Efapax) also increased to €56.9m. Total life bancassurance gross written premiums in 2018 amounted to €123.2m vs €126.5m in 2017, down 2.6% mainly due to the “Ethniki Efapax +” insurance and savings program. The production of DAF contracts stood at €29m vs €27m in 2017, reflecting the acquisition of new business and one-off payments on existing insurance programs.
2.9 Other Group Activities

The Ethniki Insurance Network

- 13 branches and 150 sales offices in Greece
- 2,049 insurance advisors and 1,402 associated insurance agents
- Presence in Romania and Cyprus

REAL ESTATE

During 2018 NBG’s Property Division was heavily engaged in the management and exploitation of real estate assets owned (REO’s), as well as with the properties of the Group subsidiaries.

Special emphasis was placed property technical and legal due diligence to ensure compliance of the Bank’s own properties with Law 449/2017 and all other property related regulations. With the completion of the maturation process, a further 770 properties acquired certificates of legality.

Furthermore, in the framework of settling the legal issues, a contract has been signed regarding the transfer of 108 FB&B & Probank assets (out of a total of 173) to NBG, implementing the decision of the Bank of Greece for the transfer of assets and liabilities of the two banks, in the context of the consolidation of the banking system (2018: 42 properties).

In addition, due diligence with respect to forestry restrictions was carried out for approximately 465 NBG owned real estate assets in 43 (out of 74) Regional Units, where forest maps have been posted, and objections regarding 62 properties were submitted.

The Division commenced a sales process for 146 properties (starting price of €12.2 million) through public tender, out of which thirty one (31) properties with a total value of €2.05 million have already been successfully sold.

To further enhance property marketing, an online real estate promotion platform (www.realestateonline.gr) was launched in July 2018. In addition, NBG is the first bank in Greece to promote the sale of properties under auction, by referring interested parties to the official e-auction website www.eauction.gr. This operation began in December 2018 and the publication of 226 real estate auctions was completed successfully by the end of the year.

In 2019, the ability to participate in tenders real time is to be launched via a new e-auction platform for sales conducted by the Bank. Despite the adverse economic environment, the sale of properties resulted in an amount of €10 million, while the collection of leases and subleases amounted to €6.3 million.

The sale of the subsidiary company Grand Hotel SA and the respective hotel in Rhodes at a price of €50.1 million was achieved.

The Deb2Asset swap transaction regarding TAPETE assets at a price of €9 million and a holding period of 40 years has been completed since April 2018, Property Division is responsible for participating in auctions of RC and SAU real estate collaterals. In the context of liquidation of Bank’s denounced portfolio through electronic auctions, the newly established Auction Unit participated successfully in ~1,400 auctions, while the Bank acquired a total of 860 properties.

In line with Bank’s strategy for the management of non-performing exposures, the Unit undertook, in the framework of amicable settlements with debtors, a coordinating role in the conduct of assets legal / technical reports (for a total of ~465 real estate, 85 debtors, in 2018).

In order to achieve the targets set by the Supervisory Mechanisms, the necessary organizational changes (New REO division) have already been launched, the extensive use of external service providers, the empowerment of performance monitoring and management processes, the modification of commercial policy and the introduction of new information systems and tools in line with best practices in Greece and abroad.

“Heavy engagement in real estate management”

Acquisition of 860 properties from participation in 1,400 auctions in the context of the liquidation of the Bank’s denounced portfolio.

Ability to participate in tenders in real time

€10m from property sales

€6.3m from the collection of leases and subleases

Completion of the sale of Grand Hotel in Rhodes for €50.1 million

New online real estate promotion platform for properties on sale
In 2018 the International Activities Division focused its work on two key areas:

• providing ongoing support to all the Units under its supervision so as to implement effectively their business plans and sustain a strong level of regulatory and supervisory compliance, and

• assisting the divestment of the Bank’s foreign operations in the context of NBG’s Restructuring Plan.

Specifically:

A. Besides the key targets regarding business development and growth, the adoption of best practices, the enrichment of the services provided and the enhancement of profitability, particular emphasis was placed on issues related to governance, supervision and control, so that NBG Group subsidiaries remain compliant with the constantly growing regulatory and supervisory requirements.

Given the significant headwinds the Group has been facing over the last years in the markets where it operates — primarily due to the demanding and rapidly changing macroeconomic environment — the Group’s units overseas, under the guidance of the International Activities Division, also focused on the more active credit risk management, the improvement of their loan book quality, reducing operating costs and streamlining activities.
INTERNATIONAL ACTIVITIES OF THE GROUP

Ongoing Support of Units under Its Supervision

- Special emphasis on effective governance, supervision and control
- Reduction of the Group’s exposure to loans to Turkish businesses
- Contribution to the completion of the sale of NBG subsidiaries in Albania and South Africa
- Continued assistance towards the sale of the NBG Egypt Network
- Continued assistance in divestments in Romania and Cyprus

Particular emphasis was also placed on the modernization of the banking services provided by the various units.

Last, the Division continued its efforts to reduce the Group’s exposure to loans, performing and non-performing, to Turkish businesses that remained on its books following the sale of Finansbank. Specifically, outstanding loans totalled €95m at the end of 2018 vs circa €105m at the end of 2016, with related exposure targeted to be further reduced to €39m in 2019.

B. The International Activities Division contributed to the effective completion of the sales process of NBG subsidiaries in Albania (Banka NBG Albania) and South Africa (The South African Bank of Athens). Likewise, it continues to assist towards the sale of NBG Egypt Network and the planned divestments in Romania (Banka Romaneasca) and Cyprus (NBG Cyprus Ltd).

INTERNATIONAL RETAIL BANKING

Against the current economic backdrop and despite the intense competition in the SE Europe markets, the Division’s International Retail Banking Sector in 2018 focused on the active management of the retail loan book (€1.7bn) and deposits (€2.2bn), which posted a total increase of 2.7% and 13.4%, respectively, at Stopanska, Romaneasca, NBG Egypt and NBG Cyprus.

The key objective continues to be the provision of a full range of retail banking products based on market segmentation that are addressed to different groups of customers, households, salaried employees, pensioners, young people and small businesses. At the same time, efforts to enhance NBG’s corporate image in the local markets continued via product promotion campaigns and public relations events, aiming to improve brand name awareness and customer loyalty. Attention was focused on the development of new products and channels through digital and alternative networks, with an emphasis on enhancing customer experience, achieving operational efficiency and harmonizing processes across all distribution channels. At the same time, streamlining and simplification of operations and processes in the branch network, and providing training and motivation for front-desk staff continued to be a key concern of the Division.

In this context, the International Activities Division played a key role in the following actions:

STOPANSKA BANKA:

An agreement was concluded with two Insurance Companies (Unifa for life insurance & Croatia for other insurance programs), with a view to launching cutting-edge bancassurance programs.

NBG CYPRUS:

At our Cyprus business steps were made to relaunch loan products, establish a framework of discretionary powers for the rescheduling/reprofiling of retail and small business debt in arrears, generating positive results.

NBG EGYPT:

In Egypt we were involved in the campaign to rationalize the implementation of the bank’s credit policy.

Our priorities and key targets shall continue to focus on customer-oriented growth at our international units, increased penetration in the market through digital channels, and maintaining and cultivating healthy assets.

INTERNATIONAL CORPORATE BANKING

Within the context of the Group’s restructuring plan, the Division’s international corporate banking activities focused on maintaining the quality of the corporate loan book with the expansion of cross-border financing and dynamic management of matters falling under its responsibility.

Accordingly, the Sector managed effectively the Group’s assets, improving ratios and indices, giving a clear boost to profitability. To this end, efforts were made to maintain market share through selected credit facilities granted in line with strict eligibility criteria and long-term relationships with businesses that have consistently demonstrated strong and effective management credentials.
OUR OPINION

We have audited the accompanying financial statements of National Bank of Greece S.A. (Bank and Group) which comprise the statement of financial position as of 31 December 2018, the statements of income, comprehensive income, changes in equity and cash flow statements for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the financial statements present fairly, in all material respects the financial position of the Bank and the Group as at 31 December 2018, their financial performance and their cash flows for the year then ended in accordance with International Financial Reporting Standards, as adopted by the European Union and comply with the statutory requirements of Codified Law 2190/1920.

BASIS FOR OPINION

We conducted our audit in accordance with International Standards on Auditing (ISAs), as they have been transposed into Greek Law. Our responsibilities under those standards are further described in the “Auditor’s responsibilities for the audit of the financial statements” section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

INDEPENDENCE

During our audit we remained independent of the Bank and the Group in accordance with the International Ethics Standards Board for Accountants’ Code of Ethics for Professional Accountants (IESBA Code) that has been transposed into Greek Law, and the ethical requirements of Law 4449/2017 and of Regulation (EU) No 537/2014, that are relevant to the audit of the financial statements in Greece. We have fulfilled our other ethical responsibilities in accordance with Law 4449/2017, Regulation (EU) No 537/2014 and the requirements of the IESBA Code.

We declare that the non-audit services that we have provided to the Bank and its subsidiaries are in accordance with the aforementioned provisions of the applicable law and regulation and that we have not provided non-audit services that are prohibited under Article 5(1) of Regulation (EU) No 537/2014.

The non-audit services that we have provided to the Bank and its subsidiaries, for the year ended 31 December 2018, are disclosed in note 45 to the financial statements.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the year ended 31 December 2018. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

INDEPENDENT AUDITOR’S REPORT

TO THE SHAREHOLDERS OF “NATIONAL BANK OF GREECE S.A.”

REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS

SUMMARY FINANCIAL STATEMENTS
Due to the magnitude of the loans and advances balances and the extent of management judgement inherent in the impairment calculations, allowance for impairment of loans and advances to customers has been identified as an area of most significance in the current year audit of the Bank’s and Group’s financial statements.

With the introduction of IFRS 9 in 2018, a number of additional judgements and assumptions are introduced and reflected in the financial statements, including the identification of significant increases in credit risk and the application of forward looking economic scenarios.

ECONOMIC ANALYSIS
The Group’s Economic Analysis Division develops future economic scenarios by using a system of macroeconomic equations. Estimates for three macroeconomic scenarios represent distinct economic scenarios and sensitivities of historical loss experience. These three scenarios together with relative weightings are then provided for incorporation into the Stage allocation process and the calculation of expected credit loss allowances.

ECONOMIC ANALYSIS
We understood management’s process and tested key controls relating to the generation, selection and weighting applied to economic scenarios. With the support of our internal specialists, when needed, we:

- Assessed the identification and use of appropriate external economic data;
- Assessed the methodology for determining the economic scenarios used and the probability weightings applied to them;
- Understood and assessed the design, implementation and operation of key related controls; and
- Assessed the risk of bias in the forecasts, as well as the existence of contrary evidence;

Based on the evidence obtained, we consider that the data used were appropriate, the key assumptions were reasonable and that the economic scenarios adopted reflect an unbiased, probability weighted view.

We considered the appropriateness of accounting policies and assessed the loan impairment methodologies applied, and compared these to the requirements of IFRS 9. We understood management’s process and tested key controls over the determination of the allowance for impairment on loans and advances to customers.

Due to the magnitude of the loans and advances balances and the extent of management judgement inherent in the impairment calculations, allowance for impairment of loans and advances to customers has been identified as an area of most significance in the current year audit of the Bank’s and Group’s financial statements.

With the introduction of IFRS 9 in 2018, a number of additional judgements and assumptions are introduced and reflected in the financial statements, including the identification of significant increases in credit risk and the application of forward looking economic scenarios.

ECONOMIC ANALYSIS
The Group’s Economic Analysis Division develops future economic scenarios by using a system of macroeconomic equations. Estimates for three macroeconomic scenarios represent distinct economic scenarios and sensitivities of historical loss experience. These three scenarios together with relative weightings are then provided for incorporation into the Stage allocation process and the calculation of expected credit loss allowances.

ECONOMIC ANALYSIS
We understood management’s process and tested key controls relating to the generation, selection and weighting applied to economic scenarios. With the support of our internal specialists, when needed, we:

- Assessed the identification and use of appropriate external economic data;
- Assessed the methodology for determining the economic scenarios used and the probability weightings applied to them;
- Understood and assessed the design, implementation and operation of key related controls; and
- Assessed the risk of bias in the forecasts, as well as the existence of contrary evidence;

Based on the evidence obtained, we consider that the data used were appropriate, the key assumptions were reasonable and that the economic scenarios adopted reflect an unbiased, probability weighted view.

We considered the appropriateness of accounting policies and assessed the loan impairment methodologies applied, and compared these to the requirements of IFRS 9. We understood management’s process and tested key controls over the determination of the allowance for impairment on loans and advances to customers.

With the introduction of IFRS 9 in 2018, a number of additional judgements and assumptions are introduced and reflected in the financial statements, including the identification of significant increases in credit risk and the application of forward looking economic scenarios.
The Bank’s employees’ Auxiliary Pension Plan provides for defined contributions to be made by the Bank at a rate of 9% of the employee’s salary. The aforementioned plan covers almost all pensioners and active employees hired prior to 1 January 2005. As per Law 3371/2005 the Bank’s employees hired after 1 January 2005 are insured in the single auxiliary social security fund, currently called ETEAEP. The Bank’s contributions to this fund, are limited to 3.5% on the respective employee’s salaries.

LEPETE is treated as a defined contribution scheme on the basis that the Bank has no obligation to make any payments other than the defined contribution of 9%.

The Bank had been providing financial assistance to LEPETE, in excess of the 9% monthly contributions, for the latter to cover cash shortfalls. The Bank’s Board of Directors decided during its meeting on 30 June 2017 to discontinue the provision of this additional financial assistance to LEPETE from October 2017 onwards.

Former employees have taken legal action against the Bank, claiming that the Auxiliary Pension Plan is a defined benefit scheme and as such the Bank has an obligation to cover any deficits.

We considered LEPETE to be a key audit matter mainly because of the complexities involved and the high level of judgement required by management in estimating the future outcome of the legal actions.

Please refer to note 11 of the annual financial statements for more details on the matter.
The losses resulted from Group’s participation in the Greek debt voluntary restructuring (“PSI+”) and subsequent debt buyback program of 2012, which are subject to a 30 year tax amortization, starting from year 2012; and

• the loan impairment losses that can offset future taxable gains according to current tax legislation.

The recoverability of the recognised DTA is dependent on the Group’s ability to generate future taxable profits sufficient to cover the deductible temporary differences when such differences crystallise for tax purposes.

Management’s assessment regarding the ability of the Bank to generate future taxable profits requires the use of significant judgement and estimates as indicated below:

• The assumptions that underpin the business plan of the Group;

• the projections required to cover the time horizon up to the legal expiration of the period within which the DTA can be recovered; and

• the adjustments required to derive the estimated tax profits from the projected accounting profits to infer the amount of DTA that will be recoverable in future periods.

Business plans may be impacted by the risks and uncertainties stemming from the macroeconomic environment in Greece.

Please refer to notes 3 and 27 of the financial statements for more details on critical accounting judgements and estimates and note of deferred tax asset.

For the purpose of our recoverability assessment we have evaluated the appropriateness of the adjustments applied to convert accounting profits into taxable ones and have assessed management’s projections beyond the business plan horizon.

Furthermore, our procedures also included assessing management’s interpretations of current tax legislation with respect to the accounting write-offs and the gradual amortisation of the crystallised tax loss arising from non performing loans’ disposals, and debt forgiveness arrangements.

We evaluated the adequacy of the financial statements disclosures, including disclosures of key assumptions and judgements.

Based on the evidence obtained we found management’s assessment with respect to the recoverability of the DTA to be reasonable.

The nature, complexity and the increased use of these information systems combined with the large volume of transactions being processed on a daily basis increase the risk over the effective inter-connectivity of the IT systems and data, and the risk around the degree of reliability of the financial reporting information. The banking environment is also subject to a number of internal and external threats relating to cyber security.

We assessed the information security resilience of the Bank and Group by evaluating the design and implementation of key IT processes and controls over financial reporting. More specifically, we assessed the administration of access, changes and daily IT operations for key layers of underlying infrastructure (i.e. application, operating system, database) for the systems in scope of the audit.

In addition, in order to place reliance on the system generated information (i.e. data and reports), and any automated controls (i.e. calculations, reconciliations) implemented in these systems, we have also relied on business process controls, and performed additional substantive procedures as part of our audit.
2018 SUMMARY FINANCIAL STATEMENTS

The Corporate Governance Statement provides the information referred to items c and d of paragraph 1 of article 43bb of the Codified Law 2190/1920.

In addition, in light of the knowledge and understanding of the Bank and Group and their environment obtained in the course of the audit, we are required to report if we have identified material misstatements in the Board of Directors’ Report and Other Information that we obtained prior to the date of this auditor’s report. We have nothing to report in this respect.

RESPONSIBILITIES OF BOARD OF DIRECTORS AND THOSE CHARGED WITH GOVERNANCE FOR THE FINANCIAL STATEMENTS OF THE GROUP

The Board of Directors is responsible for the preparation and fair presentation of the financial statements in accordance with International Financial Reporting Standards, as adopted by the European Union and comply with the requirements of Codified Law 2190/1920, and for such internal control as the Board of Directors determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors is responsible for assessing the Bank’s and Group’s ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors either intends to liquidate the Bank and Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Bank’s and Group’s financial reporting process.

AUDITOR’S RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor’s report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Bank’s and Group’s internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors.

- Conclude on the appropriateness of Board of Directors’ use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Bank’s and Group’s ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor’s report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor’s report. However, future events or conditions may cause the Bank and Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Bank and Group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our Auditor’s Report.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

1. Additional Report to the Audit Committee

Our opinion on the accompanying financial statements is consistent with our as per Art. 11 of Regulation (EU) No 537/2014, additional Report to the Audit Committee of the Bank.

2. Appointment

We were first appointed as auditors of the Company by the decision of the annual general meeting of shareholders on 30 June 2017. Our appointment has been renewed annually by the decision of the annual general meeting of shareholders for a total uninterrupted period of appointment of 2 years.

Athens, 29 March 2019
The Certified Auditor
Marios Psaltis
SOEL Reg. No. 38081
### STATEMENT OF FINANCIAL POSITION

#### 31 December 2018

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ASSETS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and balances with central banks</td>
<td>5,138</td>
<td>1,778</td>
<td>4,904</td>
<td>1,491</td>
</tr>
<tr>
<td>Due from banks</td>
<td>2,587</td>
<td>1,736</td>
<td>2,507</td>
<td>1,723</td>
</tr>
<tr>
<td>Financial assets at fair value through profit or loss</td>
<td>4,519</td>
<td>1,793</td>
<td>4,508</td>
<td>1,773</td>
</tr>
<tr>
<td>Derivative financial instruments</td>
<td>3,791</td>
<td>3,681</td>
<td>3,791</td>
<td>3,673</td>
</tr>
<tr>
<td>Loans and advances to customers</td>
<td>30,134</td>
<td>37,941</td>
<td>29,103</td>
<td>36,248</td>
</tr>
<tr>
<td>Investment securities</td>
<td>4,440</td>
<td>3,780</td>
<td>4,239</td>
<td>3,452</td>
</tr>
<tr>
<td>Investment property</td>
<td>1,016</td>
<td>874</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Investments in subsidiaries</td>
<td>-</td>
<td>-</td>
<td>1,467</td>
<td>1,443</td>
</tr>
<tr>
<td>Equity method investments</td>
<td>8</td>
<td>8</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Goodwill, software and other intangible assets</td>
<td>150</td>
<td>132</td>
<td>147</td>
<td>125</td>
</tr>
<tr>
<td>Property and equipment</td>
<td>1,046</td>
<td>1,086</td>
<td>262</td>
<td>248</td>
</tr>
<tr>
<td>Deferred tax assets</td>
<td>4,909</td>
<td>4,916</td>
<td>4,906</td>
<td>4,906</td>
</tr>
<tr>
<td>Current income tax advance</td>
<td>359</td>
<td>421</td>
<td>351</td>
<td>410</td>
</tr>
<tr>
<td>Other assets</td>
<td>1,777</td>
<td>1,612</td>
<td>1,637</td>
<td>1,459</td>
</tr>
<tr>
<td>Non-current assets held for sale</td>
<td>5,221</td>
<td>5,010</td>
<td>1,452</td>
<td>1,461</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>65,095</td>
<td>64,768</td>
<td>59,287</td>
<td>58,425</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>LIABILITIES</strong></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Due to banks</td>
<td>7,667</td>
<td>7,341</td>
<td>8,143</td>
<td>7,673</td>
</tr>
<tr>
<td>Derivative financial instruments</td>
<td>2,131</td>
<td>3,798</td>
<td>2,311</td>
<td>3,798</td>
</tr>
<tr>
<td>Due to customers</td>
<td>43,027</td>
<td>40,265</td>
<td>42,249</td>
<td>38,849</td>
</tr>
<tr>
<td>Debt securities in issue</td>
<td>1,146</td>
<td>1,026</td>
<td>848</td>
<td>742</td>
</tr>
<tr>
<td>Other borrowed funds</td>
<td>268</td>
<td>171</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Deferred tax liabilities</td>
<td>14</td>
<td>6</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Retirement benefit obligations</td>
<td>239</td>
<td>254</td>
<td>237</td>
<td>251</td>
</tr>
<tr>
<td>Current income tax liabilities</td>
<td>9</td>
<td>10</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other liabilities</td>
<td>864</td>
<td>995</td>
<td>930</td>
<td>898</td>
</tr>
<tr>
<td>Liabilities associated with non-current assets held for sale</td>
<td>4,092</td>
<td>3,523</td>
<td>111</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total liabilities</strong></td>
<td>59,457</td>
<td>57,389</td>
<td>54,649</td>
<td>52,211</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SHAREHOLDERS’ EQUITY</strong></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Share premium account</td>
<td>2,744</td>
<td>2,744</td>
<td>2,744</td>
<td>2,744</td>
</tr>
<tr>
<td>Reserves and retained earnings</td>
<td>13,866</td>
<td>13,866</td>
<td>13,863</td>
<td>13,863</td>
</tr>
<tr>
<td>Amounts recognised directly in equity relating to non-current assets held for sale</td>
<td>(11,570)</td>
<td>(9,912)</td>
<td>(11,949)</td>
<td>(10,393)</td>
</tr>
<tr>
<td>Equity attributable to NBG shareholders</td>
<td>4,962</td>
<td>6,696</td>
<td>4,638</td>
<td>6,214</td>
</tr>
<tr>
<td>Non-controlling interests</td>
<td>676</td>
<td>683</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total equity</strong></td>
<td>5,638</td>
<td>7,379</td>
<td>4,638</td>
<td>6,214</td>
</tr>
<tr>
<td><strong>Total equity and liabilities</strong></td>
<td>65,095</td>
<td>64,768</td>
<td>59,287</td>
<td>58,425</td>
</tr>
</tbody>
</table>

### INCOME STATEMENT

#### for the period ended 31 December 2018

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Continuing Operations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest and similar income</td>
<td>1,337</td>
<td>1,760</td>
<td>1,244</td>
<td>1,682</td>
</tr>
<tr>
<td>Interest expense and similar charges</td>
<td>243</td>
<td>248</td>
<td>212</td>
<td>218</td>
</tr>
<tr>
<td><strong>Net interest income</strong></td>
<td>1,094</td>
<td>1,532</td>
<td>1,032</td>
<td>1,464</td>
</tr>
<tr>
<td>Fee and commission income</td>
<td>332</td>
<td>302</td>
<td>294</td>
<td>261</td>
</tr>
<tr>
<td>Fee and commission expense</td>
<td>92</td>
<td>69</td>
<td>82</td>
<td>64</td>
</tr>
<tr>
<td><strong>Net fee and commission income</strong></td>
<td>240</td>
<td>233</td>
<td>212</td>
<td>197</td>
</tr>
<tr>
<td>Net trading income / (loss) and results from investment securities</td>
<td>17</td>
<td>(124)</td>
<td>14</td>
<td>(151)</td>
</tr>
<tr>
<td>Net other income / (expense)</td>
<td>(31)</td>
<td>(47)</td>
<td>67</td>
<td>48</td>
</tr>
<tr>
<td><strong>Total income</strong></td>
<td>1,320</td>
<td>1,594</td>
<td>1,325</td>
<td>1,462</td>
</tr>
<tr>
<td>Personnel expenses</td>
<td>(562)</td>
<td>(562)</td>
<td>(528)</td>
<td>(528)</td>
</tr>
<tr>
<td>General, administrative and other operating expenses</td>
<td>(269)</td>
<td>(266)</td>
<td>(286)</td>
<td>(287)</td>
</tr>
<tr>
<td>Depreciation and amortisation on investment property, property &amp; equipment and software &amp; other intangible assets</td>
<td>(90)</td>
<td>(90)</td>
<td>(68)</td>
<td>(68)</td>
</tr>
<tr>
<td>Credit provisions and other impairment charges</td>
<td>(312)</td>
<td>(807)</td>
<td>(299)</td>
<td>(822)</td>
</tr>
<tr>
<td>Restructuring cost</td>
<td>(78)</td>
<td>-</td>
<td>(78)</td>
<td>-</td>
</tr>
<tr>
<td><strong>Profit / (loss) before tax</strong></td>
<td>9</td>
<td>(131)</td>
<td>66</td>
<td>(246)</td>
</tr>
<tr>
<td><strong>Profit / (loss) for the period from continuing operations</strong></td>
<td>(28)</td>
<td>(158)</td>
<td>62</td>
<td>246</td>
</tr>
<tr>
<td><strong>Discontinued Operations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profit / (loss) for the period from discontinued operations</td>
<td>(22)</td>
<td>(254)</td>
<td>(55)</td>
<td>255</td>
</tr>
<tr>
<td><strong>Profit / (loss) for the period</strong></td>
<td>(50)</td>
<td>(412)</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td><strong>Attributable to:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-controlling interests</td>
<td>34</td>
<td>31</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>NBG equity shareholders</td>
<td>(84)</td>
<td>(443)</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td><strong>Earnings / (losses) per share - Basic and diluted from continuing operations</strong></td>
<td>(€0.07)</td>
<td>(€0.27)</td>
<td>€0.07</td>
<td>€(0.27)</td>
</tr>
<tr>
<td><strong>Earnings / (losses) per share</strong> - Basic and diluted from continuing and discontinued operations</td>
<td>(€0.09)</td>
<td>(€0.48)</td>
<td>0.01</td>
<td>0.01</td>
</tr>
</tbody>
</table>

### STATEMENT OF FINANCIAL POSITION

**ATHENS, 29 MARCH 2019**

THE CHAIRMAN OF THE BOARD OF DIRECTORS
COSTAS P. MICHAELIDES

THE CHIEF EXECUTIVE OFFICER
PAUL K. MYLONAS

THE CHIEF FINANCIAL OFFICER
IOANNIS P. KYRIAKOPOULOS

---

**INCOME STATEMENT - 12 MONTH PERIOD**

**ATHENS, 29 MARCH 2019**

THE CHAIRMAN OF THE BOARD OF DIRECTORS
COSTAS P. MICHAELIDES

THE CHIEF EXECUTIVE OFFICER
PAUL K. MYLONAS

THE CHIEF FINANCIAL OFFICER
IOANNIS P. KYRIAKOPOULOS
Pursuant to Law 4548/2018 (“Reform of the legal framework on Socio-Economic Democracy”), and the provisions of Law 4548/2018 on Central Securities Depository and the Bank’s Articles of Association (article 1) and following Board of Directors’ resolution dated July 10th 2019, the shareholders of National Bank of Greece S.A., a banking corporation having its registered office at 86 Eolou St., Athens, (in so far as they are members of the Bank’s Annual General Meeting (“AGM”)) to be held at 11:00 am on Wednesday, 31 July 2019, at the Hotel Grande Bretagne, 1 Vassileos Georgiou A’ Str., Syntagma Square, Athens.

AGENDA
5. Election of regular and substitute members of the Audit Committee.
7. Approval of the remuneration of the Board of Directors of the Bank for the financial year 2018 (pursuant to Article 24 of Codified Law 2131/2000, as applicable until Law 3131/2018) in line with Article 1877 of Law 4548/2018. Determination of the remuneration of the Chairman of the Board and executive and non-executive members of the Board through to the AGM of 2020. Approval, for the financial year 2018, of the remuneration of the Bank’s Directors in their capacity as members of the Bank’s Audit, Corporate Governance & Nominations, Human Resources & Remuneration, Risk Management, Strategy & Transformation and Ethics & Culture Committees, determination of their remuneration as per Article 109 of Law 4548/2018 through to the AGM of 2020.
8. Granting of permission for members of the Board of Directors, General Managers, Assistant General Managers and Managers to participate on the Board of Directors or in the Management of NBG Group companies pursuing similar or related businesses, as per Article 91 of Law 4548/2018 and Article 301 of the Bank’s Articles of Association.
9. Increase of the number of Board members from eleven (11) to thirteen (13) in accordance with Article 18, par. 2 of the Bank’s Articles of Association.
10. Election of two (2) new Independent Non-Executive Board members in accordance with Article 18, par. 2 of the Bank’s Articles of Association, for the fulfillment of the two (2) new positions in the Board of Directors.
11. Election of four (4) new members in the Board of Directors for the replacement of four (4) retiring members who have resigned and appointment of independent non-executive members.
12. Election of regular and substitute members of the Audit Committee.
13. Various announcements.

The items on the Agenda of the Repeat General Meeting shall be as above, with the exception of those on which a relevant decision was taken.

In accordance with articles 121.3 and 121.4, as well as 124 and 128 of Law 4548/2018, as in force, the Bank informs shareholders of the following:

ENTITLEMENT TO PARTICIPATE IN THE GENERAL MEETING
Any person listed as a shareholder (i.e. holder of common registered shares) in the registry of the Dematerialized Securities System (“DSS”) managed by the Hellenic Central Securities Depository S.A. (“HCSD”), at the start of the 5th day prior to the date of the General Meeting, i.e. on 26 July 2019 (“Record Date”), is entitled to participate in the General Meeting. Each common share is entitled to one vote. The aforementioned record date is applicable for the Repeat Meeting of 06.08.2019 as well.

The Hellenic Financial Stability Fund participates in the General Meeting as per Law 3884/2010, as amended.

Status of shareholder is verified by any means provided by law and in any case by means of information obtained by the Bank electronically from the HCSD through the Bank’s online connection to the DSS. In order to participate and vote at the General Meeting, the shareholder is not required to submit any written confirmation from HCSD. Anyone who has shareholder status on the aforementioned Record Date shall have the right to participate and vote at the General Meeting.

To exercise the said rights, it is not necessary to block the shares or follow any other similar process that may restrict the ability to sell and transfer shares in the period between the Record Date and the relevant General Meeting (AGM or Repeat AGM).

PROCEDURE FOR VOTING BY PROXY
The shareholder may participate in the AGM and may vote either in person or by proxy. Each shareholder may appoint up to 3 proxy holders. However, if the shareholder owns shares in the Bank that are held in the Dematerialized Securities Account, such limitation shall not prevent the shareholder from appointing, in respect of the AGM, separate proxy holders for the shares appearing in each Account. A proxy holder holding proxies from several shareholders may cast votes differently for each shareholder. Before the AGM commences, the proxy holder must disclose to the Bank any particular facts that may be of relevance for shareholders in assessing the risk that the proxy holder may pursues interests other than those of the shareholder. Within the meaning intended in this paragraph, a control of the Bank by another party is a particular when the proxy holder: (i) is a controlling shareholder of the Bank or is another entity controlled by such shareholder; (ii) is a member of the Board of Directors or in general the management of the Bank, or of a controlling shareholder or an entity controlled by such shareholder; (iii) is an employee or an auditor of the Bank, or of a controlling shareholder or an entity controlled by such shareholder; (iv) is a spouse or close relative (first degree) of a natural person referred to in (i) to (iii) hereinabove.

Participation of shareholders by electronic means, without the physical presence at the Meeting, as well as voting by distance through an electronic correspondence, shall not be permitted for the current General Meeting and any repeat Meeting thereof.

The appointment and revocation of appointment of a proxy holder shall be made in writing and shall be notified to the Bank in writing at least 48 hours prior to the date of the AGM.

To participate in the General Meeting either in person or by proxy, shareholders are kindly requested to fill in and submit to the Bank the form “DECLARATION – AUTHORIZATION FOR PARTICIPATION IN THE GENERAL MEETING AND SHAREHOLDERS’ REGISTER”.

MINORITY RIGHTS
(a) If shareholders representing 1/20 of the paid-up share capital of the Bank so request, the Bank’s Board of Directors is obliged to include additional items in the Agenda of the General Meeting, provided that the said request is communicated to the Board by 16 July 2019, i.e. at least 15 days prior to the General Meeting. The said request should be made by justification or a draft resolution to be approved by the AGM and on 18 July 2019, i.e. 13 days prior to the AGM, the revised agenda should be disclosed in the same manner as the previous agenda, and at the same time made available to shareholders through the Bank’s website, along with the justification or draft resolution tabletled by the shareholders, in accordance with the provisions of article 123-4 of Law 4548/2018, as in force.
(b) If shareholders representing 1/20 of the paid-up share capital of the Bank so request, the Board of Directors shall, in accordance with the provisions of article 123-3 of Law 4548/2018, as in force, make available to shareholders by 25 July 2019 at the latest, i.e. at least 6 days prior to the AGM, any draft resolutions on the items included in the initial or revised agenda, provided that the said request is communicated to the Board by 24 July 2019, i.e. at least 7 days prior to the AGM.
(c) If any shareholder so requests, and provided that the said request is filed with the Bank by 26 July 2019, i.e. at least 5 full days before the AGM, the Board of Directors is obliged to provide the AGM with information regarding the affairs of the Bank, insofar as such information is relevant to a proper assessment of the items on the agenda. The Board may decline to provide such information if sufficient material grounds, and this should be recorded in the minutes. The Board may provide a single answer to shareholders’ requests that are of similar content. The obligation to provide information does not apply in the event that such information is already available through the Bank’s website, particularly in the case of frequently asked questions.

AVAILAble DOCUMENTS AND INFORMATION
The information required under articles 123 par 3 and 4 of Law 4548/2018. The Bank may decide to provide via the DSS the participation-proxy appointment form and the draft resolutions on the items of the agenda shall be made available in electronic form on the website of the Bank’s Subdivision for Governance of NBG Shareholder Register & Shareholder Affairs (ground floor of the Megaro Mela, 93 Eolou Str., Athens). For further details on minority rights, shareholders should refer to the provisions of Article 141 of Law 4548/2018.

By order of the Board of Directors
The Chair of the Board
Costas P. Michaelides
Athens, 10 July 2019

INFORMATION
The term shareholder is used to refer to (a) any legal person referred to in (i) to (iii) hereinabove.

(i) A legal person (natural or legal person) referred to in (d) to (e) hereinabove.

(d) If any shareholder so requests, and provided that the said request is filed with the Bank by 26 July 2019, i.e. at least 5 full days before the AGM, the Board of Directors is obliged to provide the AGM with information on the course of the business affairs and financial status of the Bank. The Board may decline to provide such information if sufficient material grounds, and this should be recorded in the minutes.

In all the aforesaid cases the shareholders making requests are required to provide to the Bank’s Subdivision for Governance of NBG Shareholder Register & Shareholder Affairs (ground floor of the Megaro Mela, 93 Eolou Str., Athens) a written confirmation from HCSD. Anyone who has shareholder status on the date of the AGM or Repeat AGM, as in force, is entitled to participate in the General Meeting and any repeat Meeting thereof. The Board may provide a single answer to shareholders’ requests that are of similar content. The obligation to provide information does not apply in the event that such information is already available through the Bank’s website, particularly in the case of frequently asked questions.

available documents and information

The information required under articles 123 par 3 and 4 of Law 4548/2018. The Bank may decide to provide via the DSS the participation-proxy appointment form and the draft resolutions on the items of the agenda shall be made available in electronic form on the website of the Bank’s Subdivision for Governance of NBG Shareholder Register & Shareholder Affairs (ground floor of the Megaro Mela, 93 Eolou Str., Athens).