PILLAR 3

2022

Disclosure report

BANK

PILLAR 3
DISCLOSURE REPORT
BNG BANK **2022**

INTRODUCTION

The international prudential regulatory framework for banks is based on a comprehensive set of measures developed by the Basel Committee on Banking Supervision (known as Basel III). Basel III has been implemented in the European Union through the Capital Requirements Directive (CRD) and the Capital Requirements Regulation (CRR).

The Basel framework consist of three pillars:
- The first pillar consists of minimum capital requirements for three main categories of risk: credit risk, market risk and operational risk.
- The second pillar provides a framework for banks to review their capital (and liquidity) adequacy for both the risks identified in Pillar 1 as well as all other risks (e.g. concentration risk and strategic risk). This internal review by banks is known as the Internal Capital/ Liquidity Adequacy Assessment Process (ICAAP/ILAAP). Supervisors independently assess these processes in their Supervisory Review and Evaluation Process (SREP).
- The third pillar aims to introduce market discipline to complement the capital and liquidity requirements from the first and second pillar. Therefore, Basel III contains a set of disclosure requirements which will allow market participants to have sufficient understanding of a bank's activities, the risks that are involved and the controls that are implemented to manage these risks.

This report is drafted in response to the last pillar and provides a comprehensive overview of the risk profile of BNG Bank. The main purpose of the Pillar 3 disclosure requirements is to promote transparency of financial institutions. This contributes to a proper functioning of financial markets, improves efficiency of market discipline and helps in building trust between market participants.

SCOPE OF DISCLOSURE (ART 431 & 432 CRR)

The scope of the Pillar 3 disclosure is in line with the policy that BNG Bank has adopted to comply with the relevant regulatory requirements mentioned in the introduction. This policy describes the rationale for a Pillar 3 report, identifies the departments involved and the internal controls and procedures for disclosing the required information.

The scope of this report includes BNG Bank and its two subsidiaries BNG Gebiedsontwikkeling B.V. and Hypotheekfonds voor Overheidspersoneel B.V.[1] BNG Bank aims to disclose a comprehensive overview on its risk profile by including information that is clear, meaningful, consistent and comparable in this Pillar 3 report. To reduce duplication of information, cross-references are made to BNG Bank's annual report and the company website where the required information is disclosed comprehensively. Where disclosure is required for information that is considered proprietary or confidential, a generic disclosure is provided.

Pillar 3 disclosure requirements are subject to European legislation and are included in the regulatory prudential framework. Part Eight of the Capital Requirements Directive (CRD) and the guidelines on disclosure requirements prescribe in detail the tables and templates through which the Pillar 3 information needs to be disclosed[2,3]. Changes in this regulatory framework are monitored centrally within BNG Bank. The implementation of new or amendments in regulatory requirements are assigned to the responsible process owner.

Following the review of the latest regulatory requirements, the Pillar 3 report has been updated to comply with these requirements. The information disclosed in this report is subject to the same internal control procedures as the information published in the annual report and other regulatory reports.

This report provides a comprehensive qualitative overview of the management of risks by BNG Bank. In addition, it includes all the relevant templates for disclosing the quantitative information as required by the EBA. An overview of the Pillar 3 disclosure requirements with specific references to the relevant pages in this document is included at the end of this report.

1 On 12 December 2022, the portfolio of Hypotheekfonds voor Overheidspersonnel BV was sold to National Nederlanden Bank N.V.. Hypotheekfonds voor Overheidspersoneel B.V. will be liquidated.

2 EBA/ITS/2020/04, Final draft implementing technical standards on public disclosures by institutions of the information referred to in Titles II and III of Part Eight of Regulation (EU) No 575/2013, later amended by the CRR II (2019/876).

3 EBA/ITS/2022/01, Final draft implementing technical standards on prudential disclosures on ESG risks in accordance with Article 449a CRR.

FREQUENCY AND MEANS OF DISCLOSURE (ART 433 & 434 CRR)

In considering the relevant requirements on the frequency of disclosure, BNG Bank has assessed the need and the requirements to publish information more frequently[4]. Since BNG Bank is classified as "Other Systemically Important Institutions"; it is required to publish an interim and an annual Pillar 3 report, which is in accordance with the frequency of the interim and the annual financial report of the bank.

BNG Bank's business model is stable with a limited range of activities. Hence, the risk profile of BNG Bank is not prone to any rapid changes. As a result, the information that generally qualifies for more frequent disclosure, does not exhibit any sudden material fluctuations. Therefore, an interim and annual Pillar 3 disclosure suffices. Note that these disclosures also include the mandatory quarterly templates. The publications are available on the website of BNG Bank.

4 Conform the CRR requirements on materiality, proprietary and confidentiality and on disclosure frequency under Articles 432(1), 432(2) and 433.

MANAGEMENT STATEMENT

We confirm that the 2022 Pillar 3 report has been prepared in accordance with the internal control processes as they have been agreed upon within BNG Bank and are considered adequate with regard to the institution's profile and strategy. The 2022 Pillar 3 report includes the disclosures as prescribed in Part Eight of the CRR and provides a comprehensive overview on the risk profile of BNG Bank as at year end 2022.

The 2022 Pillar 3 Report was approved by the Executive Committee on 16 May 2023.

Executive Committee
Gita Salden (Chief Executive Officer), statutory director
Olivier Labe (Chief Financial Officer), statutory director
Cindy van Atteveldt-Machielsen (Chief Risk Officer), statutory director
Jaco van Goudswaard (Chief Operating Officer)
Thomas Eterman (Chief Commercial Officer)

RISK MANAGEMENT OBJECTIVES AND POLICIES (ART 435 CRR)

General information

Institutional risk management approach

The process of accepting and controlling risks is inherent to the day-to-day activities of any bank. To perform its activities the bank must accept a certain level of credit, market, liquidity, operational, compliance, security and strategic risk. BNG Bank’s low risk appetite is reflected in its risk policies, its capitalisation policy and in its Articles of Association and the restriction on its services and its customers. Also, the bank does not have a trading book.

Risk acceptance is guided by the following:

- **Prudent risk profile with reasonable long-term return:** BNG Bank aims to provide the best possible services to its stakeholders, now and in the future. The return required by its principal shareholder aims to take into account the bank's prudent risk profile. This means that the required return should not result in the bank taking risks that jeopardise its ratings and funding position.
- **Competitive pricing:** In addition to a reasonable return for shareholders, offering competitive lending prices to customers is a priority. Apart from assuming the inherent risks associated with lending to clients, the bank is willing to selectively accept additional risks for treasury activities that support lending to clients (e.g. portfolio hedging and the Interest-bearing securities portfolio). These activities are considered carefully based on their risk and return characteristics. The additional return generated from these activities supports the long-term strategy of the bank.
- **Restriction on non-zero-risk-weighted activities:** Specific to the public sector, the largest share of the bank's lending is zero-risk-weighted lending. To facilitate lending at the lowest possible prices, it is essential that the bank retains its high rating and competitive funding position by imposing restrictions on non-zero-risk-weighted lending.

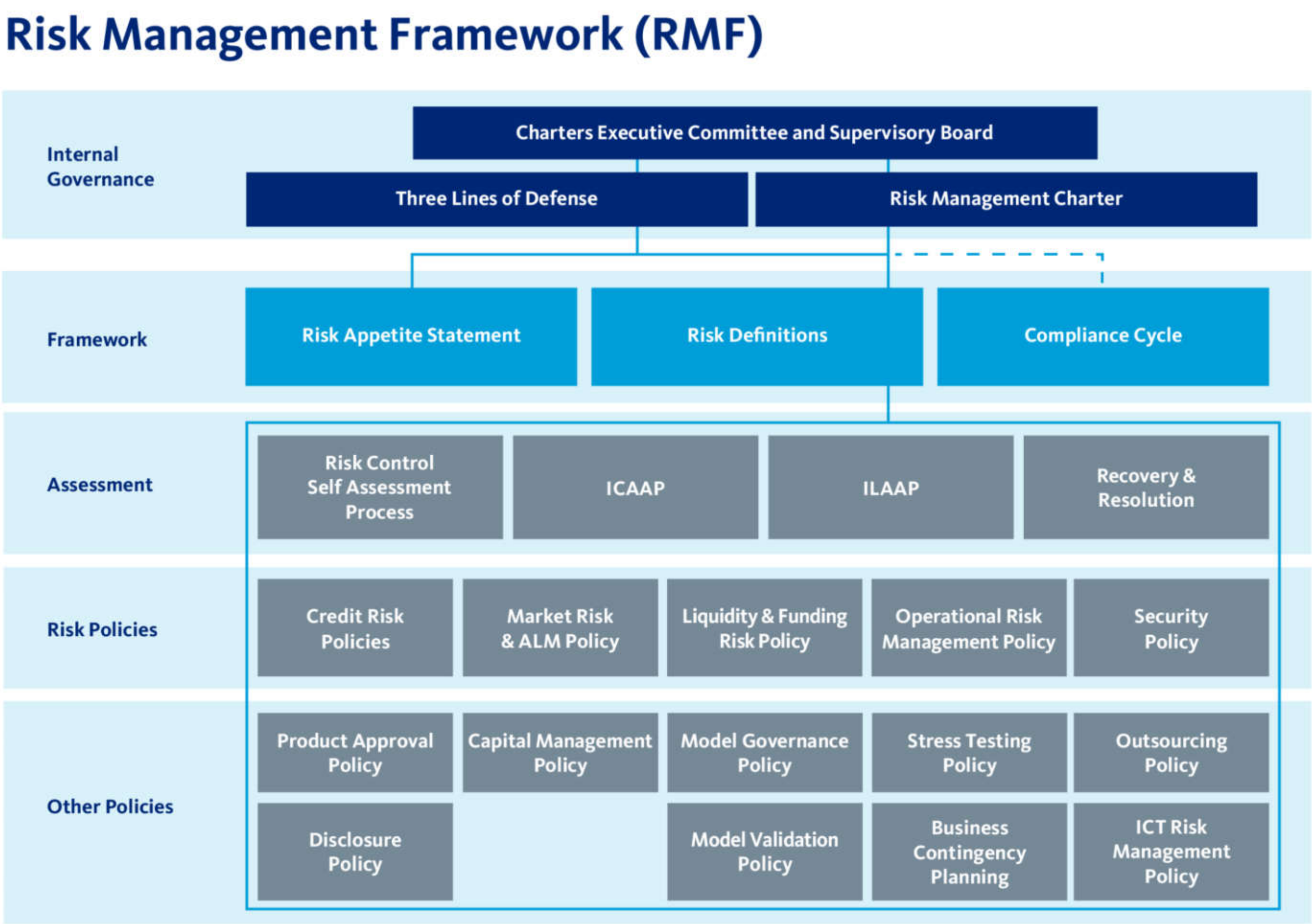
These principles are key in determining the risk appetite of BNG Bank.

In the following sections, an overview of the main elements of the Risk Management Framework is provided, which includes Risk Governance, Risk Appetite Statement and the management of individual risks. The requested information as described by relevant EBA guidelines on disclosure requirements is disclosed in corresponding tables and templates.

The Internal Governance Framework formalises the design of the internal organisation and provides the basis for all decision-making within BNG Bank. The Internal Governance Framework consists of various elements, including the Three Lines of Defence model, the Risk Management Framework (RMF) and the Compliance Cycle. The Three Lines of Defence model describes the roles of the three lines in relation to the bank's internal control and risk management system. The RMF contains the overarching policies on general and specific risk-related subjects, such as risk governance and the risk appetite framework.

Risk management framework

The RMF is tailored to BNG Bank's specific company profile, which has a strong interconnectedness with the dutch public sector. Risk management activities have been integrated into all parts of the organisation where significant risks may arise. The ongoing risk management process comprises of identification, assessment, measurement, monitoring, reporting and steering of the various types of risk. The Compliance Cycle forms the basis for all activities of the compliance function and focuses on the detection of instances where BNG Bank operates outside its integrity risk appetite or is in non-compliance with relevant laws and regulation.



Three lines of defence approach

BNG Bank has adopted the 3-Lines of Defence (3LoD) risk management model. The 3LoD model distinguishes three groups (or lines) involved in effective internal control and risk management:
- First line, Risk Ownership – Business (Core Business and Support functions).
- Second line, Risk Control – Risk Management, Credit Risk Assessment, Security and Compliance.
- Third line, Risk Assurance – Internal Audit.

The model ensures that there is adequate segregation of duties between direct accountability for risk decisions (first line), independent challenge of risk decisions and setting the RMF (second line), and independent assurance on the effectiveness of the internal control and risk management system (third line). The second line functions help to ensure that risks are appropriately identified and managed, thus enabling the organisation to be 'In Control' and support Executive Committee (ExCo) and its committees in their oversight role.

The first line (the business) is the risk owner and is primarily responsible for risk identification, designing and executing internal controls to manage the risks associated with business processes.

The following second line departments, which are directly positioned under the Chief Risk Officer, further support the ExCo in implementing and executing the bank's internal control and risk management system:
- **Risk Management:** The Risk Management department supports the business in identifying, qualifying, quantifying and mitigating the risks. It also monitors risks with the support of specific risk management instruments and independently reports on these activities. These risks consist of financial risks (credit risk, market risk and liquidity risk) and non-financial risks (operational risk and strategic risk). The Risk Management department also maintains the RMF and various risk policies. The coordination of scenario analysis is also assigned to the Risk Management department, with regard to both the economic and the normative perspective (in which, among other scenarios, an adverse climate scenario is calculated). As part of its responsibilities, the risk management department monitors that BNG Bank operates within its risk appetite. The purpose, position and authorities of the risk function are documented in the Risk Management Charter. Risk Management is represented in all ExCo committees and takes part in meetings held by the Risk Committee of the Supervisory Board. The Head of Risk Management reports to the ExCo and has a reporting line to the Supervisory Board.
- **Credit Risk Assessment:** The Credit Risk Assessment department provides independent assessments and advice on credit risk relating to individual credit proposals and reviews for clients and financial counterparties, including non-performing loans and loans where a significant increase in credit risk is observed. The department also participates in the design of policies with respect to credit risk. The department is represented in all credit risk-oriented ExCo committees.
- **Compliance:** The compliance function promotes the integrity of the organisation, its clients, its employees and the markets in which BNG Bank operates and monitors compliance with rules, regulations and internal standards. The Head of Compliance reports to the ExCo and has a reporting line to the Supervisory Board. This is documented in the Compliance Charter. Please see the paragraph on compliance risk for further details.
- **Security:** The second line Security function monitors, facilitates, supports and challenges the business in order to safeguard the reliability (confidentiality, integrity and availability) of information, IT infrastructure and critical business processes with regard to (cyber)threats. It is responsible for developing and maintaining the information security policy, maintaining the crisis management policies and the execution of the security awareness programme. Furthermore, the second line Security department is responsible for monitoring and reporting on security risks. As part of this responsibility, the second line Security department aims to ensure that BNG Bank operates within its security risk appetite. The purpose, position and authorities of the Security department are documented in the Security Charter.

The third line is represented by the internal auditors working in a separate department positioned under the Chief Executive Officer (CEO), to reflect their independence from the business.

Internal Audit Department (IAD): The IAD periodically conducts operational audits to evaluate the design and operational effectiveness of the bank's internal control and risk management systems and assess compliance with the applicable legislation. The purpose, position and authorities of the IAD are documented in the Internal Audit Charter. The IAD reports to the ExCo and it has a reporting line to the Supervisory Board.

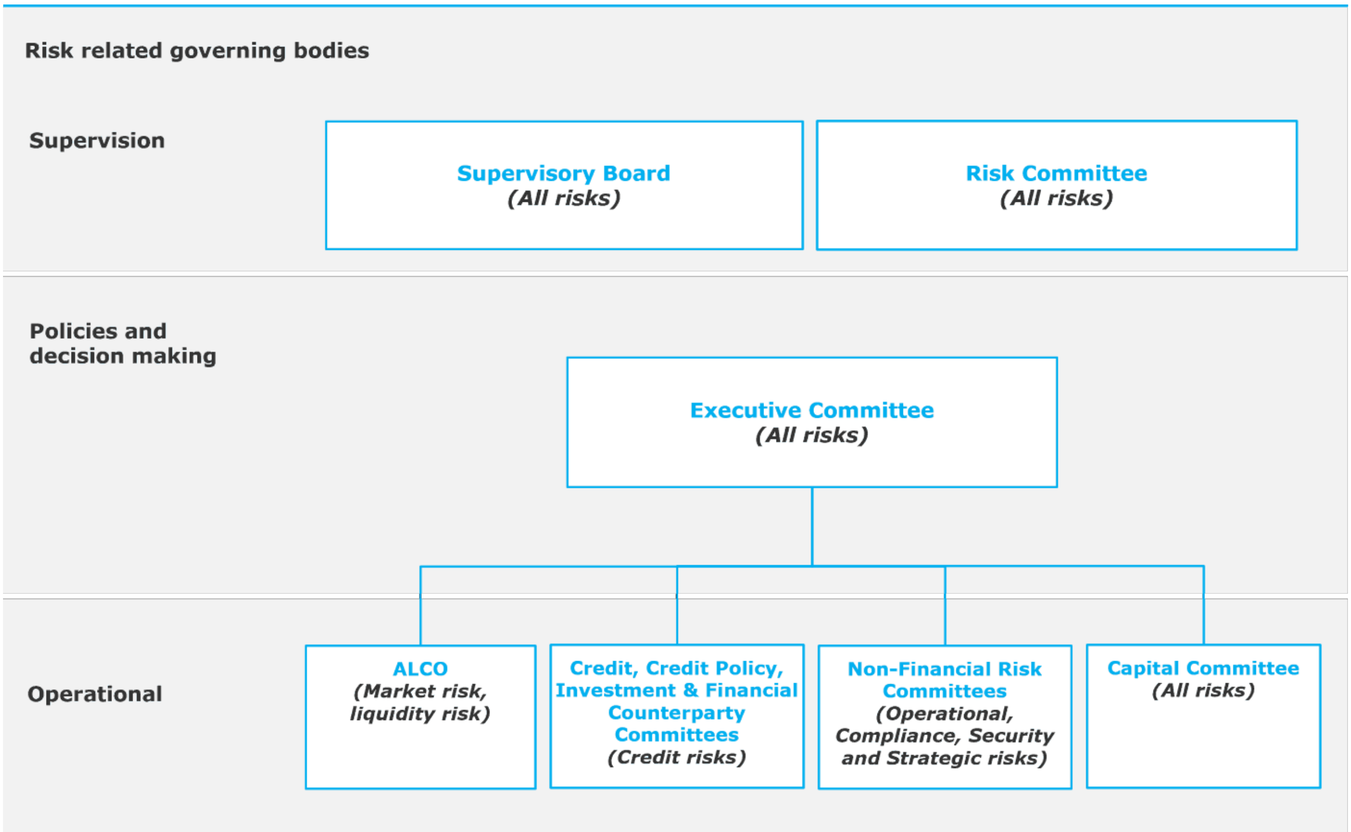
Risk governance

The Executive Committee and the Supervisory Board of BNG Bank are regularly informed about the risks and risk management. The following table provides an overview of the relevant reports that the ExCo and Supervisory Board receive periodically.

Table of reports and frequencies

3LoD	Report	Executive Committee	Supervisory Board
1st line	Financial Reports	monthly	quarterly
	Commercial Reports	monthly	quarterly
	Funding Plan	annually	annually
	Selected In Control Statements	annually	
	ICAAP/ ILAAP	annually	annually
2nd line	Integrated Risk Report	quarterly	quarterly
	Risk Appetite Statement	annually	annually
	Operational incident report	annually	annually
	Recovery Plan	annually	annually
	Risk Analysis on Remuneration Policy	annually	annually
3rd line	Internal Audit Reports	various	quarterly
	Management Letter Internal Auditor	annually	annually
Other	Audit Report External Auditor	annually	annually
	Management Letter External Auditor	annually	annually

Risk management activities are integrated in all parts of the organisation of BNG Bank where key risks are being taken. The following figure provides an overview of the relevant risk governing bodies at different levels within the organisation as at end of 2022:



BNG Bank has a two-tier governance structure consisting of a Supervisory Board and an Executive Committee. An up-to-date overview with the profiles of the members of the Supervisory Board and the Executive Committee is available on the website of BNG Bank[5,6]. The responsibilities and mandates of the Supervisory Board, supported by the Risk Committee and the Executive Committee regarding risk management are defined in their charters[7].

The Supervisory Board approves the bank's Risk Appetite Statement (RAS) and supervises the development of the actual risk profile in relation to the risk appetite. The ExCo is responsible for drafting the Risk Appetite Statement and ensuring the bank's operating activities are carried out within the parameters of the risk appetite for the various risks. The ExCo performs this task through various risk-oriented committees, namely the Asset & Liability Committee (ALCO), the Credit Policy Committee, the Credit Committee, the Capital Committee, the Financial Counterparties Committee, the Investment Committee and the Non-Financial Risk Committee. A description of the tasks and members of these committees is published on the website of BNG Bank.

Formal risk-taking decisions on subjects with potential strategic impact as well as escalations by a committee are dealt with in the Executive Committee meeting. Policy approval and the risk decisions are taken by the committees. The committees are chaired by a member of the Executive Committee and ensure the various risk-taking activities of the bank are operated in accordance with the policies.

Other committees that are relevant in connection to risk management are the Audit Committee and the Remuneration Committee of the Supervisory Board.

5 For the Supervisory Board, see also annual report 2022 (pp. 87-95).

6 For the Executive Committee, see also annual report 2022 (pp. 74-77).

7 Reglement Raad van Commissarissen, Reglementen ExCo Commissies, Reglement Risk Committee and Reglement Audit Committee.

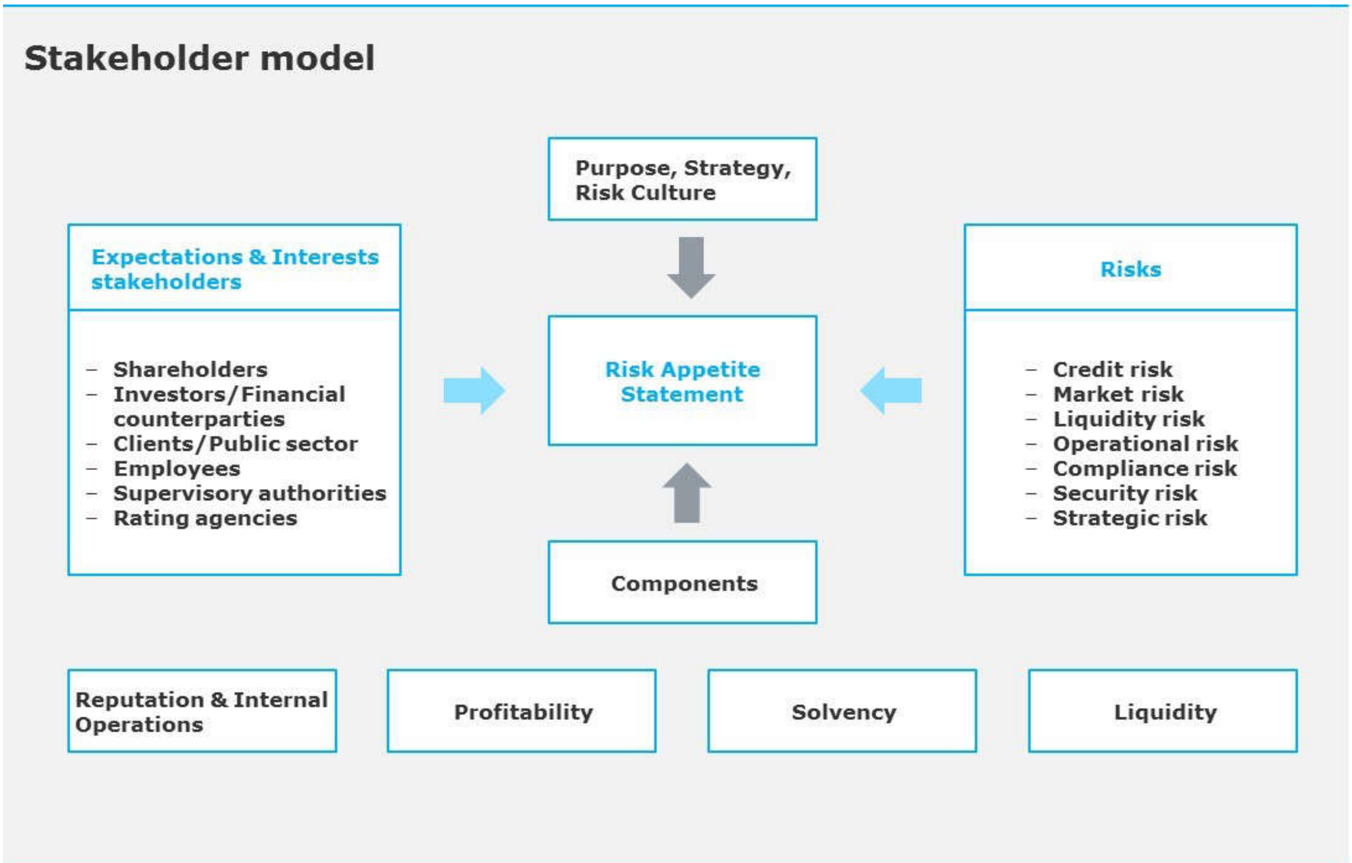
Risk Appetite Framework

An important element of the Risk Management Framework is the Risk Appetite Framework (RAF). This framework covers policies, processes, controls, and systems for establishing, communicating and monitoring the bank's risk appetite. In addition, the RAF includes the RAS, the subsequent risk limit setting, and an outline of the roles and responsibilities of parties overseeing the implementation and monitoring of the Risk Appetite Statement.

Each year, the bank reviews the RAS, sets out the level of risks that the bank is willing to accept in order to achieve its strategic objectives and business plan. The bank needs to ensure that the risk appetite stays within its risk capacity given its capital base, risk management and control capabilities and its regulatory constraints. When fulfilling its mission and executing its strategy, the bank balances the expectations and the interests of its stakeholders.

BNG Bank considers in the RAS the key risks specific to the bank's business model and the key financial drivers (Profitability, Solvency and Liquidity) that determine the overall financial health. In addition, the bank has included a non-financial determinants (Reputation and Internal Operations) in this model. As a triple A rated bank, it places great value on its impeccable reputation.

Profitability - BNG Bank does not aim to maximize profits, its priority is to maximise the social impact of activities at cost-covering rates. For its shareholders, the bank's objective is to achieve a reasonable return which is reflected in the required return. Stability of the annual results is also important to different stakeholders, including regulatory authorities and rating agencies.



Solvency - BNG Bank must comply with capital requirements. There must be a high degree of probability so that the amount of capital is sufficient to absorb unexpected losses, in the interest of safeguarding the continuity of the bank. A strong capital position is the basis for low funding rates. The credit ratings issued by rating agencies are largely based on the solvency position, supplemented with the public ownership.

Liquidity - Considering its key position regarding the financing of the public sector, BNG Bank wants to maintain a lasting and stable presence in the financial markets and continue to meet the demand for loans, both under normal as under stressed circumstances. This requires sufficient liquidity buffers. The long-term liquidity (or refinancing risk) relates to the ability to fund the current liquidity mismatch against acceptable prices. Even with a solid investor base this mismatch has to be limited to mitigate this risk.

Reputation & Internal Operations - BNG Bank's position as the bank of and for local authorities and public sector institutions is the basis for the execution of our purpose “Driven by Social Impact”, its business model and for the perception and confidence of the various stakeholders. Protecting the latter is essential and is expressed in the quality of internal risk management, the integrity of the bank and its customers, compliance with legal and regulatory requirements and multiple other qualitative aspects. Internal Operations refer to the business operations, the way the bank executes its strategy and (business) plans derived from it.

Risk appetite cycle and monitoring
The RAS is updated annually, based on external and internal developments. It is cascaded into limits and targets for the various types of risk. These are subject to a quarterly monitoring programme to determine whether the bank operates within the limits of its risk appetite. The outcomes are reported to the various risk related committees and subsequently integrated into a report to the ExCo and the Supervisory Board. This integrated risk report does not only provide aggregated information derived from figures used for periodic limit monitoring, but also aims to present a holistic view on the present and future risks of the bank.

Risk Appetite Statement 2022

Reputation and internal business operations

Qualitative description of risk appetite

- Preserve status of promotional bank
- Sound conduct and ethical business practices in line with legitimate expectations of society and other stakeholders
- Compliant with laws and regulations and criteria by supervisors
- Qualitative and quantitative capacity to execute the Road to Impact
- Effective, efficient, controlled business practices
- Meet the adequate standards to prevent information security or business continuity incidents

Ambition

- Perception of BNG Bank as a semi-public institution with excellent creditworthiness
- Committed to high standards of integrity and our role as gatekeeper to the financial system
- Driven by Social Impact – selected SDGs
- Reliable, sustainable, professional

2022

Non-financial risk profile requires management attention.

Indicator

Credit rating and other indicators

Profitability

Qualitative description of risk appetite

- Income and expense trends are relatively stable and in line with each other
- Amounts of potential / incidental losses limited
- Services at cost-covering rates

Ambition

- Relatively stable annual results.
- Reasonable returns.

2022

The bank shows healthy financial results in 2022.

Indicator

Profitability

Solvency

Qualitative description of risk appetite

- Total capital ratio higher than other banks.
- High quality of capital.
- Available capital > required capital plus a buffer.

Ambition

- Very prudent capital adequacy, in line with desired rating profile.

2022

- The bank remains well capitalised.
- This is in line with 2021.

Indicator

Capital ratios

Liquidity

Qualitative description of risk appetite

- Always be able to meet obligations in times of business as usual, without use of buffers.
- Continuous access to money and capital markets.
- The capacity to generate liquidity is sufficient for any time horizon under stressed circumstances.
- Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR) are used as backstops.

Ambition

- Stable presence for public sector.
- Prudent liquidity position, in line with desired rating profile.

2022

- The bank maintained a prudent liquidity position.
- This is in line with 2021.

Indicator

Liquidity ratios

In 2022, BNG Bank operated within its risk appetite for financial risks. Regarding credit risk, the bank is closely monitoring sectors for which a relatively severe impact is possible due to increased energy prices, cost inflation and higher interest rates. The bank remains well capitalised and maintains a prudent liquidity position in line with its desired external credit rating.

For non-financial risks, BNG Bank did not fully operate within its risk appetite in 2022. First, second and third line findings have shown that the bank should improve on opeartional risk management. The bank has therefore given priority to the improvement of the operational risk profile, amongst others by establishing a Non-Financial Risk Committee. The improvement of the operational risk profile is a multi-year programme that will continue to be a priority for the ExCo.

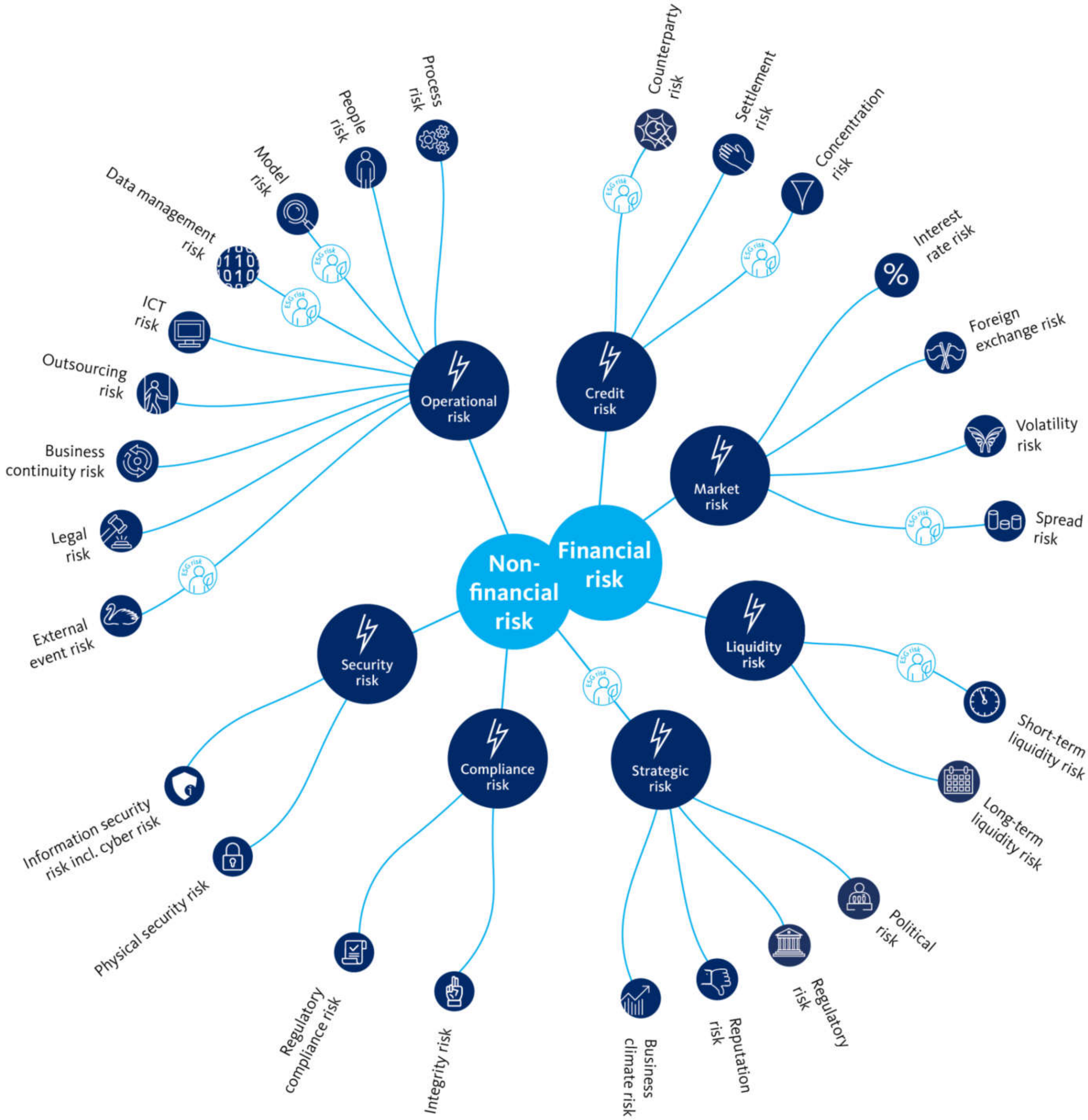
Risk culture

BNG Bank recognises the importance of ensuring a proper risk culture within its organisation and endeavours to embed this in the internal control and risk management system. The risk appetite is an important instrument in enhancing risk awareness and embedding the desired risk behaviour. To increase risk awareness by employees, BNG Bank has delegated the responsibility for the monitoring of limits and targets to the risk oriented ExCo committees. This development is aiming to increase risk awareness at operational level. It is expected that the implementation of the Governance, Risk and Compliance (GRC) tool to support the internal control and risk management process will enhance efficiency and segregation of responsibilities. The GRC tool will also contribute to the aim of the bank to further strengthen the risk culture and reach a higher level of maturity of the non-financial risk management process.

Overview of specific risks

Risk management within BNG Bank distinguishes between the categories of financial risks and non-financial risks. Within these categories main risks (level 1) and sub-risks (level 2) have been defined. Only risk categories that are relevant to BNG Bank have been included. ESG risk is connected to those traditional risk categories where material impact from ESG factors is expected. A description per specific risk will be provided in the next paragraphs.

Risks


Non-financial risk
Financial risk
Operational risk
Process risk
People risk
Model risk
Data management risk
ICT risk
Outsourcing risk
Business continuity risk
Legal risk
External event risk
Credit risk
Counterparty risk
Settlement risk
Concentration risk
Market risk
Interest rate risk
Foreign exchange risk
Volatility risk
Spread risk
Liquidity risk
Short-term liquidity risk
Long-term liquidity risk
Strategic risk
Political risk
Regulatory risk
Reputation risk
Business climate risk
Compliance risk
Integrity risk
Regulatory compliance risk
Security risk
Physical security risk
Information security risk incl. cyber risk
ESG risk

Financial risk

BNG Bank classified its main risks into two categories: financial risks and non-financial risks. In this paragraph the following main risks within the category financial risk will be further explained: credit risk, market risk and liquidity risk. ESG might have an impact on, among others, financial risk. Therefore, BNG Bank has taken steps to consider ESG related risks in the risk management framework.

Credit risk

Definitions

Credit risk is defined as the risk of losses in earnings and capital resulting from the potential risk that a borrower or a counterparty will fail to meet its obligations in accordance with agreed terms. BNG Bank distinguishes three types of credit risks:
- Counterparty risk - the risk of losses to earnings and capital arising from a party failing to make payments that result from a financial transaction, at the moment those payments are due.
- Settlement risk - the risk of losses to earnings and capital arising from a party failing to comply with the conditions of a contract (or a group of contracts) with another party at the time of settlement.
- Concentration risk - the risk that additional credit losses are realised due to the exposure of outstanding credit to a common driver.

Regarding concentration risk, the bank differentiates between:
- Country risk, with a distinction between domestic and foreign risk.
- Sector risk
- Risk for individual parties, with a distinction between clients and financial counterparties.

ESG risk is considered as part of counterparty and concentration risk. BNG Bank focuses on transition risk and physical risk. Transition risks are the risks of any negative financial impact on the institution stemming from the current or prospective impact of the transition to an environmentally sustainable economy on its counterparties or invested assets. Physical risk is the risk of any negative financial impact on the institution stemming from the current or prospective impacts of the physical effects of environmental factors on its counterparties or invested assets. Related to ESG credit risks, BNG bank has assessed which risks related to ESG are material for the bank. The next step is to implement monitoring on the material ESG credit risks.

Sources of credit risk

The bank's Articles of Association result in mainly lending to parties subject to government involvement. A considerable portion of the total exposure is directly and indirectly related to the public sector. The credit risks are generally mitigated by government guarantees on lending as well as by the WSW and WfZ guarantee funds. Hence, the portfolio of BNG Bank is largely comprised of zero risk-weighted loans and advances. The guarantee funds are guaranteed by the central government via backstop constructions. These guarantees result in a concentration risk in relation to public authorities and guarantee funds, as well as a considerable degree of concentration risk on The Netherlands. The ultimate risk on the balance sheet is therefore a risk in relation to the Dutch State. The concentration of this risk is high, but it is inextricably linked to BNG Bank's business model. Concentration risk in relation to the Dutch public sector is considered inherent in the business model. A sizeable part of the associated exposure relates to public-sector real estate. This risk is to a large extent mitigated by the guarantee funds in the Social Housing sector and Healthcare sector with a residual risk exposure for the bank to the Dutch State.

For non-zero-risk-weighted lending, concentration exists in the market segments that are serviced by the bank, e.g. universities or the energy sector. Non-zero-risk-weighted loans and investments are managed at a level that is appropriate for a promotional bank and do not jeopardise the bank's mission. BNG Bank maximizes its non-zero-risk-weighted exposure to 10% of its portfolio.

The bank is exposed to counterparty risk in relation to public sector entities (loans and advances), financial counterparties (derivatives, nostro accounts and money market transactions) and issuers of Interest-Bearing Securities (IBS) in which the bank has invested. This results in credit risks in:
- Counterparty (default) risk from clients associated with lending. These are mainly clients from the public sector that are covered by the bank's purpose and Articles of Association (statutary market parties).
- Counterparty risks in relation to financial counterparties resulting from activities that support Asset and Liability Management.

The ESG credit risks for BNG Bank relate to the ESG risks which clients and investments have. For example, the amount of CO_2 emissions which clients produce.

Mitigation measures

BNG Bank applies the following credit risk mitigation measures:
- Credit limits and targets: the limits and targets of the RAS are translated into limits applicable on individual party level.
- Periodic re-assessment of the creditworthiness (credit revision process).
- Guarantees received from a central or local authority or from the guarantee funds WSW (Social Housing) and WfZ (Healthcare). Because non-zero risk-weighted loans are often extended under partial or full guarantees or suretyships, the loan remains partly or fully zero risk-weighted on balance for BNG Bank.
- Other forms of security such as pledges and mortgages are used to minimise possible losses due to credit risks. The potential risk-reducing effect, however, is not applied in the calculation of the regulatory capital requirement.

Specific for financial counterparties:
- Indirect clearing of derivatives, where possible, through a qualified central clearing house, including exchange of initial and variation margin collateral.
- Bilateral netting and collateral agreements based on a daily collateral exchange with financial counterparties (see also the section on financial counterparties).
- Settlement risk mitigation measures.

Modelling

The credit risks are calculated by using internal or external credit ratings. The internal credit ratings are used for the clients of BNG Bank. The external ratings are used for financial counterparties and investments.

BNG bank applies internally developed rating models to assess the creditworthiness of clients, being public sector parties without external ratings. These expert models are market segment specific and subject to periodic review and validation in accordance with the bank's model governance policy. These models are not applied for capital calculations under Pillar I, where the bank uses the Standardised approach. Internal rating models are in use for the following market segments:
- Housing
- Healthcare
- Education
- Projects

Furthermore, BNG Bank has a scorecard model for local governments. Given the close relation to the Dutch government, BNG Bank does not rate local governments, but only assesses their (relative) creditworthiness on an individual basis. In cases where Probability of Default determination is needed, the rating of local governments is set equal to that of the Dutch government (ultimo 2022: AAA).

Internal rating	Description
1 through 11	The credit risk is deemed acceptable. A regular annual review is performed.
12 through 13	Watch list: there is an increased credit risk. A review takes place at least twice a year.
14 through 16	Financial Recovery & Restructuring: there is an increased credit risk. At least three times a year, a report on these debtors is submitted to the Executive Committee.
17 through 19	Financial Recovery & Restructuring: there is an increased credit risk and/or the debtor repeatedly fails to fulfil the payment obligations and/or there is no expectation of continuity. At least three times a year, a report on these debtors is submitted to the Credit Committee.

The below table provides an overview of the distribution of the loan portfolio across those ratings.

	31-12-2022		31-12-2021	
Loans and advances	**Exposure to loans and advances and off-balance, excluding incurred loss provision**	**% of total**	**Exposure to loans and advances and off-balance, excluding incurred loss provision**	**% of total**
Zero-risk-weighted	**88,315**	**86.42%**	**86,932**	**87.91%**
Non-zero-risk-weighted				
Internal rating:				
- 1 through 11	12,079	11.82%	11,037	11.16%
- 12 through 13	288	0.28%	475	0.48%
- 14 through 17	774	0.76%	124	0.13%
- 18 through 19	737	0.72%	317	0.32%
	13,878	**13.58%**	**11,952**	**12.09%**
Total	**102,193**	**100.00%**	**98,884**	**100.00%**

External ratings

Besides the use of internal ratings, BNG Bank also uses the external ratings awarded by rating agencies. Our pool of rating agencies is S&P, Moody's, Fitch and DBRS. These ratings relate either to a counterparty or to a specific security. As BNG Bank is not allowed to use internal rating models for minimal capital requirement calculations, the bank uses external ratings, where available, to determine regulatory risk weights for RWA calculations.

Governance

BNG Bank has an internal risk management organisation that serves to control its credit risks. This organisation is in line with the diversity and complexity of the bank's lending activities, and is structured as follows:
- The Credit Committee, the Head of Credit Risk Assessment or a Team Lead of Credit Risk Assessment decides on accepting or declining credit risk in connection to loans on individual client level.
- The Credit Risk Policy Committee determines the relevant policies and monitors and manages risks in relation to lending on a portfolio level.
- The Financial Counterparties Committee decides on acceptance of financial counterparties as well as monitoring and managing risks in relation to transactions with financial institutions.
- The Capital Committee decides on the capitalisation and pricing of credit risk and stress testing. It also provides advise on the implementation of new (relevant) regulations.
- The Investment Committee decides on proposals for investment in interest-bearing securities.

The Credit Risk Assessment department (on individual client level) and the Risk Management department (on portfolio level) share second line responsibility for assessing, quantifying, monitoring and reporting credit risk. These departments operate independently from the CCO domain and the Treasury department, which are the risk owners and which have first line responsibilities for credit risk.

Lending process

All clients are subject to an assessment of creditworthiness whereby an estimate of the credit risk is made based on financial and non-financial drivers using the bank's own internal methodologies. With regards to zero-weighted loans, even though the expected loss remains zero, the outcome could have impact on the intensity of monitoring depending on the risk profile.

In addition, the bank has an internal risk assessment process for tailored transactions that includes the assessment of operational risk elements. The bank uses extensive qualitative product descriptions, in which the appropriateness of the product for different types of clients is made explicit.

The bank has sector specific policy papers which detail the risk appetite of BNG bank in various market segments.

The Credit Risk Assessment department prepares an independent second opinion on the credit proposal. The intensity of the decision-making process is determined on the basis of the proposed internal rating the score resulting from the assessment and the size of the loan. The bank's risk appetite determines the level of maximum credit risk that the bank is prepared to accept for a client with a certain internal rating or score. The credit proposal must be in accordance with this maximum risk. Depending on the size of the exposure and the risk profile, either the Head of Credit Risk Assessment or the Credit Committee decides whether the risk can be accepted. The Credit Committee is chaired by the Chief Risk Officer (CRO) and it includes representation from another ExCo member (Chief Commercial Officer (CCO)), the Credit Risk Assessment department and – where applicable – the Treasury department. If the Credit Committee is unable to reach an unanimous decision, the chair has the ultimate vote. A delegation model applies to loans and advances of limited scale or risk, in which the authority to make decisions lies with the Head of Credit Risk Assessment or the team lead of Credit Risk Assessment.

Following the approval of a credit proposal and the acceptance of the offer by the client, the credit management process starts. This includes the following elements:
- The file is completed with relevant documentation by the CCO Teams.
- The CCO Teams are responsible for file management, including the monitoring of securities and covenants.
- The creditworthiness is reviewed at least once a year. This involves an update of the internal rating or score. Every credit review follows the credit risk assessment criteria set in BNG Bank's credit risk policy. The Credit

Committee evaluates these reviews. A delegation model applies here as well. Loans and advances whose credit quality (rating or score) has fallen below a specific level are subject to increased management scrutiny and, if necessary, are transferred to the Financial Restructuring and Recovery department.

Financial counterparties

The bank only conducts business with financial counterparties that have been rated by an external agency with rating A as a minimum. Financial counterparties are periodically assessed for creditworthiness. If necessary, the limit on the maximum exposure to such a counterparty is adjusted accordingly. The Financial Counterparties Committee sets limits and monitors positions with financial counterparties.

In order to reduce credit risk, netting agreements are in place with financial counterparties with which BNG Bank enters into derivative transactions. In addition, collateral agreements are established. These ensure that market value developments are mitigated on a daily basis by collateral. The agreements are updated where necessary in response to changing market circumstances, market practices and regulatory changes.

BNG Bank's interest-bearing securities portfolio is held primarily for liquidity and investment management purposes. The portfolio is composed of high-quality bonds, the majority of which are accepted as collateral by the central bank. BNG Bank's total Interest-Bearing Securities portfolio can be subdivided into a Liquidity portfolio and an Asset & Liability Management (ALM) portfolio. The Liquidity portfolio consists exclusively of highly negotiable securities and is subdivided according to the various Liquidity Coverage Ratio (LCR) levels. The ALM portfolio is subdivided according to the type of security. Each month, the development of the portfolio is evaluated by the Investment Committee. Using factors such as external ratings and – in part – internal ratings, the bank monitors the development on an individual basis. The securities qualifying under the liquidity coverage requirement are subject to a due diligence review process. The assets within these portfolios undergo an impairment analysis twice a year.

The bank is exposed to foreign country risk as a result of transactions with financial counterparties to hedge market risks arising from lending and funding activities, as a result of its liquidity portfolio and in the context of former lending and investments in the public sector abroad. Foreign lending is in most cases directly or indirectly guaranteed by the relevant governments.

All foreign exposures fall within limits set for each country. These limits mainly depend on the perceived credit quality of the country in question. Moreover, a general limit of 15% of the balance sheet total applies to foreign exposures excluding derivatives and collateral. At the end of 2022, the bank's long term foreign exposure (expressed in balance sheet value) totalled EUR 7.5 billion exposures (2021: EUR 9.7 billion). This represents 6.7% of the balance sheet total (2021: 6.5%).

Monitoring

Monitoring of the risk targets is performed on a quarterly basis by Risk Management and is reported to the relevant committees and the ExCo. The concentration risk per sector is part of the Risk Management economic capital model used to assess the capital adequacy allocation.

Clients

Sector-specific policies and internal targets are used for lending. These sector targets relate to both maximum concentrations on the balance sheet and new transactions according to the bank's annual plan. Active portfolio management is positioned within the Public Finance department.

Both zero as non-zero-risk-weighted parties, have internal limits on their exposures. The parties individual rating is a criterion for this limit-setting. BNG monitors the client's lending limits, the client's internal rating, the maximum exposure per client based on unexpected loss, maximum exposure per client and the policy requirement of a yearly credit review.

In addition, the size of the FR&R and watchlist portfolio is monitored as well as the forbearance exposures and the lending arrears.

Financial counterparties

Monitoring of several credit limits on financial counterparties is performed on a daily basis. These includes monitoring of derivatives limits, money market limits, securities transaction limits (wrong way risk limit), settlement limits and clearing member limits.

Exposures to financial counterparties have to adhere to the Large Exposure Regulation under the CRR. The bank has adopted a conservative approach regarding the maximum size of individual exposures. BNG Bank sets requirements for the minimum ratings of the financial counterparties with which it is willing to transact, taking into account the nature of the business conducted with that party. This limits the number of available parties and as a consequence, the number of transactions with the parties that are approved is high. Daily exchange of collateral mitigates the credit risk with respect to derivatives.

BNG Bank clears parts of its derivatives centrally via EUREX and London Clearing House through five clearing members. Central clearing has inevitably resulted in a shift in concentration risk from individual financial counterparties to the clearing members and the clearing houses. In order to reduce the concentration risk on clearing members, the bank sets limits on the maximum amount of initial margin exchanged.

Exposure to settlement risk is limited to transactions with financial counterparties. Settlement risk is potentially high for those parties, because of the relatively large size of the bank’s benchmark issues in foreign currencies. Netting and collateral agreements concluded with those parties serve to limit settlement risk resulting from the mutual offsetting of payments. Moreover, BNG Bank has a limit for settlement risk. Settlements with certain counterparties are distributed over time to prevent unnecessary concentrations at one point in time. Control measures throughout the operational process serve to mitigate the settlement risk further. The Bank Recovery and Resolution Directive (BRRD) offers protection for settlement and payment systems in the European Union (EU) in case of the resolution of a bank, effectively reducing the settlement risk in parts of the financial system.

Developments 2022

BNG Bank actively follows the developments within the sectors in which it operates. This also applies to the institutions issuing the individual guarantees or suretyships. In addition, BNG Bank maintains contacts with relevant parties through a variety of channels, including conferences, seminars and bilateral meetings.

In 2022, some noteworthy developments occurred in relation to credit risk in addition to the ongoing impact of the COVID-19 pandemic. Those developments are mainly related to the Russia-Ukraine conflict and the deterioration of the creditworthiness of financial counterparties.

Russia-Ukraine conflict – The conflict in Ukraine led amongst others to increased energy prices, higher inflation and rising interest rates. These developments affected all clients of BNG Bank. Therefore, the bank closely monitors the sectors in which it operates as well as its individual clients. In particular the healthcare and energy sectors receive additional attention.

Financial counterparties – The bank expects an increase in financial counterparty risk in the current economic environment. Hence it is closely monitoring relevant developments and proactively takes appropriate measures to reduce or manage exposures on its financial counterparties.

Internal improvements – In 2022 BNG Bank improved its credit risk control processes in relation to governance and monitoring. The framework of governance and limits was extended. Moreover, the bank started implementing ESG credit risks within the internal control and risk management framework. To identify the material sectors for monitoring purposes, the bank is conducting an analysis per sector in which it operates, to define the material ESG-related credit risks. The results from the analysis conducted so far, demonstrate that most ESG-related credit risks are mainly related to emissions and energy. In 2023, the bank will continue with the analysis and is planning to implement monitoring metrics as one of the next steps.

Market risk

Definitions

Market risk is defined as the risk of losses to earnings and capital resulting from market price fluctuations. Several sub risks can be distinguished within market risk:

- Interest rate risk - the risk of losses to earnings and capital arising from adverse movements in interest rates ('outright risk'), basis tenor rates, overnight indexed swap rates and the cross-currency basis spreads.
- Foreign exchange risk - the risk of losses to earnings and capital arising from unfavourable exchange rate fluctuations.
- Volatility risk - the risk of losses to earnings and capital arising from adverse movements in the implied volatility of market interest rates or currencies. This risk only applies to products with types of optionality, such as caps and floors.
- Spread risk – risk of losses to earnings and capital arising from unfavourable spread fluctuations, credit spread risk, Credit/Debit Value Adjustments (CVA/DVA), index fluctuation and ESG risk.

Risk appetite

- BNG Bank adopts a prudent approach to manage its market risk. The interest rate position of BNG Bank consists of the actively managed Treasury book and the passively managed ALCO book. The interest rate position in the Treasury book is managed at portfolio level by the Treasury department. This department is authorized to operate and hedge within a limited bandwidth, which allows efficient hedging and flexibility for clients.
- BNG Bank closely monitors the IBOR transition towards Euro short-term rate (€str). BNG Bank's interest rate risk is currently hedged to mainly 6-month EURIBOR. This IBOR transition risk is capitalized. With regard to tenor basis risk, the bank accepts a limited position arising from regular funding and lending.
- Optionality is usually hedged and only accepted where explicitly permitted by risk policies or product approval documents.
- The bank accepts the risk to earnings and capital caused by unfavourable credit spread fluctuations, under the condition that this risk is explicitly covered by a sufficient amount of allocated capital.
- The bank fully hedges the risk arising from changes in the value of financial instruments that can result from the change in an index, such as inflation.

BNG Bank is not willing to assume any substantial open exposures to foreign exchange risk. Foreign exchange risks are therefore in principle hedged in terms of nominal amounts. Furthermore, BNG Bank has no trading book and consequently does not assume any market risk resulting from trading portfolios.

Governance

The Treasury and Capital Markets department is the 'first line of defense' and is responsible for day-to-day market risk management, primarily for managing market risks resulting from commercial activities.

Risk Management is the 'second line of defense' and is tasked to monitor the market risk independently. It performs daily reviews to ensure the risk positions are within the limits cascaded from the Risk Appetite and set by the Asset & Liability Committee. Risk Management independently prepares reports for the ALCO and Treasury, challenges the first line and provides risks analysis and advice, both proactively and upon request. Moreover, the department also periodically updates the assumptions used, maintains the set of policies, frameworks, procedures and reporting, and incorporates new regulations in their revision. By participating in the product approval process, it also plays an important role in identifying and assessing (new) market risks caused by new activities.

The ALCO decides on market risk policy and limit adjustments and is responsible for decision taking within the boundaries set in the policy. The ALCO consists of the CFO (Chair), the CRO, the Managing Director Treasury and Capital Markets, the Head of Risk Management and is, depending on the agenda, supplemented with other participants.

Interest rate risk

Framework

The bank's most significant interest rate risk is the 'outright risk' to the interest rate swap curve, which is determined excluding the impact of spreads. This means that changes in spreads such as credit spreads, CVA/DVA and cross-currency basis spreads do not influence the interest rate risk position and hedging. There is no material presence of early redemption options in BNG Bank's regular loan portfolio. Likewise, there is no material exposure in mortgages and the bank does not attract savings from private individuals. Consequently, client behaviour is not modelled in the bank's interest rate risk models as its loan book is almost entirely held to maturity.

The bank applies stress testing, in which the impact of the interest rate position is assessed based on multiple types of interest rate shocks (parallel and non-parallel) and from various perspectives (i.e. economic value, Earnings at Risk, IBOR transition risk and the normative capital perspective).

Risk measures and limits

BNG Bank has risk measures and limits in place for several areas within market risk:

- The Treasury department has a mandate to hold an unhedged interest rate risk position within pre-defined limits. Economic value limits for the Treasury book are set for the total delta and for the interest rate stress testing outcomes. The latter is calculated for several internal parallel and non-parallel interest rate shocks, and is compared on a daily basis to the capital allocated for interest rate risk. In addition, early warning levels are set for the internal Earnings at Risk scenarios such that a balance is sought between the economic value and the earnings perspective.
- The bank also makes sure that the outlier criterion is not exceeded. The outlier criterion is prescribed by regulations, where it is used to express the maximum relationship between market risk and equity. The outlier criterion is a sensitivity analysis in which the interest rate risk is measured under six externally prescribed shocks, among which the instantaneous plus or minus 200 basis points parallel scenario.
- In case of cross-currency swaps, the cross-currency basis spread risk is monitored on a daily basis. This risk is not limited, since the contracts are deemed to be held until maturity. Although, in case of fluctuations, regulatory capital may be affected through "cost of hedging", the effect is not expected to materialise.
- Economic capital is allocated for interest rate risk, spread risk, IBOR transition risk and CVA risk. The monitoring is conducted periodically (monthly/ quarterly).

All these interest rate risk measures complement each other, and they ensure the transparency and manageability of risks.

Any breach of a limit must be reported to the ALCO (or in case of capital limit breach: the Capital committee). The ALCO decides whether action should be taken immediately in order to adjust the interest rate position to a position within the limit or to authorise the limit breach for a certain period of time. Early warning levels are in place to trigger discussions on certain events and require no direct action from the ALCO.

Monitoring and reporting

The risk measures are monitored and reported on a daily basis to the ALCO members as well as the Treasury and Capital Markets directorate, except for the Earnings at Risk measure that is calculated on a monthly basis.

The daily measures are summarised in a monthly dashboard, which is discussed in the regular ALCO meetings. In addition, these measures and limit monitoring are summarised in the quarterly Risk Report, which is presented to and discussed in the ExCo, the Risk Committee of the SB and the SB itself.

The limits with respect to interest rate risk were not breached in 2022. In the bank's opinion, its interest rate risk management was adequate, compliant with the regulatory standards and within the limits as defined in the bank's risk appetite and risk policies. The table below outlines the Earnings at Risk as per end of 2022 compared to end of 2021, in a scenario with an instantaneous parallel shock of plus 100 basis points for the 1-year and 2-year horizon. During the year, the most negative or least positive impact can be seen in the scenario with an instantaneous parallel shock of minus 100 basis points. A negative sign relates to a loss in Net Interest Income. The main reason for this switch is higher Euribor fixations in the banking book.

Earnings at risk (in millions of euros)	**2022**	**2021**
Horizon		
1 year	-22	9
2 years	-45	67

Foreign exchange risk
The bank obtains a large portion of its funding in foreign currencies and is therefore exposed to foreign exchange fluctuations. However, according to the bank's policy, foreign exchange risks are hedged in terms of notional amounts. Incidentally, foreign exchange positions may occur in certain cases where it is not cost-efficient to hedge the risk. The foreign exchange risk of these minor positions is monitored on a daily basis and subject to limits. In 2022, these limits were not breached.

Volatility risk
In order to be able to manage its interest rate risk exposure in a flexible and cost efficient way, the bank allows itself a limited range for assuming volatility risk to support the interest rate position in the Treasury book. This range is limited and is monitored by the Risk Management department. During 2022, no additional volatility risk was assumed to support the active interest rate position. With regard to its other activities, BNG Bank's policy specifies that the volatility risks for new financial instruments should be hedged one-to-one. The resulting volatility risk is relatively small and is subject to monitoring by Risk Management.

Spread risk
The economic value of BNG Bank's equity is determined over its total portfolio of assets and liabilities. Both assets and liabilities are valued on the basis of an interest rate curve made up of market-based swap rates plus credit risk spreads. In case of interest rate swaps, the CVA risk (counterparty risk) and DVA risk (the bank's own default risk) are included. Spread risk is not hedged by the bank. The impact of changes in these spreads is measured and monitored on a daily basis. For the fair value instruments affecting profit and loss or regulatory capital, a warning level on the credit spread stress testing outcomes has been set.

The bank has inflation-linked instruments in its portfolio. The bank's policy specifies that exposure to fluctuations in inflation risk should be hedged in full and it executes this policy. The inflation delta is monitored on a daily basis.

Developments

The interest rate position in the ALCO book is a passive position and replicates the benchmark used for its required return on equity. Due to this passive strategy with a direct link to the required return, the economic impact of the rising interest rates was relatively limited to BNG Bank.

In 2022 BNG Bank has finalised adjustments for the transition from GBP Libor to Sonia. In addition, preparations have been made for the transition from USD Libor to SOFR and efforts will continue in 2023. BNG bank will continue its efforts to enhance the tooling and systems to support the Inter Bank Offer Rate (IBOR) strategy in 2023.

Liquidity risk

Definitions

Liquidity risk is defined as the risk of losses to earnings and capital due to the possibility that at any moment BNG Bank will not be able to fulfil its payment obligations without incurring any unacceptable costs or losses. The following liquidity risks are distinguished:

- Short-term liquidity risk - the risk that the bank will not be able to attract sufficient funds in order to meet its payment obligations.
- Funding capacity risk - the risk that the bank, as a result of its funding capacity, will not be able to attract sufficient funds to cover its long term funding requirement, which jeopardises its continuity.
- Funding spread risk - the risk that the bank, as a result of its own creditworthiness, will have to attract (re)financing on the long term at funding spreads that will threaten future earnings or capital.

Risk appetite

In order to meet payment obligations at all times, short-term liquidity risks are only accepted if they are matched by sufficient liquidity buffers which are capable of meeting these short-term obligations. To manage short-term liquidity risk and to be able to meet payment obligations at all times, BNG Bank has prudent liquidity limits and a significant liquidity buffer in place.

The public sector consists largely of institutions with a long-term investment horizon. This means that loans often have long maturities, up to decades. As BNG Bank is unable to raise funding for these maturities, a funding mismatch is accepted. However, this is only accepted if there are sufficient buffers to be able to refinance at acceptable prices, even in times of stress.

Governance

The Treasury and Capital Markets directorate is the ‘first line of defense’, and is responsible for the day-to-day liquidity and funding risk management. Both departments are in this role also responsible for attracting funding. Treasury is mandated to assume a liquidity risk position within the limits and triggers as stated by the liquidity and funding risk policy. Treasury operates on the basis of its annual funding plan. This plan is approved by the ALCO, which also decides in case of significant deviations during the year.

The Risk Management department is the ‘second line of defense’ and is responsible for the independent monitoring of liquidity risk, as well as daily checks whether the bank remains within the limits and triggers set by the Asset & Liability Committee. Additionally, stress scenarios are used to assess on a monthly basis whether liquidity and funding are sufficient. The Risk Management department has the role to challenge the “first line of defense” and independently reports to the ALCO and to Treasury on the use of predetermined limits, while it also provides risk analyses and advice, both proactively and on request. Risk Management periodically reviews the assumptions used, maintains the set of policies, frameworks, procedures and reporting and incorporates new regulations. By participating in the product approval process, it also plays an important role in assessing (new) liquidity and funding risks from new or changed activities.

The Contingency Funding Plan (CFP) can be enforced in case of a potential liquidity contingency situation, initiated by a breach of limits of triggers or if deemed necessary by Treasury, Risk Management or ALCO. Additional ALCO meetings, temporary procedures for more intensive liquidity management and temporary control of liquidity management by the liquidity contingency team are the main elements of this plan. During the majority of 2022, several CFP triggers were hit, reflecting the stressed market conditions as a result of the

Russia-Ukraine conflict. However, there was never need to actually enforce the CFP, as the consequences for the access to funding for BNG Bank were not material.

Framework

BNG Bank wants to maintain a constant and stable presence in the capital markets, because the bank wants to meet the demand for credit from its clients even in difficult times. It also pursues a prudent liquidity policy to ensure that it can meet its obligations at all times. In this context, ongoing access to the money and capital markets is essential, along with the ongoing maintenance of attractive, varied and sufficiently large issuance programmes for investors. In addition, buffers are required in order to have access to liquidity in times of stress. One such buffer is formed by assets held explicitly for liquidity purposes, known as the liquidity portfolio. The management of the size and composition of this portfolio is one of the liquidity measures taken to comply with the requirement under the CRR to have a Liquidity Coverage Ratio of at least 100%. BNG Bank also holds ample quantity of collateral in the central bank depot, which enables it to obtain short-term funding immediately. The amount of collateral in the depot at DNB increased significantly in 2022. Since most of the bank's assets could serve as collateral at the central bank, this collateral may be further extended in the event of prolonged stress. The size of both buffers is tested in the liquidity stress tests, which are monitored on at least a monthly basis. Furthermore, the funding plan and the corresponding planned liquidity gap are tested in an adverse stress scenario for the LCR and Net Stable Funding Ratio (NSFR) ratios.

The Treasury and Capital Markets directorate is responsible for the management of the long-term liquidity position of the bank, which is less volatile. The long-term liquidity position is the result of the loan policy on the one hand, and the funding policy on the other hand. Due to the low variability of the maturity schedules and stability of new production of loans, the need for long-term funding can be estimated reasonably well.

On the one hand, the long-term liquidity position is monitored by a (daily available) liquidity gap profile and corresponding limits. The limits are chosen in a conservative way, to ensure that the funding capacity of BNG Bank is sufficient to manage future refinancing. On the other hand, it is managed by means of an Earnings at Risk measure related to a scenario of rising (funding) spreads with a horizon of one year. The risk in this view is limited by a certain maximum fluctuation in the annual interest rate result, as stated in the Risk Appetite. Moreover, this risk is measured by means of the potential loss due to a stressed funding spread of all future years, compared to the capital that is allocated for this risk.

Risk measures and limits

For several liquidity and funding risk measures such as the liquidity gap analysis, limits or early warning levels are in place. The liquidity buffer after stress measures the remaining liquidity after the stress period and is determined under several stress scenarios. Liquidity buffers are determined under a range of stress scenarios. For all stress scenarios, except the reverse stress scenario, a limit or target for the liquidity buffer is set in the cascading of the risk appetite. Moreover, contingency funding plan triggers are measured daily to identify a potential liquidity stress situation, in which case it can be decided to activate the contingency funding plan.

Monitoring and reporting

The liquidity gap analysis is monitored and reported on a daily basis to ALCO as well as the Treasury and Capital Markets directorate. All measures are summarised in a dashboard on a monthly basis, which is discussed in the ALCO meetings. In addition, the highlights of the outcomes of these measures and possible other developments are summarised in the quarterly risk report, which is presented to and discussed in the ExCo, the Risk Committee of the SB and the SB itself.

Despite the adverse and challenging market and geopolitical conditions, the bank considers its liquidity management to have been adequate in 2022 and the strength of the bank's liquidity position to be amply sufficient as well as compliant with the regulatory standards and limits set by the ALCO. All in all, BNG Bank was able to operate effectively both on the capital markets and on the money markets. The bank remained within its risk appetite regarding liquidity risk. As at end of 2022, the LCR ratio amounted to 189% (2021: 174%) and the NSFR ratio amounted to 125% (2021: 126%).

Developments

Following the retenchment of the TLTRO conditions on October 27th 2022, BNG Bank decided to redeem EUR 15 billion of TLTRO funding on 21st December 2022. By the end of 2022, BNG Bank had an outstanding TLTRO funding of EUR 3.5 billion.

The outstanding amount of collateral decreased in 2022 from EUR 13.9 billion to EUR 2.1 billion due to increased interest rates leading to a significant relief in funding for BNG Bank.

Quantitative information of LCR (EU LIQ1)

	Scope of consolidation (consolidated)	Total unweighted value				Total weighted value			
	Currency and units (EUR million)	31-12-2022	30-9-2022	30-6-2022	31-3-2022	31-12-2022	30-9-2022	30-6-2022	31-3-2022
	Number of data points used in the calculation of averages								
	High-quality liquid assets								
1	Total high-quality liquid assets (HQLA)					42,792	39,170	33,797	30,645
	Cash-outflows								
2	**Retail deposits and deposits from small business customers, of which:**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
3	- Stable deposits	-	-	-	-	-	-	-	-
4	- Less stable deposits	-	-	-	-	-	-	-	-
5	**Unsecured wholesale funding**	**21,495**	**19,334**	**16,211**	**15,640**	**18,987**	**17,029**	**14,116**	**13,687**
6	- Operational deposits (all counterparties) and deposits in networks of cooperative banks	-	-	-	-	-	-	-	-
7	- Non-operational deposits (all counterparties)	6,130	5,850	5,813	5,650	3,622	3,546	3,718	3,698
8	- Unsecured debt	15,365	13,484	10,398	9,989	15,365	13,484	10,398	9,989
9	**Secured wholesale funding**					**1,359**	**1,359**	**1,250**	**711**
10	**Additional requirements**	**7,784**	**9,427**	**11,638**	**13,889**	**5,391**	**6,026**	**6,714**	**7,429**
11	- Outflows related to derivative exposures and other collateral requirements	5,741	6,063	6,384	6,765	5,188	5,669	6,132	6,623
12	- Outflows related to loss of funding on debt products	-	-	-	-	-	-	-	-

	Scope of consolidation (consolidated)	Total unweighted value				Total weighted value			
13	- Credit and liquidity facilities	2,043	3,363	5,254	7,124	203	357	582	806
14	**Other contractual funding obligations**	**882**	**792**	**607**	**388**	**871**	**788**	**607**	**388**
15	**Other contingent funding obligations**	**6,515**	**5,448**	**4,086**	**2,866**	**631**	**523**	**378**	**243**
16	**Total cash outflows**					**27,238**	**25,726**	**23,065**	**22,458**
	Cash-inflows								
17	Secured lending (eg reverse repos)	247	218	158	158	167	167	46	114
18	Inflows from fully performing exposures	1,781	1,977	2,234	2,525	990	1,086	1,216	1,364
19	Other cash inflows	2,260	2,418	2,322	2,000	2,260	2,418	2,322	2,000
EU-19a	(Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in non-convertible currencies)					-	-	-	-
EU-19b	(Excess inflows from a related specialised credit institution)					-	-	-	-
20	**Total cash inflows**	**4,289**	**4,613**	**4,722**	**4,691**	**3,418**	**3,671**	**3,653**	**3,478**
EU-20a	Fully exempt inflows	-	-	-	-	-	-	-	-
EU-20b	Inflows subject to 90% cap	-	-	-	-	-	-	-	-
EU-20c	Inflows subject to 75% cap	4,209	4,562	4,670	4,639	3,418	39,170	3,653	30,621
21	**Liquidity buffer**					**42,774**	**39,170**	**33,772**	**30,621**
22	**Total net cash outflows**					**23,820**	**22,055**	**19,410**	**18,979**
23	**Liquidity coverage ratio (%)**					**183%**	**179%**	**157%**	**161%**

The table provides an overview of the LCR during 2022. For disclosure purposes, our LCR is based on the average of 12 data points for each quarter. The LCR remains well above the regulatory minimum requirements.

Funding outflows and outflows related to derivative exposures and collateral requirements are the main drivers for the liquidity outflow. The main items that affect the inflows of the LCR are the payments from fully performing exposures. The figures in LCR are steady for over a year and there are no significant changes in 2022.

The majority of funding is acquired from international capital markets. BNG Bank distinguishes between short-term and long-term funding (turning point: 1 year). The bank maintains a number of issuance programmes that enable it to have access to funding at all times at competitive levels. The bank pursues proactive investor relations which support these efforts.

The liquidity buffer is composed of cash and high-quality securities. At BNG Bank, this buffer consists mainly of Level 1 high quality liquid assets.

BNG Bank uses derivatives (interest rate swaps and cross currency swaps) to mitigate its interest rate risk and currency risk. The additional collateral requirements in the event of a decline in fair value of derivatives are based on a historical lookback approach.

The main currencies for BNG Bank are euro and US dollar. The liquidity buffer consists almost entirely of cash and securities in euros.

Funding types

The following resources are used for short-term funding (money markets):
- Commercial Paper: The bank has a European Commercial Paper (ECP) programme of EUR 20 billion and a US Commercial Paper (USCP) programme of USD 20 billion. Under normal market circumstances, a substantial margin is maintained between the maximum size allowed under the programme and the bank's actual usage.
- Repurchase transactions with interbank parties under a Global Master Repurchase Agreement (GMRA), where the bank's liquidity portfolio is used to pledge as collateral.
- Deposits from institutional money market parties.

The following programmes are available for long-term funding (capital markets):
- Debt Issuance Programme (DIP) of EUR 100 billion. Socially Responsible Investing (SRI) bonds are also issued under this programme.
- Kangaroo-Kauri Programme of AUD 10 billion, specifically for the Australian and New Zealand market.
- Samurai shelf registration and Uridashi shelf registration, specifically for Japanese investors.
- Namen-Schuld-Verschreibungen (NSV), under German Law.
- Private loan agreements under different legislations.

The bank also uses the following alternative funding sources:
- Long-term funding instruments provided by the European Central Bank, such as TLTRO.
- Global loans from the European Investment Bank and the Council of Europe Development Bank.
- Guaranteed Investment Contracts (GICs).

Note that the bank does not enter into transactions with private individuals.

The bank has a funding plan, in which the desired funding mix is described in detail. Part of the funding plan is the annual issuance in benchmark size to maintain a 'BNG curve' in the market. These large-scale issuances ensure that the bank has a high profile among investors, allowing it to retain access to investors even in times of market stress. The actual realisation of this desired funding mix or the reason for diverging from it is monitored and evaluated by the ALCO, by means of a quarterly funding dashboard provided by Treasury.

Net Stable Funding Ratio (EU LIQ2)

31-12-2022		Unweighted value by residual maturity				Weighted value
		No maturity	< 6 months	6 months to < 1 year	≥ 1year	
1	Capital items and instruments	3,965	309	-	-	3,965
2	*- Own funds*	*3,965*	*309*	-	-	*3,965*
3	*- Other capital instruments*		-	-	-	-
4	Retail deposits		-	-	-	-
5	*- Stable deposits*		-	-	-	-
6	*- Less stable deposits*		-	-	-	-
7	Wholesale funding:		13,729	8,902	77,973	83,974
8	*- Operational deposits*		-	-	-	-
9	*- Other wholesale funding*		*13,729*	*8,902*	*77,973*	*83,974*
10	Interdependent liabilities		-	-	-	-
11	Other liabilities:	-	391	-	-	-
12	*- NSFR derivative liabilities*	-				
13	*- All other liabilities and capital instruments not included in the above categories*		*391*	-	-	-
14	**Total available stable funding (ASF)**					**87,938**

31-12-2022		Unweighted value by residual maturity				Weighted value
		No maturity	< 6 months	6 months to < 1 year	≥ 1year	
15	Total high-quality liquid assets (HQLA)					962
EU -15a	Assets encumbered for more than 12m in cover pool		-	-	-	-
16	Deposits held at other financial institutions for operational purposes		-	-	-	-
17	Performing loans and securities:		7,545	5,510	81,137	70,750
18	*Performing securities financing transactions with financial customerscollateralised by Level 1 HQLA subject to 0% haircut*		-	-	-	-
19	*Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial institutions*		*1,244*	*39*	*945*	*1046*
20	*Performing loans to non- financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, of which:*		*6,247*	*4,804*	*77,620*	*67,151*

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31-12-2022		**Unweighted value by residual maturity**				**Weighted value**
		No maturity	< 6 months	6 months to < 1 year	≥ 1year	
21	*- With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		*3,143*	*1,766*	*30,504*	*24,032*
22	*Performing residential mortgages, of which:*		-	-	-	-
23	*- With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		-	-	-	-
24	*Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products*		*54*	*667*	*2,572*	*2,552*
25	Interdependent assets		-	-	-	-
26	Other assets:		2,404	89	2,515	-1,554
27	*Physical traded commodities*				-	-
28	*Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs*		-	-	*2,026*	*1,722*
29	*NSFR derivative assets*		-			-
30	*NSFR derivative liabilities before deduction of variation margin posted*		*3,977*			*199*
31	*All other assets not included in the above categories*		*-1,573*	*89*	*489*	*-3,475*
32	Off-balance sheet items		14	62	1,957	111
33	**Total RSF**					**70,268**
34	**Net Stable Funding Ratio (%)**					**125.15%**

30-9-2022		Unweighted value by residual maturity				Weighted value
		No maturity	< 6 months	6 months to < 1 year	≥ 1year	
1	Capital items and instruments	3,966	-	309	-	3,966
2	*- Own funds*	*3,966*	-	*309*	-	*3,966*
3	*- Other capital instruments*		-	-	-	-
4	Retail deposits		-	-	-	-
5	*- Stable deposits*		-	-	-	-
6	*- Less stable deposits*		-	-	-	-
7	Wholesale funding:		38,622	21,273	80,396	93,301
8	*- Operational deposits*		-	-	-	-
9	*- Other wholesale funding*		*38,622*	*21,273*	*80,396*	*93,301*
10	Interdependent liabilities		-	-	-	-
11	Other liabilities:	-	334	-	-2	-
12	*- NSFR derivative liabilities*	-				
13	*- All other liabilities and capital instruments not included in the above categories*		*334*	-	*-2*	-
14	**Total available stable funding (ASF)**					**97,267**

30-9-2022		Unweighted value by residual maturity				Weighted value
		No maturity	< 6 months	6 months to < 1 year	≥ 1year	
15	Total high-quality liquid assets (HQLA)					908
EU -15a	Assets encumbered for more than 12m in cover pool		-	-	-	-
16	Deposits held at other financial institutions for operational purposes		-	-	-	-
17	Performing loans and securities:		8,121	4,980	81,370	78,680
18	*Performing securities financing transactions with financial customerscollateralised by Level 1 HQLA subject to 0% haircut*		-	-	-	-
19	*Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial institutions*		*883*	*427*	*826*	*1101*
20	*Performing loans to non- financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, of which:*		*7,132*	*4,484*	*77,286*	*74,714*
21	*- With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		*3,060*	*1,835*	*30,322*	*31,433*

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30-9-2022		**Unweighted value by residual maturity**				**Weighted value**
		No maturity	< 6 months	6 months to < 1 year	≥ 1year	
22	*Performing residential mortgages, of which:*		-	-	-	-
23	*- With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		-	-	-	-
24	*Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products*		*106*	*69*	*3,257*	*2,865*
25	Interdependent assets		-	-	-	-
26	Other assets:		43,075	16	2,291	-987
27	*Physical traded commodities*				-	-
28	*Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs*		-	-	*1,953*	*1,660*
29	*NSFR derivative assets*		*535*			*535*
30	*NSFR derivative liabilities before deduction of variation margin posted*		*3,405*			*170*
31	*All other assets not included in the above categories*		*39,136*	*16*	*338*	*-3,352*
32	Off-balance sheet items		39	32	1,975	111
33	**Total RSF**					**78,712**

34	**Net Stable Funding Ratio (%)**	**123.57%**

31-12-2021		Unweighted value by residual maturity				Weighted value
		No maturity	< 6 months	6 months to < 1 year	≥ 1year	
1	Capital items and instruments	4,063	733	-	-	4,081
2	*- Own funds*	*4,063*	*733*	-	-	*4,081*
3	*- Other capital instruments*		-	-	-	-
4	Retail deposits		-	-	-	-
5	*- Stable deposits*		-	-	-	-
6	*- Less stable deposits*		-	-	-	-
7	Wholesale funding:		13,447	7,995	104,313	109,666
8	*- Operational deposits*		-	-	-	-
9	*- Other wholesale funding*		*13,447*	*7,995*	*104,313*	*109,666*
10	Interdependent liabilities		-	-	-	-
11	Other liabilities:	-	317	-	-	-
12	*- NSFR derivative liabilities*	-				
13	*- All other liabilities and capital instruments not included in the above categories*		*317*	-	-	-
14	**Total available stable funding (ASF)**					**113,747**

31-12-2021		Unweighted value by residual maturity				Weighted value
		No maturity	< 6 months	6 months to < 1 year	≥ 1year	
15	Total high-quality liquid assets (HQLA)					793
EU-15a	Assets encumbered for more than 12m in cover pool		-	-	-	-
16	Deposits held at other financial institutions for operational purposes		-	-	-	-
17	Performing loans and securities:		7,761	5,707	81,021	78,505
18	*Performing securities financing transactions with financial customerscollateralised by Level 1 HQLA subject to 0% haircut*		-	-	-	-
19	*Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial institutions*		*160*	*48*	*829*	*869*
20	*Performing loans to non- financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, of which:*		*7,409*	*5,461*	*76,376*	*74,198*
21	*- With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		*3,856*	*1,944*	*29,940*	*31,192*

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31-12-2021		**Unweighted value by residual maturity**				**Weighted value**
		No maturity	< 6 months	6 months to < 1 year	≥ 1year	
22	*Performing residential mortgages, of which:*		-	-	-	-
23	*- With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		-	-	-	-
24	*Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products*		*192*	*198*	*3,816*	*3,439*
25	Interdependent assets					
26	Other assets:		44,678	16,972	17,099	11,056
27	*Physical traded commodities*				-	-
28	*Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs*				*2,401*	*2,041*
29	*NSFR derivative assets*		*1,197*			*1,197*
30	*NSFR derivative liabilities before deduction of variation margin posted*		*13,336*			*667*
31	*All other assets not included in the above categories*		*13,960*	*38*	*165*	*7,150*
32	Off-balance sheet items		70	94	2,328	150
33	**Total RSF**					**90,503**
34	**Net Stable Funding Ratio (%)**					**125.68%**

Non-Financial risk

The non-financial risk section elaborates on operational risk, compliance risk, security risk and strategic risk. ESG risks might also have an impact on non-financial risk. Therefore, BNG Bank has started to incorporate climate related risks in the risk management framework also for these types of risk.

Operational risk

Definitions

Operational risk is defined as the risk of losses to earnings and capital due to shortcomings in internal processes, people and systems, or as a result of external events. Operational risk comprises the following risks:

- Process risk - the risk of shortcomings of internal processes supporting all activities related to products, services, clients, transactions (change risk, statutory reporting & tax risk).
- People risk - the risk of unintended actions from people, shortcomings in capacity and employee management (e.g. key person risk);
- Model risk - the potential loss an institution may incur, as a consequence of decisions that could be principally based on the output of internal models, due to errors in the development, implementation or use of such models.
- ICT risk - the risk of failure of hardware-, software- or network, supporting the activities in the business processes (ICT availability risk).
- Data management risk - the risk that data that are stored and processed are incomplete, inaccurate or inconsistent, impairing the ability of an institution to provide services and produce (risk) management information and financial information in a correct and timely manner.
- Outsourcing risk - the risk that the continuity, integrity and/or quality of activities outsourced to third parties or the equipment or staff provided by these third parties is adversely affected.
- Legal risk - the risk associated with the possibility that contractual stipulations prove unenforceable or have been incorrectly documented.
- Business continuity risk - the risk of unplanned, negative operational, financial, legal, reputational and other material consequences arising from the (partly) inability to continue the delivery of services within acceptable time frames at predefined capacity during a disruption due to outage or (partly) failure of ICT (including cloud and communication systems), buildings, locations, core-staff or chain-partners (ICT continuity risk).
- External event risk - the risk of events outside the Bank's direct or indirect control that can impact the Bank's operations.

Risk appetite

Operational risk is inherent in operating a business. Although BNG Bank is putting effort in the excellence of its business operations, mitigation of operational risks is based on a costs/economic benefits decision, except in case of compliance with legal and regulatory requirements and integrity, where the risks should be minimised.

Governance

The overarching governance-related developments in operational risk management relate to the Non-Financial Risk Committee (NFRC) and the implementation of a tool to support the management of non-financial risks. The NFRC became fully operational in 2022 and is formed by two members from the ExCo, the Chief Operating Officer (Chair) and Chief Risk Officer, as well as senior stakeholders from the first and second line of defense. The NFRC addresses non-financial risk related policies and developments on the internal control and risk management system as reported by the first line and by the second line, including the outcome of Risk Control Self Assessments on processes and incident management topics.

The implementation of a process management tool that will enable more effective and efficient management of the operational, compliance and security risks started with a pilot project for the Back-office process. After a successful pilot in the midst of the year, the further roll out has been executed and this will continue in 2023. This will support the execution and documentation of first line risk monitoring activities.

The Risk Management department has oversight on all operational risks, they report on a quarterly basis upon the bank-wide, aggregated exposure on operational risk of BNG Bank based on the risk appetite of the bank. The reports are discussed in the NFRC. A summary of the integrated report is included in the quarterly integrated Risk Report to the ExCo and Supervisory Board.

Business is the first line of defense and as risk owner has primary responsibility for managing operational risk in day-to-day operations, in line with policies, guidelines and internal process design. Internal processes are designed by process owners in association with the managers of the involved departments. All recurring processes are documented in process flows with triggers, actors, activities, used systems, documents and results. Although operational risks cannot and need not be fully mitigated, they must obviously be made transparent and manageable.

Risk Management challenges the first line on their management of operational risks. Risk Management monitors the risk activities of the first line and Risk Management is also involved in material projects, process changes and documentation as well as in the Product Approval and Review Process.

BNG Bank is convinced of the importance of the 'soft' component referred to as 'culture'. To improve risk awareness, a broad representation of the organisation is involved in various operational risk management activities and operational risk is regularly discussed.

Operational Risk Management instruments

The Risk Management department supports, advises and challenges line management through several operational risk management instruments.

Key Risk Indicators

The cascading of the bank's risk appetite for operational risk results in a risk tolerance statement especially focused on the components reputation and internal business operations. The operational risk exposure of the bank is measured by means of Key Risk Indicators (KRI) as a limit, target or information figure. The KRI's cover all categories of operational risk. The measurement of the KRI's in comparison to the risk appetite is reported on a quarterly basis in the operational risk report to the NFRC.

Risk Control Self-Assessments (RCSAs)

Risk Management facilitates and supports the business with the execution of Risk and Control Self-Assessments (RCSA) on their processes. Based on likelihood- and impact scales, the identified key risks and the related key controls are assessed, both inherently and as residual risks. Risk Management also challenges the process-owners on the results of the assessments and provides its own opinion and advises on necessary or potential improvements. The RCSA cycle is an annual cycle. Where necessary, Risk Management cooperates with Compliance and Security on their specific disciplines. The RCSA's form input for the monitoring programmes of the business for key control effectiveness testing.

Incident management

BNG Bank registers all operational incidents with a (potential) impact of EUR 5,000 or higher. To this end, employees are obliged to report all operational incidents to the Risk Management department. Root cause analysis and remedial actions directly related to the incident are the responsibility of the respective process owners, if necessary supported by Risk Management. In addition, Risk Management assesses whether the prevention of future similar incidents will require any adjustments to the process, systems or working methods. Risk Management reports significant incidents (amongst others with a (possible) impact from EUR 10,000 upwards) on a quarterly basis in the operational risk report to the NFRC. Risk Management also provides an annual report on incidents with an impact from EUR 100,000 upwards to the ExCo and the SB's Risk Committee.

Scenario-analysis
A scenario analysis on operational risk is performed on an annual basis. Scenarios are identified within the categories and subcategories of operational risk as well as within the Basel event types defined in legislation and reporting requirements. Based on these scenarios, the economic capital allocation for operational risk is underpinned.

Annual In Control cycle
The various risks posed by the bank's activities are discussed each year in BNG Bank's annual report. In their 'In Control Statement' to the Executive Committee, the managing directors and department heads report directly to the Executive Committee, focusing on risk management as it relates to the bank's risk appetite.

Developments 2022

Process risk (including change)
The bank has an ambitious change agenda to support the execution of its strategy. To ensure oversight and focus on the key priorities, the bank has adopted an Integral Portfolio Management approach (and related governance body) and further developed its Project Management Office. Furthermore, the transition to a new organisation structure and related processes have resulted in changes that require additional management and operational capacities. As a consequence, the bank has observed a deterioration in its operational risk profile.

The risk owners in the first line, are strengthening their own operational risk monitoring by means of explicit monitoring programmes for testing the effectiveness of their key controls. This is supported by the GRC tool.

In 2022 the annual Incidents Report contains 3 incidents with an estimated financial impact in excess of EUR 100,000, or material reputational impact. The number of operational incidents remained relatively stable compared to 2021.

People risk
People are an important asset. Adequate staffing is part of the annual planning and control cycle. Managers are responsible for human resource management within their department, supported by the Human Resource Management department. In 2022 a higher staff turnover is observed in key positions within the bank. Key person risk is closely monitored and managed.

To cope with the operational challenges resulting from the change agenda, the bank has increased its capacity and capabilities by hiring temporary external staff. Due to the difficult job market, especially in the IT-area, a number of internal vacancies have to be filled in by external hires as well. BNG Bank is also aware and keen to strengthen the knowledge and experience of its own employees and has set up a new training portal for personal development.

Model risk
During 2022 BNG Bank further strengthened the Model Risk Management team and made updates in its model governance and model validation policy, in order to strengthen the controls around proper use of models. Several

model validations were performed, some of them with external support, in order to monitor the appropriateness of the internal models.

ICT risk

BNG Bank's IT strategy aims to develop and maintain information systems that allow the bank to continue executing its business strategy successfully. The IT strategy is annually reviewed based on business objectives and external developments.

BNG Bank has outsourced its ICT infrastructure and technical support. For each application, clear arrangements are in place with respect to the availability and loss of data and control the availability and continuity risk.

The ICT environment is gradually moving from an on-premise environment located at the bank's main outsourcing partner towards cloud services provided by multiple outsourcing partners. To select and review cloud services the vendor management processes are followed to ensure appropriate assurance on delivered services. A risk analysis is performed and an assessment is made based on a set of requirements that determine minimum service level. The selection of outsourcing partners is subject to stringent criteria. Based on policies regarding information security, outsourcing, cloud computing and architecture, the decision to select a cloud application is made by the IT Risk Working Group. The working group discusses and approves risk assessments on applications, outsourced services and projects within the mandate of the working group. Risks outside risk appetite are escalated towards the NFRC when needed.

The management of ICT risk is based on the application of preventive measures. These measures are aimed at preventing or detecting potential or actual incidents and avoiding potential damage or restoring the desired situation as quickly as possible.

The agile methodology DevOps has been adopted for change management. All projects are initiated and managed via a project portfolio. Many changes in systems are prompted by changing laws and regulations.

The dependency on outsourcing partners has increased the risk profile regarding IT performance, due to the developments related to one important partner. Furthermore, the IT-related control framework was subject to an internal review in 2022 and further improvements are being prepared to ensure and maintain an adequate maturity level of IT-related controls. The bank considers this a key priority.

Data management risk

Data quality continues to be of high importance, as data quality is the basis for reliable business operations and management information. In operational processes as well as in projects, departments cooperate on improving data quality. Data Owners are accountable for the data and the quality of data within their domain. The Data Governance Office advises on subjects regarding data, facilitates automated data quality monitoring and supports further developing of the data quality framework.

A strategic goal is to create a common data source, the central data warehouse, for analysis, reporting and reconciliation. The development and maintenance of the central data warehouse requires a large amount of ICT capacity, also for the next few years. With the development of the central data warehouse, the possibilities of data reconciliation and data lineage will further increase. The Data Governance Roadmap will be further executed in 2023.

The project Data Insight 2.0 was started to further improve the central data warehouse. It is expected that data quality and its monitoring will improve and that the number of manual interventions will decrease.

Outsourcing risk

A dedicated Vendor Management department was set up to uplift the vendor management activities of the bank. As part of these activities all main outsourcing partners were reviewed against the EBA Guidelines on Outsourcing Arrangements. A number of outsourcing partners is classified as 'critical or important'.

BNG Bank manages the activities performed by its partner via Service Level Agreements and the bank's internal demand organisation. BNG Bank regularly monitors and evaluates the service provider's services. The annual ISAE 3402 type II statement is part of the procedure. The IAD's periodical audits provide additional assurance. The operational services are, in general, in line with the agreed service level.

BNG Bank's most important outsourcing contract includes payment transactions, current account administration, the computing centre and workstation management. In 2022 multiple changes and developments within one important outsourcing partner were subject of concern and closely monitored. The bank is also closely monitoring the financial situation of this outsourcing partner.

The bank further strengthened the internal controls relating to outsourcing risks, such as timely risk assessments and review on assurance reports.

Legal risk

The bank has a Legal Affairs and Tax department (JFZ), whose tasks and responsibilities include drafting and/or reviewing legally sound arrangements with clients and other parties. Where applicable, the JFZ department seeks external assistance; for example, in the event of complex (often syndicated) transactions and in cases requiring specialist legal knowledge. To the extent external documentation is used, these contracts are drafted by or reviewed by external counsel, usually on the basis of internationally accepted Loan Market Association standards (LMA-standards).

In the third quarter of 2022, BNG Bank has taken legal action in a dispute with the Dutch Central Bank (DNB) regarding an operational incident from 2021 whereby the bank has not been granted the first conditional bonus rate from the TLTRO programme. This resulted in a negative impact of EUR 57 million. See the annual financial results in 2021 for more information. As at year end 2022, BNG Bank was not involved in any legal proceedings with material financial loss.

Business continuity risk

In order to guarantee the continuity of ICT support within the bank, annual fall-back tests are conducted for critical applications. As in previous years, the tests demonstrated that the bank's backup systems are adequately equipped to ensure that services continue as normal in the event of a calamity.

External event risk

In 2022 the activities relating to the Covid-19 pandemic (such as the calamity team that was in place) were downsized. Furthermore, relevant policy documents were reviewed for including ESG- climate & environmental topics.

Compliance risk

Definitions
Compliance risk is the risk of insufficient compliance with or recognition of corporate values, codes of conduct, generally accepted social standards and values, laws, regulations and supervisory requirements. Compliance risk comprises the following risks:
- Integrity risk -the risk of unethical or unprofessional behaviour of the organisation, its employees or third parties that can be directly or indirectly attributed to the bank and which is in breach of social and institutional standards and/or applicable legislation and regulations (conduct, financial crime risk, internal fraud risk and external fraud risk);
- Regulatory compliance risk - the risk of breaches of applicable laws, regulations (including codes and covenants) and supervisory requirements, inadequate response to regulatory change or ineffective relationships with regulators.

Risk appetite
BNG Bank has defined an integrity and compliance risk appetite as part of its risk appetite. The bank pursues an outstanding integrity profile and expects its employees, clients, counterparties and third parties relevant to the bank to satisfy its integrity requirements. With regard to rules and regulations, the bank aims to ensure sound conduct, ethical business practices and compliance with relevant legislation and regulations as well as relevant criteria of the regulatory bodies.

Governance
Managing the compliance risks is the responsibility of all departments of the bank. An independent compliance function supports the organisation in performing the Systematic Integrity Risk Analysis (SIRA), developing and advising on compliance policies, organising the process of identification and impact assessment of regulatory developments and advising, monitoring and reporting on integrity and regulatory compliance risks.

In its compliance charter the bank has defined the objective and scope of the second line compliance function as well as the compliance cycle which forms the basis for all activities of the compliance department. The compliance charter can be found on the website.

Main tools to detect significant instances where BNG Bank operates outside its integrity risk appetite are:
- Identification of risks and controls in annual SIRA workshops, Risk Control Self Assessments and corresponding controls to mitigate identified key risks.
- Execution of risk-basedmonitoring programmes by both first and second line departments to monitor the effectiveness of the controls.
- Procedures to manage incidents.

Additional assurance on our compliance risk management is provided by internal and external audits as well as frequent contact with supervisors.

Each quarter the integrated risk report provides information to both ExCo and SB on the state of play of those risks. The quarterly compliance report provides further details on the compliance risks and is discussed each quarter in the Non-Financial Risk Committee, Executive Committee and Risk Committee.

Developments 2022

In 2022, substantial progress was made in the further professionalisation of the Compliance Cycle and the maturity level of the compliance activities was raised. Both first line departments and the Compliance department have continued their efforts to strengthen compliance risk management in 2022. The risk based compliance monitoring programme as well as the regulatory change process have been enhanced. In the course of 2022 GRC tooling was implemented for a number of processes, to facilitate effective execution of those programs. This tool will be expanded to other processes in 2023.

The number of compliance related internal staff in the first as well as second line departments have increased to ensure sufficient resources are available for execution of the Compliance Cycle. Simultaneously, the Compliance department reduced the number of external staff which temporarily supported BNG Bank in improving the compliance management cycle with a focus on CDD policy development, monitoring and training activities, enhancing the privacy organisation and the regulatory change process.

During 2022, the Compliance department determined that BNG Bank did not fully operate within its risk appetite for compliance risks. This specifically related to the increasing requirements on CDD-processes, the complexity to effectively execute a privacy framework and the challenges of the regulatory landscape. However, no significant risks materialised. As detailed in the respective sections below, enhancements in its controls to mitigate those risks were ongoing in 2022 to ensure that BNG Bank operated within its risk appetite.

Financial Economic Crime

Both counterparties on the money and capital markets as well as the clients in the Dutch public domain are subject to a CDD policy. This policy is based on our commitment to high standards of integrity and our role as gatekeeper to the financial system. As part of this commitment BNG Bank has a transaction monitoring system in place to detect suspicious transactions.

After its formation in 2021, the first line Client Integrity department focused in 2022 on reducing the remaining backlogs in CDD-processes, improving the quality of CDD analyses and advancing its transaction monitoring techniques. No breaches of the sanction lists have been identified.

A specific priority in 2022 were the frequent updates of sanction lists due to the Russia-Ukraine conflict. BNG Bank performed periodic screenings of updated sanction lists on its entire client and counterparty portfolio as well as its vendors. Transaction data were monitored closely to identify any transactions that could be related to entities which were mentioned on any of the applicable sanction lists. Municipalities that qualified for temporarily exemptions in their energy contracts with sanctioned parties have been contacted by BNG Bank to ensure the required substantiation and attestation were in place.

Conduct risk

To safeguard its integrity as well as the integrity of its staff, clients, counterparties and other third parties and the provision of fair products and services, the bank applies internal policies and rules of conduct including the bank's code of conduct. Policies are published internally and are available to all employees. Maintaining and increasing awareness of applicable policies is a responsibility of both managers and the Compliance department. New employees are informed of these policies when they start their employment.

Employees can consult their manager, the Compliance department as well as the Human Resources department if they want advise on compliance policies. Furthermore, whistle blower and complaints schemes as well as counsellors are in place for employees to raise any concerns about the business conduct. For clients and other parties a compliant procedure is in place which is made public through the website.

Incidents that were detected in 2022 through these procedures have not led to any significant impact. Most incidents related to confidential information for which the protection was breached or the protection was deemed insufficient. These incidents have not led to any complaints concerning breaches of customer privacy.

Improvements in the protection of personal data are part of the implementation of the new privacy organisation for which the policy and framework was drafted in 2021. The implementation was executed in 2022 in a separate project.

No incidents have been detected in respect of corruption (or other unacceptable conduct). As with other integrity risks, the risk of (indirect) involvement in corruption is part of the annual SIRA-cycle. Therefore, all process owners annually assess their risks related to corruption. Inherent risks to corruption are identified in the commercial processes, but are considered to be limited after taken into account the bank's policies and code of conduct, that mitigate these risks. As a result of the consideration, no specific training on anti-corruption has been provided in 2022.

Fraud risk

Identification and mitigation of fraud risks have a high priority as these risks can cause direct financial impact to BNG Bank and/or its clients. Additionally these risks can impact its reputation as a reliable financial institution. Therefore, fraud risks are analysed together with the other integrity risks in the annual SIRA-cycle. Workshops are organised for all processes to discuss which scenarios of fraud could potentially occur. Controls which mitigate those scenarios are identified. The residual risks are mapped to the risk appetite to determine whether additional measures are required. In 2022, no new risk scenarios or measures concerns have been identified.

BNG Bank detected no internal fraud cases and no internal fraud investigations were conducted in 2022. Neither is BNG Bank aware of any external fraud occurrences regarding BNG Bank itself.

Regulatory compliance risk

Regulatory requirements continue to be highly demanding and require continued, intense effort by the organisation. Furthermore, the requirement of a demonstrable compliance has grown of importance. The processes to deal with this ongoing changing environment are now incorporated into a dedicated regulatory change framework (RCF). It consists of a policy, working methods, roles and responsibilities in order to ensure that new or amended legislation and regulations are detected, analysed and implemented in time. After implementation of the RCF in the first half of 2022 a maturity model has been incorporated in the RCF to guide further enhancements. These are aimed at improving the effectiveness of the processes as well as the oversight for process owners, senior management and the compliance function.

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With respect to existing laws and regulations risk based monitoring programmes periodically review whether compliance is safeguarded. Internal monitoring activities, supervisory requests,regulatory changes and incidents resulted in the identification of several topics where timely and full compliance with law and legislations could be improved. In some cases the shortcomings are followed-up closely by the supervisors, while in other cases they are managed solely internally. Most significant instances relate to enhancements to the role of BNG Bank as gatekeeper to the financial system, its processes to manage IT and privacy related risks and its external reporting capabilities. Actions to follow-up on those instances were already in place or were initiated immediately after detection. In 2022 no instances were observed where BNG Bank incurred a fine or sanction or was involved in legal proceedings for non-compliance with laws and regulations. There were no outstanding fines or sanctions from previous years of non-compliance.

Security risk

Definitions

Security risk is the risk of compromising data or ICT systems and/or damage or harm to locations, buildings, equipment, personnel or visitors. Security risk comprises the following risks:
- Information Security (incl. cyber risk) - the risk of data loss/breach, unauthorised obtaining of data, unauthorised access, use, disclosure, disruption, modification or destruction of data, ICT systems, endpoints and media.
- Physical security risk - the risk of unauthorised access to or use of locations or buildings, unauthorised obtaining of equipment and physical damage or harm to equipment, personnel or visitors.

Risk appetite

Security risk is inherent in the daily business of the bank. BNG Bank is prudent with regard to managing security risk and will therefore not accept security risks with a high or critical impact.

Governance

The security function provides support to the ExCo and line management in order to safeguard the reliability and continuity of the business processes as well as to be in control of security risks. The 1st line security department is positioned in the COO column, with a direct reporting line to the COO. The second line security department is positioned in the CRO column, with a direct reporting line to the ExCo and Risk committee. The purpose, position and authorities of the Security function are documented in the Security Charter.

The first line is responsible for identifying, analysing and mitigating (cyber) security risks and for reporting on the effectiveness of security safeguards.

The second line security department is responsible for developing and maintaining the security policy and the execution of the security awareness programme. Furthermore the second line security department is responsible for monitoring, facilitating, supporting and challenging the business (including the first line Security department) in order to safeguard the reliability (confidentiality, Integrity and availability) of data, the IT-infrastructure, physical infrastructure and the critical business processes against (cybersecurity) threats. Furthermore the second line security department is responsible for the reporting on security risks to ensure that BNG Bank operates within its security risk appetite.

Developments

No major security incidents occurred in 2022. To improve employee security awareness, quarterly phishing tests were performed in the past year. Furthermore, security training sessions and serious gaming sessions (as part of BNG Bank's knowledge programme) as well as security awareness presentations were conducted.

The first line security function has been strengthened. BNG Bank's second line Security department challenges the IT department, including its IT projects and critical IT changes, regarding security aspects. Furthermore, the Security department monitors the quality of disaster recovery exercises.

To improve management of (cyber)security risks, security assessments and ethical hack tests have been performed. Findings are addressed through a focussed security programme to ensure the bank operates within its security risk appetite. The bank has also strengthened its cyber security capacity and will continue to expand its security teams in 2023.

Strategic risk

Definitions

Strategic risk is defined as the risk that the institutions' strategic decisions could result in losses to earnings and capital due to changes beyond the control of the institution or group in the area of the political climate, regulatory developments, reputation and business climate. In addition to general strategic risks, the following aspects can be identified:

- Political risk - the risk that the institution's competitive and market position will be influenced by the political climate and stakeholder influence.
- Regulatory risk - the risk that developments in regulatory requirements will materially impact the business model and complexity of operations.
- Reputation risk - the risk that the institution's market position will deteriorate due to a negative perception of its image amongst stakeholders (step-in risk).
- Business climate risk - the risk of losses to earnings and capital due to environmental changes in terms of the economy, stock exchange climate, wage and/or purchasing power developments, broader society, technology and by the activities, actions and/or decisions of (new) competitors.
- ESG-risk - the impact that ESG-factors might have as risk driver on this traditional risk category.

Risk appetite

For strategic risk, it is relatively difficult to determine the extent to which risks are assumed, since they are particularly driven by external factors and are therefore less easily influenced. However, the bank needs to address the risks that emerge from changes in its environment. Given its close ties to the Dutch public sector, its sensitivity to government policy and its status as a promotional bank, political risk and regulatory risk are important elements. To monitor and mitigate these risks, the bank is permanently in close contact with its stakeholders. In addition, it observes and analyses the regulatory processes, and it participates in several banking associations.

To remain relevant, it is essential for the bank to be responsive to new external developments. As of 2021 the bank actively targets to increase its sustainable footprint by executing the strategy "Road to Social Impact" in which five Social Development Goals (SDG's) are adopted. In 2022, the bank continues to target on five selected Social Development Goals (SDG's) with the objective to maximise its social impact:

- SDG 3: Good health and well-being
- SDG 4: Quality education
- SDG 7: Affordable and clean energy
- SDG 11: Sustainable cities and communities
- SDG 13: Climate Action.

Through engagement in client partnerships, BNG Bank aspires to be a partner for its clients that actively contributes to the resolution of social challenges that its clients have to cope with. Starting with the 'E' of 'ESG', at the end of 2022 the bank published a Climate Action Plan in which it specifies its customer engagement in relation to the climate. To execute this Climate Action Plan the bank will walk untrodden paths in the next years. This is a strategic challenge, but BNG Bank believes it should be entering into a medium to long term commitment in order to take its responsibility regarding ESG. Regarding people, process and systems many change projects were executed in 2022 to adapt to the current and future challenges that ESG challenges pose to the bank. The bank expects this process to continue during the next years.

Governance
Strategic risks are primarily driven by external factors and closely interlinked with the strategic elements in the business plan. In addition, they interlink with other risk types. For instance, operational risks can reach a dimension in which they can have a serious effect on the reputation of BNG Bank or, conversely, a changing business climate causes changes in the credit risk or interest rate risk profile of BNG Bank. Therefore, strategic risk has no dedicated general policy of its own. Instead, BNG Bank's responses to strategic risks are incorporated in the annual plan and the business plans of the individual departments. Furthermore, they are incorporated in the stress-testing programme and are also addressed in the Capital Management Plan (as part of the ICAAP).

Decisions on strategic risk are the responsibility of the ExCo, although, depending on the nature of the strategic risk, discussions can also take place in specific ExCo committees.

The identification of strategic risks is part of the strategic decision process. The monitoring of measures and actions to mitigate strategic risk is part of the planning and budget cycle. Moreover, the reporting on strategic risks is part of the Risk Management cycle.

Political risk
Because public authorities are both shareholders and clients, the bank's dependence on political decisions is high. This is especially the case for decisions that impact regulations for client sectors which represent significant portions of the bank's balance sheet, such as housing or healthcare.

Regulatory risk
Regulations are subject to continuous changes and extensions, mostly aimed at improving the safety of banks and often resulting in higher capital requirements or stricter requirements with regards to governance and risk management. BNG Bank is specifically exposed to potential changes in solvency requirements related to zero-risk weighted lending, since most of its assets are zero-risk-weighted and therefore have a relief in capital requirements. A non-zero risk weight for these exposures could have an unfavourable impact on the bank's capital.

Reputation risk
As a public sector bank, it is of vital importance that the products and services that the bank provides to its clients support their role in the Dutch public sector. To an important degree, its product offering is tailored to the client's requests. The bank provides loans with long maturities and advanced cash flow schemes as requested by their clients. But the bank also shows reticence if it's not sufficiently clear that a certain product is in the clients' interest. This applies in particular to smaller organisations of which the bank has reason to believe that the in-house expertise may be insufficient to manage the risks of that product. This is factored into the bank's Product Approval and Review Process, which uses product templates that explicitly address the type of client that the product is suitable for, as well as the risks and limitations of the product for both client and bank.

Reputation risk also applies to the bank's other stakeholders, such as investors and shareholders. It often arises as a consequential risk if other risks are not properly controlled. As a result, it makes up an integral part of all aspects of the bank's risk policy. Mitigation of the various risks therefore indirectly safeguards the bank's reputation. Instruments to manage reputation risk includes stakeholder dialogues to align expectations.

Business climate risk
Regarding competition, the market segments in which BNG Bank operates are characterised by relatively low margins. Although non-financial institutions may benefit from having regulatory advantages they have not entered these markets on a large scale. Scale and processing efficiency are key to servicing low-margin portfolios. To a certain extent, the low interest rates of the preceding years on government bonds made the public sector

market more attractive for investors, but in 2022 interest rates on government bonds rose sharply, reducing this effect. Following the retrenchment of the TLTRO conditions, the bank has decided to reduce its TLTRO funding.

The low interest rate environment and the rising costs are putting pressure on the earnings of banks in general and this holds for BNG Bank as well. Since the main interest of BNG Bank's shareholders is low credit pricing, the return on equity is of subordinate importance. This is reflected in the return on equity for the bank as defined by its main shareholder.

ESG risk

Physical exposure to changes in climate, developments in clean technology and public opinions can adversely impact the business models of our clients and the value of their assets. If not managed properly, this could lower their credit ratings which would result in higher risks and capital costs for the bank. To identify the material sectors for monitoring purposes, the bank is conducting an analysis per client sector in which it operates, to define the material ESG-related credit risks.

Developments

Strategic risks are constantly evolving and BNG Bank had to respond to a wide range of external developments in addition to the COVID-19 pandemic. Specifically, the Russia-Ukraine conflict, the Non-performing Exposure (NPE) backstop regulations and the need for addressing ESG in its strategy and processes have added more complexity to the environment in which the bank operates.

Government guaranteed credit exposures are also subject to the NPE backstop regulation. This regulation prescribes write-offs to non-performing loans after a certain period of time, even if a full guarantee is in place. Although the details of the regulation may be still be amended, this regulation in its current form may have consequences for the way the bank finances guaranteed clients in the future. In addition, concentration limits on government exposures would be an obvious threat to the bank's business model, that could also be harmed by other regulatory restrictions in lending to its main client sectors.

The bank has recalibrated its priorities to improve internal alignment with the strategic direction and associated goals. This has enhanced focus and is expected to have a positive contribution to the execution power of the bank.

BNG Bank has foreseen that ESG factors will have a potential material impact on the following risk categories in the long run: counterparty and concentration credit risk, spread risk, short-term liquidity risk, data management risk, model risk, external event risk and strategic risk (related to regulatory adjustments and BNG Bank's reputation and business model). In 2022, the bank has started to conduct impact and materiality assessments on ESG and will continue to complete this exercise for all relevant risk categories.

Further incorporation of ESG risks into the internal control and risk management framework has been an important focus for 2022 and this will continue to be a key priority in 2023 and beyond.

SCOPE OF APPLICATION (ART 436 CRR)

The requirements of the CRR apply to BNG Bank. BNG Bank has two subsidiaries that operate in support of the bank's core business activity. There is no difference in scope of consolidation for accounting and prudential purposes for BNG Bank. Each year, BNG Bank prepares consolidated financial statements for the parent company and its subsidiaries. The financial statements of the parent company and its subsidiaries, which are used to prepare the consolidated financial statements, are drawn up at the same reporting date and are based on uniform principles. All intra-group transactions and balances, including income, expenses and dividends, have been fully eliminated in the consolidated financial statements. The consolidated financial statements comprise the following subsidiaries over which BNG Bank has control:

- BNG Gebiedsontwikkeling directly or indirectly provides venture capital or other capital to public authorities and directly or indirectly participates in and/or cooperate with projects, either with or on behalf of public authorities or institutions affiliated with public authorities.
- Hypotheekfonds voor Overheidspersoneel finances mortgage loans for civil servants employed by an affiliated public or semi-public institution with which a cooperation agreement has been reached.

Differences between accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories (EU LI1)

31-12-2022	Carrying values of items					
	Carrying values as reported in published financial statements and for regulatory consolidation	Subject to credit risk framework	Subject to counterparty credit risk framework	Subject to securitisation framework	Subject to market risk framework	Not subject to capital requirements or subject to deduction of capital
Assets						
Cash and balances with the central bank	6,821	6,821	-	-	-	-
Amounts due from banks	346	346	-	-	226	-
Cash collateral posted	4,144	3	4,141	-	104	-
Financial assets at fair value through the income statement	901	901	-	-	487	-
Derivatives (assets)	3,737	-	3,737	-	3,645	-
Financial assets at fair value through other comprehensive income	7,398	7,398	-	-	23	-
Interest-bearing securities at amoritsed cost	7,636	2,021	-	5,615	594	-
Loans and advances at amortised cost	89,624	89,624	-	-	92	-
Value adjustments on loans involved in portfolio hedge accounting	-8,679	-	-	-	-	-
Associated and joint ventures	24	24	-	-	-	-
Property & equipment	13	13	-	-	-	-
Other assets	109	109	-	-	56	-
Assets held for sale	-	-	-	-	-	-
Total assets	**112,074**	**107,261**	**7,877**	**5,615**	**5,226**	**-**
Liabilities						
Amounts due to banks	4,012	-	-	-	140	3,872
Cash collateral received	1,173	-	1,173	-	-	-
Financial liabilities at fair value through the income statement	185	-	-	-	173	12
Derivatives	6,129	-	6,129	-	6,129	-
Debt securities	90,774	-	-	-	30,732	60,042
Funds entrusted	4,785	-	-	-	517	4,268
Subordinated debts	38	-	-	-	-	38
Current tax liabilities	11	-	-	-	-	11
Deferred tax liabilities	14	-	-	-	-	14
Other liabilities	338	-	-	-	59	279
Total Liabilities	**107,459**	**-**	**7,303**	**-**	**37,750**	**68,535**

31-12-2021	Carrying values of items					
	Carrying values as reported in published financial statements and for regulatory consolidation	Subject to credit risk framework	Subject to counterparty credit risk framework	Subject to securitisation framework	Subject to market risk framework	Not subject to capital requirements or subject to deduction of capital
Assets						
Cash and balances with the central bank	9,264	9,264	-	-	-	-
Amounts due from banks	163	163	-	-	40	-
Cash collateral posted	12,993	2	12,991	-	-	-
Financial assets at FVTPL	1,383	1,383	-	-	771	-
Derivatives (assets)	5,685	-	5,685	-	5,685	-
Financial assets at FVOCI	8,572	8,572	-	-	23	-
Interest-bearing securities at AC	7,632	2,336	-	5,295	1,134	-
Loans and advances	89,738	89,738	-	-	98	-
Value adjustments on loans involved in portfolio hedge accounting	13,555	13,555	-	-	-	-
Participating interests	28	28	-	-	-	-
Property and equipment	15	15	-	-	-	-
Other assets	21	21	-	-	-	-
Current tax assets	-	-	-	-	-	-
Assets held for sale	8	-	8	-	-	-
Total assets	**149,057**	**125,077**	**18,684**	**5,295**	**7,751**	**-**
Liabilities						
Amounts due to banks	19,525	-	-	-	666	18,859
Cash collateral received	984	-	984	-	-	-
Financial liabilities at FVTPL	310	-	-	-	273	37
Derivatives (liabilities)	16,935	-	16,935	-	16,907	-
Debt securities issued	101,355	-	-	-	35,590	65,764
Funds entrusted	4,525	-	-	-	491	4,034
Subordinated debts	36	-	-	-	-	36
Current tax liabilities	32	-	-	-	-	31
Deferred tax liabilities	77	-	-	-	-	77
Other liabilities	216	-	-	-	3	211
Total Liabilities	**143,995**	-	**17,919**	-	**53,930**	**89,049**

Main sources of differences between regulatory exposure amounts and carrying values in financial statements (EU LI2)

31-12-2022	Total	Items subject to: Credit risk framework	Counterparty credit risk framework	Securitisation framework	Market risk framework
Asset carrying value amount under scope of regulatory consolidation (as per template LI1)	**125,980**	107,261	7,877	5,615	5,226
Liabilities carrying value amount under regulatory scope of consolidation (as per template LI1)	**45,053**	-	7,303	-	37,750
Total net amount under regulatory scope of consolidation	**80,927**	**107,261**	**575**	**5,615**	**-32,523**
Off-balance sheet amounts before CCF after provisions	**11,161**	11,010	-	151	-
Differences due to application of the overall net FX position	**32,523**	-	-	-	32,523
Differences due to application of Mark-to-Market Method and contractual netting for CCR	**2,515**	-	2,515	-	-
Differences between financial statements and exposure value due to valuation and netting	**-4**	247	-	-252	-
Exposure amounts considered for regulatory purposes	**127,123**	**118,518**	**3,090**	**5,514**	**0**

31-12-2021	Total	Items subject to: Credit risk framework	Counterparty credit risk framework	Securitisation framework	Market risk framework
Asset carrying value amount under scope of regulatory consolidation (as per template LI1)	**156,800**	125,076	18,676	5,296	7,752
Liabilities carrying value amount under regulatory scope of consolidation (as per template LI1)	**71,849**	-	17,919	-	53,930
Total net amount under regulatory scope of consolidation	**84,951**	**125,076**	**757**	**5,296**	**-46,178**
Off-balance sheet amounts before CCF after provisions	**10,702**	10,546	-	156	-
Differences due to application of the overall net FX position	**46,178**	-	-	-	46,178
Differences due to application of Mark-to-Market method and contractual netting for CCR	**2,442**	-	2,442	-	-
Differences between financial statements and exposure value due to valuation and netting	**231**	560	-	-329	-
Exposure amounts considered for regulatory purposes	**144,504**	**136,182**	**3,199**	**5,123**	**-**

Explanations of differences between accounting and regulatory exposure amounts (EU LIA)

The consolidation scope for the purpose of calculating Regulatory Capital is equal to the consolidation scope under IFRS. The main differences between the carrying value of assets under the scope of regulatory consolidation and the exposure amounts considered for regulatory purposes can be explained by the inclusion of the off-balance sheet liabilities in the exposure amounts for regulatory purposes, the exclusion of items that are capital deducted, and the different valuation of derivatives due to netting rules and collateral. The market risk framework for regulatory purposes for BNG Bank consists only of the standardised approach for foreign exchange risk. In Table EU LI1, the column for the market risk framework shows all transactions with a foreign currency component. After eliminating the transactions denominated in euros, the remaining positions, subject to capital charge, are nil for year-end 2022 and 2021 (Table EU LI2).

Outline of the differences in the scopes of consolidation (entity by entity) (EU LI3)

Name of the entity	Method of accounting consolidation	Method of regulatory consolidation				Description of the entity
		Fully consolidated	Proportional consolidated	Neither consolidated nor deducted	Deducted	
BNG Gebieds-ontwikkeling BV	Fully consolidated	x				Directly or indirectly provides venture capital or other capital to public authorities and directly or indirectly participates in and/or cooperate with projects, either with or on behalf of public authorities or institutions affiliated with public authorities.
Hypotheek-fonds voor Overheidspersoneel BV (HvO)	Fully consolidated	x				Finances mortgage loans taken out by civil servants in the employ of an affiliated public or semi-public institution with which a cooperation agreement has been reached. On 12 December 2022, the portfolio was sold to National Nederlanden Bank N.V. (NN Bank). HvO will be wound up.

OWN FUNDS (ART 437 CRR)

In response to the COVID-19 pandemic several actions by legislators and regulators have been taken. The most important being the adoption of the so called 'Banking Package' and the measures taken by the European Central Bank. BNG Bank has decided not to use these measures, except for the allowance to temporarily exclude central bank reserves from the leverage ratio exposure measure. This measure was extended to 31 March 2022.

Balance sheet reconciliation

BNG Bank's capitalisation is well above the fully-loaded capital requirements laid down in the Capital Requirements Directive (CRD). The capital structure consists mainly of common equity. The other part consists of additional Tier 1 instruments.

Share capital

The authorised capital is divided into 100 million shares with a nominal value of EUR 2.50 each, of which 55,690,720 shares have been issued and fully paid up. The number of shares in circulation remained unchanged during the financial year. There are no issued shares that are not fully paid up. BNG Bank and its subsidiaries hold no company shares. None of the shares carry preferential rights, nor are they subject to restrictions. There are no options that can be exercised to obtain entitlement to the issuance of shares.

Equity attributable to the shareholders includes reserves which consist of a revaluation reserve, the cash flow hedge reserve, a reserve for fair value increases as well as retained earnings from previous years. This equity amounts to EUR 4,306 million at end of 2022 (2021: EUR 4,329 million). A full breakdown of total equity is included in the annual report (pp. 154-156).

Additional tier 1 capital

The bank's hybrid capital amounts to EUR 309 million, a reduction of EUR 424 million compared to last year. The change is due to the redemption of one of the AT1 instruments outstanding. Hybrid capital concerns perpetual loans involving an annual non-cumulative discretionary payment on the outstanding principal amount, subject to compulsory amortisation in the event that the CET1 ratio falls below 5.125%. The payment qualifies as dividend under IFRS and is charged to the Other reserves. The instrument is structured in line with CRR requirements and the EBA guidelines and qualifies as additional Tier 1 capital. BNG Bank has the unilateral contractual option of repaying the perpetual capital instruments on the sixth coupon due date and subsequently every year on the coupon due date.

The table shows the reconciliation of regulatory own funds to balance sheet.

Reconciliation of regulatory own funds to balance sheet in the audited financial statements (EU CC2)

	Carrying values as reported in published financial statements and for regulatory consolidation	
	31-12-2022	31-12-2021
Assets		
Cash and balances held with central banks	6,821	9,264
Amounts due from banks	346	163
Cash collateral posted	4,144	12,993
Financial assets at fair value through the income statement	901	1,383
Derivatives	3,737	5,685
Financial assets at fair value through other comprehensive income	7,398	8,572
Interest-bearing securities at amortised cost	7,636	7,632
Loans and advances at amortised costs	89,624	89,738
Value adjustments on loans in portfolio hedge accounting	-8,679	13,555
Associates and joint ventures	24	28
Property & equipment	13	15
Other assets	109	21
Assets held for sale	-	8
Total assets	**112,074**	**149,057**
Liabilities		
Amounts due to banks	4,012	19,525
Cash collateral received	1,173	984
Financial liabilities at fair value through the income statement	185	310
Derivatives	6,129	16,935
Debt securities	90,774	101,355
Funds entrusted	4,785	4,525
Subordinated debts	38	36
Current tax liabilities	11	32
Deferred tax liabilities	14	77
Other liabilities	338	216
Total Liabilities	**107,459**	**143,995**
Equity		
Share capital	139	139
Share premium reserve	6	6
Retained earnings	3,824	3,736
Revaluation reserve	4	83
Cash flow hedge reserve	14	1
Own credit adjustment	2	3
Cost of hedging reserve	17	125
Net profit	300	236
Equity attributable to shareholders	**4,306**	**4,329**
Additional Tier 1 capital	309	733
Total equity	**4,615**	**5,062**
Total liabilities and equity	**112,074**	**149,057**

Prudential filters
BNG Bank applies, in line with the Capital Requirements Regulations, the following prudential filters to the CET1 capital:
- The cash flow hedge reserve is eliminated.
- The benefits arising from own credit risk (DVA) in derivatives transactions are eliminated.
- The benefits arising from 'own credit risk' in relation to obligations classified as Financial liabilities at fair value through the income statement are eliminated.
- Due to the regulations on prudent valuation, an adjustment is calculated in relation to the balance sheet valuation of assets and liabilities that are carried at fair value.
- The investments in the development of software is activated and amortised over three years. After a correction for 'deferred tax', the total of these intangible assets is deducted.
- The expected credit loss allowance of Financial assets at fair value through OCI.

Deductible items
Due to a differene between the IFRS provisions and the supervisory expectations thereof for non performing loans, an additional CET1 deduction of EUR 15 million is applied.

BNG Bank does not have any positions with a 1250% solvency weighting in both 2022 and 2021.

Main features of regulatory own funds instruments and eligible liabilities instruments (EU CCA)

BNG Bank N.V.			
1	Issuer	BNG Bank N.V.	BNG Bank N.V.
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)		XS1453520378
2a	Public or private placement	private	private
3	Governing law(s) of the instrument	Laws of the Netherlands	Laws of the Netherlands
3a	Contractual recognition of write down and conversion powers of resolution authorities	n/a	yes
Regulatory treatment			
4	Current treatment taking into account, where applicable, transitional CRR rules	Common Equity Tier 1	Additional Tier 1
5	Post-transitional CRR rules	Common Equity Tier 1	Additional Tier 1
6	Eligible at solo / (sub-)consolidated / solo&(sub-)consolidated	Solo & (sub-)consolidated	Solo & (sub-)consolidated
7	Instrument type (types to be specified by each jurisdiction)	Ordinary share	Perpetual Capital Security
8	Amount recognised in regulatory capital (Currency in million, as of most recent reporting date).	EUR 145	EUR 309
9	Nominal amount of instrument	EUR 139	EUR 309
EU 9a	Issue price	n/a	100% for 1st tranche at 28/07/2016 (two follow-up tranches were issued in second half of 2016 on same terms at 100.34% and 99.72% respectively)
EU 9b	Redemption price	n/a	Subject to write down
10	Accounting classification	Shareholders'equity	Equity
11	Original date of issuance	23 December 1914	28 July 2016
12	Perpetual or dated	Perpetual	Perpetual
13	Original maturity date	no maturity	no maturity
14	Issuer call subject to prior supervisory approval	No	Yes
15	Optional call date,	n/a	16 May 2022 and every interest payment date thereafter,
	contingent call dates,		Tax and/or regulatory event call,
	and redemption amount		Redemption at prevailing principal amount
16	Subsequent call dates, if applicable	n/a	Interest payment date (16 May)
Coupons / dividends			
17	Fixed or floating dividend/coupon	Floating	Fixed
18	Coupon rate and any related index	n/a	4.742%, resettable on 16 May 2027 and every 5 years afterwards equal to prevailing

Continuation of previous page

BNG Bank N.V.

			5-year Mid-Swap Rate plus initial margin
19	Existence of a dividend stopper	n/a	n/a
EU 20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Mandatory	Mandatory
EU 20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Fully discretionary	Fully discretionary
21	Existence of step up or other incentive to redeem	n/a	No
22	Noncumulative or cumulative	Noncumulative	Noncumulative
23	Convertible or non-convertible	Nonconvertible	Nonconvertible
24	If convertible, conversion trigger(s)	n/a	n/a
25	If convertible, fully or partially	n/a	n/a
26	If convertible, conversion rate	n/a	n/a
27	If convertible, mandatory or optional conversion	n/a	n/a
28	If convertible, specify instrument type convertible into	n/a	n/a
29	If convertible, specify issuer of instrument it converts into	n/a	n/a
30	Write-down features	No	Yes
31	If write-down, write-down trigger(s)	n/a	CET1 ratio < 5.125%
32	If write-down, fully or partially	n/a	Partially
33	If write-down, permanent or temporary	n/a	Temporary
34	If temporary write-down, description of write-up mechanism	n/a	Pro rata with other Discretionary Temporary Write-down Instruments, subject to MDA and Maximum Write-up Amount
34a	Type of subordination (only for eligible liabilities)	n/a	n/a
EU 34b	Ranking of the instrument in normal insolvency proceedings	1	2
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Additional Tier 1 instruments	Tier 2 instruments
36	Non-compliant transitioned features	No	No
37	If yes, specify non-compliant features	n/a	n/a
37a	Link to the full term and condition of the instrument (signposting)	Private placement	Private placement

Composition of regulatory own funds (EU CC1)

	Common Equity Tier 1 (CET1) capital: instruments and reserves	31-12-2022	31-12-2021
1	Capital instruments and the related share premium accounts	**146**	**146**
	of which: Instrument type 1	146	*146*
	of which: Instrument type 2	-	-
	of which: Instrument type 3	-	-
2	Retained earnings	3,824	3,734
3	Accumulated other comprehensive income (and other reserves)	37	213
EU-3a	Funds for general banking risk	-	-
4	Amount of qualifying items referred to in Article 484 (3) and the related share premium accounts subject to phase out from CET1	-	-
5	Minority interests (amount allowed in consolidated CET1)	-	-
EU-5a	Independently reviewed interim profits net of any foreseeable charge or dividend	-	-
6	**Common Equity Tier 1 (CET1) capital before regulatory adjustments**	**4,006**	**4,093**
	Common Equity Tier 1 (CET1) capital: regulatory adjustments		
7	Additional value adjustments (negative amount)	-9	-9
8	Intangible assets (net of related tax liability) (negative amount)	-	-
9	Empty set in the EU	-	-
10	Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability where the conditions in Article 38 (3) are met) (negative amount)	-	-
11	Fair value reserves related to gains or losses on cash flow hedges of financial instruments that are not valued at fair value	-14	-1
12	Negative amounts resulting from the calculation of expected loss amounts	-	-
13	Any increase in equity that results from securitised assets (negative amount)	-	-
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	-2	-3
15	Defined-benefit pension fund assets (negative amount)	-	-
16	Direct and indirect holdings by an institution of own CET1 instruments (negative amount)	-	-
17	Direct, indirect and synthetic holdings of the CET 1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	-	-
18	Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	-
19	Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	-
20	Empty set in the EU	-	-
EU-20a	Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative	-	-
EU-20b	of which: qualifying holdings outside the financial sector (negative amount)	-	-
EU-20c	of which: securitisation positions (negative amount)	-	-
EU-20d	of which: free deliveries (negative amount)	-	-
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability where the conditions in Article 38 (3) are met) (negative amount)	-	-

Continuation of previous page

Common Equity Tier 1 (CET1) capital: instruments and reserves		31-12-2022	31-12-2021
22	Amount exceeding the 17,65% threshold (negative amount)	-	-
23	of which: direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities	-	-
24	Empty set in the EU	-	-
25	of which: deferred tax assets arising from temporary differences	-	-
EU-25a	Losses for the current financial year (negative amount)	-	-
EU-25b	Foreseeable tax charges relating to CET1 items except where the institution suitably adjusts the amount of CET1 items insofar as such tax charges reduce the amount up to which those items may be used to cover risks or losses (negative amount)	-	-
26	Empty set in the EU	-	-
27	Qualifying AT1 deductions that exceed the AT1 items of the institution (negative amount)	-	-
27a	Other regulatory adjusments *(including IFRS 9 transitional adjustments when relevant)*	-16	-
28	**Total regulatory adjustments to Common Equity Tier 1 (CET1)**	**-41**	**-13**
29	**Common Equity Tier 1 (CET1) capital**	**3,965**	**4,080**
Additional Tier 1 (AT1) capital: instruments			
30	Capital instruments and the related share premium accounts	**309**	**733**
31	*of which: classified as equity under applicable accounting standards*	*309*	*733*
32	*of which: classified as liabilities under applicable accounting standards*	-	-
33	Amount of qualifying items referred to in Article 484 (4) and the related share premium accounts subject to phase out from AT1 as described in Article 486(3) of CRR	-	-
EU-33a	Amount of qualifying items referred to in Article 494a(1) subject to phase out from AT1	-	-
EU-33b	Amount of qualifying items referred to in Article 494b(1) subject to phase out from AT1	-	-
34	Qualifying Tier 1 capital included in consolidated AT1 capital (including minority interests not included in row 5) issued by subsidiaries and held by third parties	-	-
35	*of which: instruments issued by subsidiaries subject to phase out*	-	-
36	**Additional Tier 1 (AT1) capital before regulatory adjustments**	**309**	**733**
Additional Tier 1 (AT1) capital: regulatory adjustments			
37	Direct and indirect holdings by an institution of own AT1 instruments (negative amount)	-	-
38	Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	-	-
39	Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	-
40	Direct, indirect and synthetic holdings by the institution of the AT1 instruments of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)	-	-
41	Empty set in the EU	-	-
42	Qualifying T2 deductions that exceed the T2 items of the institution (negative amount)	-	-
42a	Other regulatory adjustments to AT1 capital	-	-
43	**Total regulatory adjustments to Additional Tier 1 (AT1) capital**	**-**	**-**
44	**Additional Tier 1 (AT1) capital**	*309*	*733*
45	**Tier 1 capital (T1 = CET1 + AT1)**	**4,274**	**4,813**

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Common Equity Tier 1 (CET1) capital: instruments and reserves		31-12-2022	31-12-2021
Tier 2 (T2) capital: instruments			
46	Capital instruments and the related share premium accounts	-	-
47	Amount of qualifying items referred to in Article 484 (5) and the related share premium accounts subject to phase out from T2 as described in Article 486 (4) CRR	-	-
EU-47a	Amount of qualifying items referred to in Article 494a (2) subject to phase out from T2	-	-
EU-47b	Amount of qualifying items referred to in Article 494b (2) subject to phase out from T2	-	-
48	Qualifying own funds instruments included in consolidated T2 capital (including minority interests and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties	-	-
49	of which: instruments issued by subsidiaries subject to phase out	-	-
50	Credit risk adjustments	-	-
51	**Tier 2 (T2) capital before regulatory adjustments**	**-**	-
Tier 2 (T2) capital: regulatory adjustments			
52	Direct and indirect holdings by an institution of own T2 instruments and subordinated loans (negative amount)	-	-
53	Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	-	-
54	Direct and indirect holdings of the T2 instruments and subordinated loans of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	-
54a	Empty set in the EU	-	-
55	Direct and indirect holdings by the institution of the T2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)	-	-
56	Empty set in the EU	-	-
EU-56a	Qualifying eligible liabilities deductions that exceed the eligible liabilities items of the institution (negative amount)	-	-
56b	Other regulatory adjusments to T2 capital	-	-
57	**Total regulatory adjustments to Tier 2 (T2) capital**	**-**	-
58	**Tier 2 (T2) capital**	-	-
59	**Total capital (TC = T1 + T2)**	**4,274**	**4,813**
60	**Total risk exposure amount**	**11,403**	**12,760**
Capital ratios and buffers			
61	Common Equity Tier 1 (as a percentage of total risk exposure amount)	34.77%	31.97%
62	Tier 1 (as a percentage of total risk exposure amount)	37.48%	37.72%
63	Total capital (as a percentage of total risk exposure amount)	37.48%	37.72%
64	Institution CET1 overall capital requirement (CET1 requirement in accordance with Article 92 (1) CRR, plus additional CET1 requirement which the institution is required to hold in accordance with point (a) of Article 104(1) CRD, plus combined buffer requirement in accordance with Article 128(6) CRD) expressed as a percentage of risk exposure amount)	9.20%	9.27%
65	*of which: capital conservation buffer requirement*	2.50%	2.50%
66	*of which: countercyclical buffer requirement*	0.07%	0.00%
67	*of which: systemic risk buffer requirement*	0.00%	0.00%

Continuation of previous page

Common Equity Tier 1 (CET1) capital: instruments and reserves		31-12-2022	31-12-2021
EU-67a	*of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer*	1.00%	1.00%
EU-67b	*of which: additional own funds requirements to address the risks other than the risk of excessive leverage*	1.13%	1.27%
68	**Common Equity Tier 1 available to meet buffer (as a percentage of risk exposure amount)**	27.48%	23.20%
Amounts below the thresholds for deduction (before risk weighting)			
72	Direct and indirect holdings of own funds and eligible liabilities of financial sector entities where the institution does not have a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	-	-
73	Direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 17.65% thresholds and net of eligible short positions)	-	-
75	Deferred tax assets arising from temporary differences (amount below 17.65% threshold, net of related tax liability where the conditions in Article 38 (3) are met)	-	-
		-	-
Applicable caps on the inclusion of provisions in Tier 2			
76	Credit risk adjustments included in T2 in respect of exposures subject to standardised approach (prior to the application of the cap)	-	-
77	Cap on inclusion of credit risk adjustments in T2 under standardised approach	104	122
78	Credit risk adjustments included in T2 in respect of exposures subject to internal ratings-based approach (prior to the application of the cap)	-	-
79	Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach	-	-
Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2014 and 1 Jan 2022)			
80	Current cap on CET1 instruments subject to phase out arrangements	-	-
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	-	-
82	Current cap on AT1 instruments subject to phase out arrangements	-	-
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	-	-
84	Current cap on T2 instruments subject to phase out arrangements	-	-
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	-	-

OWN FUNDS, RISK WEIGTHED EXPOSURE, CAPITAL BUFFERS AND KEY METRICS (ART 438, 440 & 447 CRR)

Capital and solvency

Definitions

Regulatory Capital (CRD IV/CRR)
Regulatory Capital relates to the capital requirements under the CRD/CRR. For regulatory purposes the capital requirement is based on the Pillar 1 requirement for the aggregated Risk-Weighted Assets (RWA) for the three major risk types (credit, operational and market risk). This requirement is supplemented by so-called Combined Buffer Requirement (CBR) and a Pillar 2 requirement (P2R). The CBR consists of a capital conservation buffer, a systemic risk buffer, a countercyclical buffer and a systemic relevance buffer. The P2R is an institutional specific requirement stemming from the Supervisor Review and Evaluation Process (SREP) conducted by the supervisor. The P2R covers risks that are not (fully) covered by Pillar 1. BNG Bank employs the 'Standardised Approach' to calculate the RWAs.

Economic Capital
In addition to the regulatory required capital BNG Bank calculates Economic Capital (EC). Economic capital covers all risks in our risk taxonomy, for which capital is deemed needed to cover unexpected losses. It is used for internal risk measurement and management. It is the amount of capital BNG Bank deems adequate to pursue its strategy and which achieves a sufficient level of protection against large unexpected losses that could result from extreme market conditions or events.

Capital Management Strategy
The primary objective of the capital management strategy is to ensure that internal as well as external capital adequacy requirements are met at all times and sufficient capital is available to support the bank's strategy. The capital management strategy builds on the bank's risk appetite and its business plans. Besides expectations and requirements of external stakeholders (e.g. regulators, investors, rating agencies, shareholders), the bank's capitalisation relative to the peers in the market, market developments and the feasibility of capital management actions are taken into account. The capitalisation policy is incorporated in the so-called Internal Capital Adequacy Assessment Process (ICAAP). Key to this policy is the capital management plan, which determines the level and composition of the capital based on the risks to be captured by that capital. In the ICAAP, regulatory as well as economic capital is taken into account. As part of the ICAAP a number of stress scenarios is executed in order to determine the adequacy and robustness of the capitalisation. Next to the level of capitalisation, the ICAAP determines the allocation per relevant type of risk. On an ongoing basis, capital adequacy is measured and monitored against target capital ratios. These target levels are derived from the bank's risk appetite and

strategy and quantified by the ICAAP. The allocation is derived from the ICAAP. This process ensures that the bank is operating in line with its risk appetite.

ICAAP Information - (EU OVC)

Based on the strategy, the risk appetite, the risk inventory and risk limits the ICAAP quantifies the internal capital need from an economic perspective. The economic perspective focuses on quantifying the capital requirement for credit, market and operational risk based on internal risk models used in day-to-day risk management. This ensures consistency between the management of risks and the capitalisation of risks. The time horizon used is one year, taking into account a management intervention period, and the confidence level used is 99.9%. BNG Bank ensures that its internal capital covers the quantified economic capital.

Governance

The capital management activities are governed by the capital management policy. The ExCo is responsible for determining the policy with respect to capital, including the allocation of capital. Decision making is prepared by the Capital Committee. This committee is chaired by a member of the ExCo and its members represent all relevant stakeholders from Relationship Banking, Treasury, Capital Management, Risk Management and Finance and Control.

The design of the capital management process is organised in the Capital Management Framework. This framework interacts with the strategy and overall governance of the bank and ensures alignment to the risk appetite and risk related policies. The framework also enables the embedding of capital management considerations in the daily decision making process by means of the pricing-model, product approval process and the credit approval process.

Developments

BNG Bank is required in 2022 to meet an overall Capital Requirement level of 13.50%. BNG Bank amply meets the requirements. On May 25 2022, the Dutch supervisor announced to increase the countercyclical buffer rate from 0% to 1%. The new rate will be effective from May 25 2023.

	31-12-2022		31-12-2021	
	Minimum required externally	**Present**	**Minimum required externally**	**Present**
Solvency				
CRD IV/CRR				
Tier 1 capital	1,539	4,274	1,754	4,813
Total capital ratio	13.50%	37.5%	13.75%	37.7%
- Pillar 1	8.00%		8.00%	
- Pillar 2 requirement	2.00%		2.25%	
- Combined Buffer Requirement	3.50%		3.50%	
Common Equity Tier 1 capital	1,140	4,006	1,308	4,093
Common Equity Tier 1 ratio	10.00%	34.8%	10.25%	32.0%
- Pillar 1	4.50%		4.50%	
- Pillar 2 requirement	2.00%		2.25%	
- Combined Buffer Requirement	3.50%		3.50%	
Risk-weighted assets	N/A	11,403	N/A	12,760

Regulatory framework

On June 7, 2019 CRDV, CRR2, BRRD2 and SRMR2 were published in the official journal of the European Union. CRR2 and CRDV amend the Capital Requirements Regulation (CRR) and Capital Requirements Directive (CRDIV), which provide the legal architecture for the prudential regulation of banks in the EU. A key element of CRR2 is that it lays down the non-risk based leverage ratio as a binding measure. All banks have to comply with a minimum leverage ratio of 3%. The competent authority may require or recommend additional own funds to cover other risks of excessive leverage not already covered by this requirement. For public development sector institutions like BNG Bank, CRR2 provides for a proportional treatment. These institutions are allowed to deduct exposures arising from assets that constitute claims on central governments, regional governments, local authorities or public sector entities in relation to public sector investments, and promotional loans from the exposure measure.

BRRD2 and SRMR2 amend the Bank Recovery and Resolution Directive and the Single Resolution Mechanism Regulation, which constitute the EU legislative framework on bank resolution. Part of the framework is an additional loss-absorbing measure, MREL. MREL is an institution specific requirement determined by the Single Resolution Board (SRB). On December 8, 2022 the SRB concluded that simplified obligations apply to BNG Bank. This means that the preferred resolution strategy is normal insolvency law. In line with the resolution strategy, the SRB sets the MREL requirement equal to the loss absorption amount. Hence, the MREL requirement does not pose an additional capital requirement.

Commonly referred to as Basel IV, the Basel Committee on Banking Supervision has issued in December 2017 post crisis reforms. Basel IV has to be transposed in European law. On 27 October 2021, the European Commission adopted the Banking Package 2021. This proposal is meant, amongst other things, to implement Basel IV in the EU. The intended application date for the amendments to CRR is 1 January 2025, with some exemptions for specific elements. Since this is still a proposal, the impact is not yet certain and conditional on the negotiations by the European Parliament and Council (i.e. potential changes made during this process). While introducing changes to the Standardised Approach, the framework aims specifically to enhance the reliability and comparability of risk-weighted capital ratios under the Internal Model approach. The treatment of sovereign exposures is not part of Basel IV. Developments in this area will be monitored closely.

Key metrics template (EU KM1)

	31-12-2022	30-9-2022	30-6-2022	31-3-2022	31-12-2021
Available own funds (amounts)					
Common Equity Tier 1 (CET1) capital	3,965	3,966	4,013	4,186	4,080
Tier 1 capital	4,274	4,275	4,322	4,495	4,813
Total capital	4,274	4,275	4,322	4,495	4,813
Risk-weighted exposure amounts					
Total risk-weighted exposure amount	11,403	10,679	10,909	12,245	12,760
Capital ratios (as a percentage of risk-weighted exposure amount)					
Common Equity Tier 1 ratio (%)	34.77%	37.14%	36.78%	34.18%	31.97%
Tier 1 ratio (%)	37.48%	40.04%	39.62%	36.71%	37.72%
Total capital ratio (%)	37.48%	40.04%	39.62%	36.71%	37.72%
Additional own funds requirements based on SREP (as a percentage of risk-weighted exposure amount)					
Additional own funds requirements to address risks other than the risk of excessive leverage (%)	2.00%	2.00%	2.00%	2.00%	2.25%
- of which: to be made up of CET1 capital (percentage points)	1.13%	1.13%	1.13%	1.13%	1.27%
- of which: to be made up of Tier 1 capital (percentage points)	1.50%	1.50%	1.50%	1.50%	1.69%
Total SREP own funds requirements (%)	10.00%	10.00%	10.00%	10.00%	10.25%
Combined buffer requirement (as a percentage of risk-weighted exposure amount)					
Capital conservation buffer (%)	2.50%	2.50%	2.50%	2.50%	2.50%
Conservation buffer due to macro-prudential or systemic risk identified at the level of a Member State (%)	0.00%	0.00%	0.00%	0.00%	0.00%
Institution specific countercyclical capital buffer (%)	0.00%	0.00%	0.00%	0.00%	0.00%
Systemic risk buffer (%)	0.00%	0.00%	0.00%	0.00%	0.00%
Global Systemically Important Institution buffer (%)	0.00%	0.00%	0.00%	0.00%	0.00%
Other Systemically Important Institution buffer	1.00%	1.00%	1.00%	1.00%	1.00%
Combined buffer requirement (%)	3.50%	3.50%	3.50%	3.50%	3.50%
Overall capital requirements (%)	13.50%	13.50%	13.50%	13.50%	13.75%
CET1 available after meeting the total SREP own funds requirements (%)	26.89%	30.04%	29.62%	25.33%	23.20%
Leverage ratio					
Total exposure measure	32,920	72,622	52,387	40,432	45,277
Leverage ratio	12.98%	5.89%	8.25%	11.12%	10.63%
Additional own funds requirements to address risks of excessive leverage (as a percentage of leverage ratio total exposure amount)					
Additional own funds requirements to address the risk of excessive leverage (%)	0.07%	0.00%	0.00%	0.00%	0.00%

Continuation of previous page	31-12-2022	30-9-2022	30-6-2022	31-3-2022	31-12-2021
- of which: to be made up of CET1 capital (percentage points)	0.00%	0.00%	0.00%	0.00%	0.00%
Total SREP leverage ratio requirements (%)	3.00%	3.00%	3.00%	3.72%	3.79%
Leverage ratio buffer and overall leverage ratio requirement (as a percentage of total exposure measure)					
Leverage ratio buffer requirement (%)	0.00%	0.00%	0.00%	0.00%	0.00%
Overall leverage ratio requirements (%)	3.00%	3.00%	3.00%	3.72%	3.79%
Liquidity Coverage Ratio					
Total high-quality liquid assets (HQLA) (Weighted value - average)	15,402	51,874	32,468	41,319	18,559
Cash outflows - Total weighted value	9,036	28,909	15,110	27,445	12,022
Cash inflows - Total weighted value	980	3,995	1,954	3,403	1,309
Total net cash outflows (adjusted value)	8,055	24,913	13,156	24,043	10,713
Liquidity coverage ratio (%)	182.99%	208.22%	176.65%	163.34%	155.28%
Net Stable Funding Ratio					
Total available stable funding	87,938	97,267	102,920	111,846	113,748
Total required stable funding	70,268	78,712	81,856	87,695	90,503
NSFR ratio (%)	125.15%	123.57%	125.73%	127.54%	125.68%

Overview of RWA (EU OV1)

	Risk weighted exposure amounts (RWEAs)					Total own funds requirements				
	31-12-2022	30-9-2022	30-6-2022	31-3-2022	31-12-2021	31-12-2022	30-9-2022	30-6-2022	31-3-2022	31-12-2021
Credit risk (excluding CCR)	7,203	7,263	7,799	8,164	8,263	576	581	624	653	661
- Of which the standardised approach	7,203	7,263	7,799	8,164	8,263	576	581	624	653	661
- Of which the foundation IRB (FIRB) approach	-	0	-	-	-	-	-	-	-	-
- Of which: slotting approach	-	-	-	-	-	-	-	-	-	-
- Of which: equities under the simple riskweighted approach	-	-	-	-	-	-	-	-	-	-
- Of which the advanced IRB (AIRB) approach	-	-	-	-	-	-	-	-	-	-
Counterparty credit risk - CCR	2,522	1,686	1,521	2,455	2,863	202	135	122	196	229
- Of which the standardised approach	1,083	779	840	1,289	1,464	87	62	67	103	117
- Of which internal model method (IMM)	-	-	-	-	-	-	-	-	-	-
- Of which exposures to a CCP	12	8	10	9	9	1	1	1	1	1
- Of which credit valuation adjustment - CVA	1,410	844	658	1,144	1,378	113	68	53	92	110
- Of which other CCR	17	54	14	13	12	1	4	1	1	1
Settlement risk	-	-	-	-	-	-	-	-	-	-
Securitisation exposures in the non-trading book (after the cap)	767	732	746	783	791	61	59	60	63	63
- Of which SEC-IRBA approach	-	-	-	-	-	-	-	-	-	-
- Of which SEC-ERBA (including IAA)	767	732	746	783	791	61	59	60	63	63
- Of which SEC-SA approach	-	-	-	-	-	-	-	-	-	-
- Of which 1250%/ deduction	-	-	-	-	-	-	-	-	-	-
Position, foreign exchange and commodities risks (Market risk)	-	153	-	-	-	-	12	-	-	-
- Of which the standardised approach	-	153	-	-	-	-	12	-	-	-
- Of which IMA	-	-	-	-	-	-	-	-	-	-

Continuation of previous page	Risk weighted exposure amounts (RWEAs)					Total own funds requirements				
Large exposures	-	-	-	-	-	-	-	-	-	-
Operational risk	912	843	843	843	843	73	67	67	67	67
- Of which basic indicator approach	-	-	-	-	-	-	-	-	-	-
- Of which standardised approach	912	843	843	843	843	73	67	67	67	67
- Of which advanced measurement approach	-	-	-	-	-	-	-	-	-	-
Amounts below the thresholds for deduction (subject to 250% risk weight) (For information)	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total	**11,403**	**10,679**	**10,909**	**12,245**	**12,760**	**912**	**854**	**873**	**980**	**1,021**

Geographical distribution of credit exposures relevant for the calculation of the countercyclical buffer (EU CCyB1)

31-12-2022	General credit exposures	Relevant credit exposures - market risk	Securiti-sation exposure	Total exposure value	Own funds requirements				Risk-weighted exposure amounts	Own funds require-ments weight (%)	Counter cyclical buffer rate (%)
	Exposure value SA	Sum of long and short positions of trading book exposures for SA	Exposure value for non-trading book		Relevant credit exposures - Credit risk	Relevant credit exposures – Market risk	Relevant credit exposures – Securitisation positions in the non-trading book	Total			
Belgium	177	-	19	**196**	14	-	0	**14**	**178**	2.18%	0.00%
Germany	234	-	-	**234**	14	-	-	**14**	**170**	2.09%	0.00%
Spain	-	-	187	**187**	-	-	6	**6**	**79**	0.98%	0.00%
France	271	-	277	**548**	5	-	2	**7**	**91**	1.13%	0.00%
Great Britain	1,272	-	-	**1,272**	46	-	-	**46**	**570**	7.02%	0.07%
Ireland	60	-	-	**60**	5	-	-	**5**	**60**	0.74%	0.00%
Italy	-	-	63	**63**	-	-	1	**1**	**13**	0.16%	0.00%
Netherlands	8,073	-	4,856	**12,929**	505	-	50	**556**	**6,945**	85.47%	0.00%
Portugal	-	-	37	**37**	-	-	2	**2**	**20**	0.24%	0.00%
United States	-	-	-	**-**	0	-	-	**0**	**-**	0.00%	0.00%
Total	**10,087**	**-**	**5,439**	**15,527**	**589**	**-**	**61**	**650**	**8,126**	**100.00%**	

31-12-2021	General credit exposures	Relevant credit exposures - market risk	Securiti-sation exposure	Total exposure value	Own funds requirements				Risk-weighted exposure amounts	Own funds require-ments weight (%)	Counter cyclical buffer rate (%)
	Exposure value SA	Sum of long and short positions of trading book exposures for SA	Exposure value for non-trading book		Relevant credit exposures - Credit risk	Relevant credit exposures – Market risk	Relevant credit exposures – Securitisation positions in the non-trading book	Total			
Belgium	228	-	22	250	18	-	-	**18**	**228**	2.39%	0.00%
Germany	616	-	-	616	12	-	-	**12**	**149**	1.56%	0.00%
Spain	0	-	251	251	-	-	8	**8**	**102**	1.07%	0.00%
France	215	-	187	402	7	-	3	**10**	**123**	1.29%	0.00%
Great Britain	2610	-	-	2610	93	-	-	**93**	**1,162**	12.18%	0.00%
Ireland	30	-	37	67	1	-	2	**3**	**30**	0.31%	0.00%
Italy	-	-	73	73	-	-	1	**1**	**16**	0.17%	0.00%
Luxembourg	-	-	19	19	-	-	0	**0**	**2**	0.02%	0.50%
Netherlands	22,016	-	4,530	26,546	565	-	49	**614**	**7,680**	80.46%	0.00%
Portugal	50	-	4	54	4	-	-	**4**	**52**	0.55%	0.00%
Total	**25,765**	**-**	**5,123**	**30,888**	**700**	**-**	**63**	**763**	**9,544**	**100.00%**	

Amount of institution-specific countercyclical capital buffer (EU CCyB2)

Amount of institution-specific countercyclical capital buffer	31-12-2022	31-12-2021
Total risk exposure amount	11,403	12,760
Institution specific countercyclical buffer rate	0.07%	0.00%
Institution specific countercyclical buffer requirement	8	0

EXPOSURE TO CREDIT RISK, DILUTION RISK AND CREDIT RISK MITIGATION (ART 442 & 453 CRR)

In the application of article 442 and 453 CRR templates and tables in this section provide further quantitative insight into the credit risk profile of BNG Bank. This chapter first starts with the definitions applied with respect to the credit quality of assets. Then some different perspectives on the overall portfolio of BNG Bank will be provided before concentrating on the non-performing and forborne exposures, the credit risk mitigation measures that are applied and the effects on the RWA that should be considered for capitalisation purposes.

Credit quality of assets (EU CRB)

Forborne exposures

Forbearance concerns credit agreements whose credit conditions have been amended in the debtor's favour as a result of the debtors precarious financial position, so as to enable it to fulfil its obligations. This concession would not have been facilitated if the borrower had not experienced financial difficulties.

Non-performing exposures

BNG Bank applies the following criteria to designate exposures as non-performing:
- BNG Bank considers that the obligor is unlikely to pay its credit obligations to the bank (unlikeliness to pay trigger);
- The obligor is past due 90 days or more on any material credit obligation to the bank;
- The obligor is past due 30 days or more on a forborne credit obligation to the bank,
- Additional contract adjustments in favor of the obligor on a forborne credit obligation.

The bank employs various indicators for 'unlikeliness to pay'. There are 'hard' triggers, 'soft' triggers and triggers specific for forborne exposures.

The term 'past due' refers to the payment arrears commencing at the moment on which payment was contractually due.

An exposure classified as non-performing can once again be regarded as performing if all of the following conditions are met:
- The debtor's situation has improved to the extent that the debtor is able to meet payment obligations according to an existing or adjusted payment profile ('likely to pay'); and
- An analysis of the obligor's financial situation has shown that the transactions no longer meet the conditions to be considered non-performing.

In addition, BNG Bank uses a number of additional outflow criteria for non-performing exposures with forbearance status.

Impairment of financial assets
BNG Bank assesses on a forward-looking basis the expected credit losses (ECL). Financial assets that are not accounted as Fair Value through Profit and Loss migrate through the following three stages based on the change in credit risk since initial recognition. When a modification of a financial asset results in the derecognition of the existing financial asset and the subsequent recognition of the modified asset, the date of modification shall be regarded as the date of initial recognition.

Stage 1: 12-month ECL

BNG Bank recognises an ECL allowance reflecting default events that are possible within the next 12 months for exposures without a significant increase in credit risk (SICR) since initial recognition, or fall under the low credit risk exemption.

Stage 2: lifetime ECL – not credit-impaired

BNG Bank recognises an ECL allowance reflecting default events that are possible during the remaining lifetime of the financial assets for exposures which have had a significant increase in credit risk since initial recognition and do not fall under the low credit risk exemption, but which are not considered credit-impaired.

Stage 3: lifetime ECL – credit-impaired

BNG Bank assesses on an individual exposure level whether exposures are credit-impaired. This assessment is based on whether one or more events have occurred that have a detrimental impact on the estimated future cash flows of that asset.

Credit-impaired exposures are financial assets measured at amortised cost or fair value through other comprehensive income and off-balance sheet exposures for which a Stage 3 credit loss allowance was made. Exposures classified under Stage 1 or 2 are not classified as credit-impaired exposures.

Quality of non-performing exposures by geography (EU CR1)

31-12-2022	Gross carrying amount/nominal amount						Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions						Collateral and financial guarantees received	
	Performing exposures			Non-performing exposures			Performing exposures - accumulated impairment and provisions			Non-performing exposures - accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions				
		Of which: Stage 1	Of which: stage 2		Of which: stage 2	Of which: stage 3		Of which: Stage 1	Of which: stage 2		Of which: stage 2	Of which: stage 3	On performing exposures	On non-performing exposures
Cash balances at central banks and other demand deposits	**6,824**	**6,824**	**-**	**-**	**-**	**-**	**-0**	**-0**	**-**	**-**	**-**	**-**	**-**	**-**
Loans and advances	**93,691**	**91,373**	**2,046**	**849**	**-**	**849**	**-29**	**-8**	**-21**	**-129**	**-**	**-129**	**53,123**	**596**
Central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General governments	32,431	32,368	0	-	-	-	-1	-1	-0	-	-	-	578	-
Credit institutions	4,073	4,073	-	-	-	-	-0	-0	-	-	-	-	340	-
Other financial corporations	1,143	1,143	0	41	-	41	-0	-0	-	-9	-	-9	393	32
Non-financial corporations	53,018	51,755	1,055	763	-	763	-23	-6	-18	-113	-	-113	49,284	552
of which SMEs	13,323	13,262	30	264	-	264	-0	-0	-0	-13	-	-13	13,246	250
Households	3,026	2,035	992	45	-	45	-5	-1	-3	-7	-	-7	2,528	12
Debt Securities	**15,666**	**14,950**	**86**	**-**	**-**	**-**	**-2**	**-1**	**-2**	**-**	**-**	**-**	**2,106**	**-**

Continuation of previous page **31-12-2022**	Gross carrying amount/nominal amount						Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions						Collateral and financial guarantees received	
Central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General governments	6,611	6,570	-	-	-	-	-0	-0	-	-	-	-	-	-
Credit institutions	2,210	2,131	-	-	-	-	-0	-0	-	-	-	-	1,594	-
Other financial corporations	5,625	5,539	86	-	-	-	-2	-0	-2	-	-	-	193	-
Non-financial corporations	1,220	710	-	-	-	-	-0	-0	-	-	-	-	318	-
Off-balance-sheet exposures	**10,882**	**10,608**	**274**	**282**	**-**	**282**	**1**	**0**	**0**	**2**	**-**	**2**	**1,188**	**-**
Central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General governments	3,853	3,853	-	-	-	-	0	0	-	-	-	-	98	-
Credit institutions	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other financial corporations	1,254	1,254	-	7	-	7	0	0	-	-	-	-	474	-
Non-financial corporations	5,184	5,054	130	260	-	260	0	0	0	2	-	2	444	-
Households	590	447	144	15	-	15	0	0	0	-	-	-	172	-
Total	**127,064**	**123,756**	**2,406**	**1,131**	**-**	**1,131**	**-31**	**-8**	**-22**	**-126**	**-**	**-126**	**56,418**	**596**

31-12-2021	Gross carrying amount/nominal amount						Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions						Collateral and financial guarantees received	
	Performing exposures			Non-performing exposures			Performing exposures - accumulated impairment and provisions			Non-performing exposures - accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions				
		Of which: Stage 1	Of which: stage 2		Of which: stage 2	Of which: stage 3		Of which: Stage 1	Of which: stage 2		Of which: stage 2	Of which: stage 3	On performing exposures	On non-performing exposures
Cash balances at central banks and other demand deposits	**9,287**	**9,287**	**-**	**-**	**-**	**-**	**0**	**0**	**-**	**-**	**-**	**-**	**-**	**-**
Loans and advances	**103,091**	**102,147**	**411**	**549**	**-**	**549**	**-14**	**-5**	**-9**	**-224**	**-**	**-224**	**53,499**	**267**
Central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General governments	33,174	33,097	1	-	-	-	-1	0	0	-	-	-	598	-
Credit institutions	10,886	10,886	-	-	-	-	0	0	-	-	-	-	1,113	-
Other financial corporations	3,026	3,013	13	15	-	15	-1	0	0	-	-	-	455	15
Non-financial corporations	52,795	52,014	324	534	-	534	-11	-4	-8	-224	-	-224	48,651	252
of which SMEs	13,283	13,107	80	124	-	124	-2	-	-1	-15	-	-15	13,190	110
Households	3,210	3,137	73	-	-	-	-1	-1	-1	-	-	-	2,682	-
Debt Securities	**17,055**	**16,137**	**68**	**-**	**-**	**-**	**-2**	**0**	**-2**	**-**	**-**	**-**	**2,050**	**-**
Central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General governments	8,033	7,990	-	-	-	-	-	-	-	-	-	-	-	-
Credit institutions	1,982	1,900	-	-	-	-	0	0	-	-	-	-	1,412	-

Continuation of previous page **31-12-2021**	**Gross carrying amount/nominal amount**						**Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions**						**Collateral and financial guarantees received**	
Other financial corporations	5,295	5,227	68	-	-	-	-2	-	-2	-	-	-	345	-
Non-financial corporations	1,745	1,020	-	-	-	-	0	0	0	-	-	-	293	-
Off-balance-sheet exposures	**10,791**	**10,721**	**71**	**68**	**-**	**68**	**0**	**-**	**-**	**1**	**-**	**1**	**1,359**	**-**
Central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General governments	3,826	3,822	4	-	-	-	0	0	0	-	-	-	50	-
Credit institutions	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other financial corporations	1,090	1,090	0	5	-	5	0	0	-	-	-	-	471	-
Non-financial corporations	5,383	5,364	20	63	-	63	0	0	0	1	-	1	775	-
Households	492	445	47	-	-	-	0	0	0	-	-	-	63	-
Total	**140,224**	**138,292**	**550**	**617**	**-**	**617**	**-16**	**-5**	**-11**	**-223**	**-**	**-224**	**56,908**	**267**

Maturity of exposures (EU CR1-A)

31-12-2022	Net exposure value					
	On demand	<= 1 year	> 1 year <= 5 years	> 5 years	No stated maturity	**Total**
Loans and advances	4,779	4,377	11,005	74,379	-	**94,540**
Debt securities	131	657	3,357	11,521	-	**15,666**
Total	**4,911**	**5,034**	**14,362**	**85,900**	**-**	**110,206**

31-12-2021	Net exposure value					
	On demand	<= 1 year	> 1 year <= 5 years	> 5 years	No stated maturity	**Total**
Loans and advances	16,250	3,540	12,189	71,663	-	**103,642**
Debt securities	134	359	3,088	13,474	-	**17,055**
Total	**16,384**	**3,899**	**15,277**	**85,137**	**-**	**120,697**

The exposure values in this table do not include off-balance exposure in contrast to the other tables. The total credit exposure is therefore lower than in the other tables.

Changes in the stock of non-performing loans and advances (EU CR2)

	Gross carrying amount	
	31-12-2022	31-12-2021
Initial stock of non-performing loans and advances	**549**	**397**
Inflows to non-performing portfolios	519	213
Outflows from non-performing portfolios	220	61
- Outflows due to write-offs	111	0
- Outflow due to other situations	109	61
Final stock of non-performing loans and advances	**848**	**549**

Credit quality of forborne exposures (EU CQ1)

31-12-2022	Gross carrying amount/nominal amount of exposures with forbearance measures				Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions		Collateral received and financial guarantees received on forborne exposures	
	Performing forborne	Non-performing forborne			On performing forborne exposures	On non-performing forborne exposures		Of which: collateral and financial guarantees received on non-performing exposures with for-bearance measures
			Of which: defaulted	Of which: impaired				
Cash balances at central banks and other demand deposits	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Loans and advances	**129**	**234**	**234**	**234**	**-4**	**-57**	**211**	**170**
of which:								
- Central banks	-	-	-	-	-	-	-	-
- General governments	-	-	-	-	-	-	-	-
- Credit institutions	-	-	-	-	-	-	-	-
- Other financial corporations	-	11	11	11	-	-4	6	6
- Non-financial corporations	129	223	223	223	-4	-53	204	163
- Households	-	0	0	0	-	-	0	0
Debt Securities	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Loan commitments given	**22**	**13**	**13**	**13**	**-**	**-**	**4**	**4**
Total	**151**	**247**	**247**	**247**	**-4**	**-57**	**216**	**174**

31-12-2021	Gross carrying amount/nominal amount of exposures with forbearance measures				Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions		Collateral received and financial guarantees received on forborne exposures	
	Performing forborne	Non-performing forborne			On performing forborne exposures	On non-performing forborne exposures		Of which: collateral and financial guarantees received on non-performing exposures with for-bearance measures
			Of which: defaulted	Of which: impaired				
Cash balances at central banks and other demand deposits	-	-	-	-	-	-	-	-
Loans and advances	**167**	**199**	**199**	**199**	**-4**	**-48**	**256**	**151**
of which:								
- Central banks	-	-	-	-	-	-	-	-
- General governments	-	-	-	-	-	-	-	-
- Credit institutions	-	-	-	-	-	-	-	-
- Other financial corporations	13	-	-	-	0	-	13	-
- Non-financial corporations	151	199	199	199	-4	-48	243	151
- Households	3	-	-	-	0	-	-	-
Debt Securities	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Loan commitments given	**12**	**-**	**-**	**-**	**-**	**-**	**0**	**-**
Total	**179**	**199**	**199**	**199**	**-4**	**-48**	**256**	**151**

Credit quality of performing and non-performing exposures by past due days (EU CQ3)

31-12-2022	Gross carrying amount / nominal amount											
	Performing exposures			Non-performing exposures								
					Unlikely to pay that are:							
		Not past due or past due ≤ 30 days	Past due > 30 ≤ 90 days		not past due or are past due ≤ 90 days	Past due > 90 ≤ 180 days	Past due > 180 ≤ 1 year	Past due > 1 ≤ 2 years	Past due > 2 ≤ 5 years	Past due > 5 ≤ 7 years	Past due > 7 years	Of which: defaulted
Cash balances at central banks and other demand deposits	**6,824**	**6,824**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Loans and advances	**93,691**	**93,691**	**-**	**849**	**849**	**-**	**-**	**-**	**-**	**-**	**-**	**849**
Central banks	-	-	-	-	-	-	-	-	-	-	-	-
General governments	32,431	32,431	-	-	-	-	-	-	-	-	-	-
Credit institutions	4,073	4,073	-	-	-	-	-	-	-	-	-	-
Other financial corporations	1,143	1,143	-	41	41	-	-	-	-	-	-	41
Non-financial corporations	53,018	53,018	-	763	763	-	-	-	-	-	-	763
of which SMEs	*13,323*	*13,323*	-	*264*	*264*	-	-	-	-	-	-	*264*
Households	3,026	3,026	-	45	45	-	-	-	-	-	-	45
Debt Securities	**15,666**	**15,666**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Central banks	-	-	-	-	-	-	-	-	-	-	-	-
General governments	6,611	6,611	-	-	-	-	-	-	-	-	-	-
Credit institutions	2,210	2,210	-	-	-	-	-	-	-	-	-	-
Other financial corporations	5,625	5,625	-	-	-	-	-	-	-	-	-	-
Non-financial corporations	1,220	1,220	-	-	-	-	-	-	-	-	-	-
Off-balance-sheet exposures	**10,882**			**282**								**282**
Central banks	-	-	-	-	-	-	-	-	-	-	-	-
General governments	3,853	-	-	-	-	-	-	-	-	-	-	-
Credit institutions	-	-	-	-	-	-	-	-	-	-	-	-
Other financial corporations	1,254	-	-	7	-	-	-	-	-	-	-	7

Continuation of previous page 31-12-2022	Gross carrying amount / nominal amount											
Non-financial corporations	5,184	-	-	260	-	-	-	-	-	-	-	260
Households	590	-	-	15	-	-	-	-	-	-	-	15
Total	**127,064**	**116,182**	**0**	**1,131**	**849**	**0**	**0**	**0**	**0**	**0**	**0**	**1,131**

31-12-2021	Gross carrying amount / nominal amount											
	Performing exposures			Non-performing exposures								
					Unlikely to pay that are:							
		Not past due or past due ≤ 30 days	Past due > 30 ≤ 90 days		not past due or are past due ≤ 90 days	Past due > 90 ≤ 180 days	Past due > 180 ≤ 1 year	Past due > 1 ≤ 2 years	Past due > 2 ≤ 5 years	Past due > 5 ≤ 7 years	Past due > 7 years	Of which: defaulted
Cash balances at central banks and other demand deposits	**9,287**	**9,287**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Loans and advances	**103,091**	**103,091**	**-**	**549**	**549**	**-**	**-**	**-**	**-**	**-**	**-**	**549**
Central banks	-	-	-	-	-	-	-	-	-	-	-	-
General governments	33,174	33,174	-	-	-	-	-	-	-	-	-	-
Credit institutions	10,886	10,886	-	-	-	-	-	-	-	-	-	-
Other financial corporations	3,026	3,026	-	15	15	-	-	-	-	-	-	15
Non-financial corporations	52,795	52,795	-	534	534	-	-	-	-	-	-	534
of which SMEs	*13,283*	*13,283*	-	*124*	*124*	-	-	-	-	-	-	*124*
Households	3,210	3,210	-	-	-	-	-	-	-	-	-	-
Debt Securities	**17,055**	**17,055**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Central banks	-	-	-	-	-	-	-	-	-	-	-	-
General governments	8,033	8,033	-	-	-	-	-	-	-	-	-	-
Credit institutions	1,982	1,982	-	-	-	-	-	-	-	-	-	-
Other financial corporations	5,295	5,295	-	-	-	-	-	-	-	-	-	-
Non-financial corporations	1,745	1,745	-	-	-	-	-	-	-	-	-	-
Off-balance-sheet exposures	**10,791**			**68**								**68**
Central banks	-			-								-
General governments	3,826			-								-
Credit institutions	-			-								-
Other financial corporations	1,090			5								5
Non-financial corporations	5,383			63								63
Households	492			-								-
Total	**140,224**	**129,433**	**-**	**617**	**549**	**-**	**-**	**0**	**-**	**-**	**-**	**617**

Quality of non-performing exposures by geography (EU CQ4)

31-12-2022	Gross carrying amount/ nominal amount		Accumulated impairment	Provisions on off-balance sheet commitments and financial guarantee given	Accumulated negative changes in fair value due to credit risk on non-performing exposures
		Of which: defaulted			
On balance sheet exposures	**110,206**	**849**	**-160**		**-**
Netherlands	98,913	849	-154		-
United Kingdom	1,715	-	-2		-
France	2,431	-	-2		-
Belgium	1,484	-	-0		-
United States	1,825	-	-0		-
Other countries	3,839	-	-2		-
Off balance sheet exposures	**11,164**	**282**		**3**	**-**
Netherlands	10,681	282		3	
United States	474	-		-	
Unites Kingdrom	4	-		-	
Germany	4	-		-	
Other countries	-	-		-	
Total	**121,370**	**1,131**	**-160**	**3**	**-**

31-12-2021	Gross carrying amount/ nominal amount		Accumulated impairment	Provisions on off-balance sheet commitments and financial guarantee given	Accumulated negative changes in fair value due to credit risk on non-performing exposures
		Of which: defaulted			
On balance sheet exposures	**120,697**	**549**	**-240**		**-**
Netherlands	100,185	549	-235		-
United Kingdom	2,848	-	-2		-
France	3,972	-	0		-
Belgium	5,264	-	0		-
United States	2,312	-	0		-
Other countries	6,116	-	-3		-
Off balance sheet exposures	**10,859**	**68**		**1**	**-**
Netherlands	10,366	68		1	
United Kingdom	5			-	
United States	445			-	
Belgium	42			0	
Germany	1			-	
Other countries	-			-	
Total	**131,556**	**617**	**-240**	**1**	**-**

Credit quality of loans and advances to non-financial corporations by industry (EU CQ5)

31-12-2022	Gross carrying amount/ nominal amount		Accumulated impairment	Accumulated negative changes in fair value due to credit risk on non-performing exposures
		Of which: defaulted		
Agriculture, forestry and fishing	0	-	-0	-
Mining and quarrying	-	-	-	-
Manufacturing	57	48	-43	-
Electricity, gas, steam and air conditioning supply	818	33	-23	-
Water supply	1,261	-	-1	-
Construction	2,518	161	-14	-
Wholesale and retail trade	63	-	-0	-
Transport and storage	669	155	-1	-
Accommodation and food service activities	-	-	-	-
Information and communication	77	-	-0	-
Real estate activities	44,008	154	-5	-
Financial and insurance actvities	323	3	-0	-
Professional, scientific and technical activities	528	144	-33	-
Administrative and support service activities	426	2	-1	-
Public administration and defense, compulsory social security	-	-	-	-
Education	44	-	-	-
Human health services and social work activities	2,660	63	-14	-
Arts, entertainment and recreation	68	-	-0	-
Other services	262	-	-0	-
Total	**53,781**	**763**	**-136**	**-**

31-12-2021	Gross carrying amount/ nominal amount		Accumulated impairment	Accumulated negative changes in fair value due to credit risk on non-performing exposures
		Of which: defaulted		
Agriculture, forestry and fishing	0	-	0	-
Mining and quarrying	-	-	-	-
Manufacturing	52	42	-33	-
Electricity, gas, steam and air conditioning supply	913	33	-6	-
Water supply	1,351	42	0	-
Construction	1,099	97	-1	-
Wholesale and retail trade	239	177	-161	-
Transport and storage	790	-	-2	-
Accommodation and food service activities	0	-	0	-
Information and communication	81	-	0	-
Real estate activities	44,847	-	-2	-
Financial and insurance actvities	483	-	0	-
Professional, scientific and technical activities	572	138	-25	-
Administrative and support service activities	78	3	-1	-
Public administration and defense, compulsory social security	-	-	-	-
Education	19	-	-	-
Human health services and social work activities	2,652	2	-4	-
Arts, entertainment and recreation	70	-	0	-
Other services	82	-	0	-
Total	**53,328**	**534**	**-235**	**-**

Collateral obtained by taking possession and execution processes (EU CQ7)

	31-12-2022		31-12-2021	
	Collateral obtained by taking possession		Collateral obtained by taking possession	
	Value at initial recognition	Accumulated negative changes	Value at initial recognition	Accumulated negative changes
Property, plant and equipment (PP&E)	-	-	-	-
Other than PP&E, of which:				
- Residential immovable property	-	-	-	-
- Commercial immovable property	-	-	-	-
- Movable property (auto, shipping, etc.)	-	-	-	-
- Equity and debt instruments	-	-	-	-
- Other	-	-	-	-
Total	**-**	**-**	**-**	**-**

CRM techniques overview: Disclosure of the use of credit risk mitigation techniques (EU CR3)

31-12-2022	Unsecured carrying amount	Secured carrying amount	of which secured by collateral	of which secured by financial guarantees	of which secured by credit derivatives
Loans and advances	47,645	53,719	75	53,644	-
Debt Securities	13,560	2,106	-	2,106	-
Total	**61,205**	**55,825**	**75**	**55,750**	**-**
Of which non-performing exposures	253	596	-	596	-
- of which defaulted	123	595	-	596	-

31-12-2021	Unsecured carrying amount	Secured carrying amount	of which secured by collateral	of which secured by financial guarantees	of which secured by credit derivatives
Loans and advances	59,161	53,767	1,103	52,664	-
Debt Securities	15,005	2,050	-	2,050	-
Total	**74,166**	**55,817**	**1,103**	**54,714**	**-**
Of which non-performing exposures	282	267	-	267	-
- of which defaulted	282	267	-	267	-

Standardised approach – Credit risk exposure and CRM effects (EU CR4)

Guarantees provided by governments, WSW and WfZ are an important part in the determination of the credit risk profile of BNG Bank. Below tables show the effect of all CRM techniques. RWA density provides a synthetic metric on the portfolio that remains after the application of CRM techniques.

31-12-2022	Exposures before CCF and CRM		Exposures post CCF and CRM		RWAs and RWA density	
	On-balance	Off-balance	On-balance	Off-balance	RWA	RWA density
Central governments or central banks	9,849	0	59,520	1,366	-	0%
Regional governments or local authorities	31,382	3,342	34,551	1,501	45	0%
Public sector entities	2,941	495	2,989	187	383	12%
Multilateral Development Banks	117	-	117	-	-	0%
International Organisations	1,405	-	1,405	-	-	0%
Institutions	750	-	83	-	17	20%
Corporates	58,511	6,894	6,763	250	6,143	88%
Retail	-	-	-	-	-	0%
Secured by mortgages on immovable property	-	-	-	-	-	0%
Exposures in default	720	280	172	38	301	144%
Items associated with particularly high risk	-	-	-	-	-	0%
Covered bonds	1,688	-	1,688	-	169	10%
Institutions and corporates with a short-term credit assessment	-	-	-	-	-	0%
Collective investments undertakings (CIU)	-	-	-	-	-	0%
Equity	24	-	24	-	24	100%
Other items	122	-	122	-	122	100%
Total	**107,509**	**11,010**	**107,434**	**3,341**	**7,203**	**7%**

31-12-2021	Exposures before CCF and CRM		Exposures post CCF and CRM		RWAs and RWA density	
	On-balance	Off-balance	On-balance	Off-balance	RWA	RWA density
Central governments or central banks	13,784	0	61,246	1,526	-	0%
Regional governments or local authorities	32,162	3,407	35,665	1,607	60	0%
Public sector entities	2,531	383	2,332	55	360	15%
Multilateral Development Banks	195	-	195	-	-	0%
International Organisations	1,405	-	1,405	-	-	0%
Institutions	684	-	611	-	122	20%
Corporates	59,023	6,845	8,549	251	7,385	84%
Retail	-	-	-	-	-	0%
Secured by mortgages on immovable property	102	-	70	-	70	100%
Exposures in default	326	67	60	0	67	111%
Items associated with particularly high risk	-	-	-	-	-	0%
Covered bonds	1,643	-	1,643	-	127	8%
Institutions and corporates with a short-term credit assessment	-	-	-	-	-	0%
Collective investments undertakings (CIU)	-	-	-	-	-	0%
Equity	36	-	36	-	36	100%
Other items	13,591	-	13,591	-	36	0%
Total	**125,482**	**10,702**	**125,403**	**3,439**	**8,263**	**6%**

Standardised approach (EU CR5)

31-12-2022	Risk weight:										
	0%	2%	10%	20%	35%	50%	100%	150%	Others	Total	Of which: unrated
Central governments or central banks	60,886	-	-	-	-	-	-	-	-	60,886	60,886
Regional governments or local authorities	35,947	-	-	75	-	-	30	-	-	36,052	35,947
Public sector entities	1,264	-	-	1,913	-	-	-	-	-	3,177	3,177
Multilateral Development Banks	117	-	-	-	-	-	-	-	-	117	117
International Organisations	1,405	-	-	-	-	-	-	-	-	1,405	1,405
Institutions	-	-0	-	83	-	0	-	-	-	83	-
Corporates	-	-0	-	614	-	758	5,642	-	-	7,013	5,275
Retail	-	-	-	-	-	-	-	-	-	-	-
Secured by mortgages on immovable property	-	-	-	-	-	-	-	-	-	-	-
Exposures in default	-	-	-	-	-	-	26	183	-	209	209
Exposures associated with particularly high risk	-	-	-	-	-	-	-	-	-	-	-
Covered bonds	-	-	1,688	-	-	-	-	-	-	1,688	-0
Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-
Unit or shares in collective investment undertakings	-	-	-	-	-	-	-	-	-	-	-
Equity	-	-	-	-	-	-	24	-	-	24	24
Other items	0	-	-	-	-	-	122	-	-	122	0
Total credit risk exposure	**99,619**	**(0)**	**1,688**	**2,685**	**-**	**758**	**5,844**	**183**	**-**	**110,776**	**107,040**

31-12-2021	Risk weight:										Of which:
	0%	2%	10%	20%	35%	50%	100%	150%	Others	Total	unrated
Central governments or central banks	62,772	-	-	-	-	-	-	-	-	62,772	62,772
Regional governments or local authorities	37,021	-	-	152	-	-	30	-	-	37,203	37,095
Public sector entities	587	-	-	1,800	-	-	-	-	-	2,387	2,367
Multilateral Development Banks	195	-	-	-	-	-	-	-	-	195	195
International Organisations	1,405	-	-	-	-	-	-	-	-	1,405	1,405
Institutions	-	0	-	611	-	-	-	-	-	611	-
Corporates	-	0	-	1,521	-	439	6,799	42	-	8,801	5,961
Retail	-	-	-	-	-	-	-	-	-	-	-
Secured by mortgages on immovable property	-	-	-	-	-	-	70	-	-	70	70
Exposures in default	-	-	-	-	-	-	47	13	-	60	60
Exposures associated with particularly high risk	-	-	-	-	-	-	-	-	-	-	-
Covered bonds	378	-	1,265	-	-	-	-	-	-	1,643	378
Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	36	-	-	36	36
Unit or shares in collective investment undertakings	-	-	-	-	-	-	-	-	-	-	-
Equity	-	-	-	-	-	-	-	-	-	-	-
Other items	13,555	-	-	-	-	-	36	-	-	13,591	13,555
Total credit risk exposure	**115,913**	**-**	**1,265**	**4,084**	**-**	**439**	**7,018**	**55**	**-**	**128,774**	**123,894**

COUNTERPARTY CREDIT RISK (ART 439 CRR)

Counterparty credit risk is the risk of losses to earnings and capital arising from a party failing to make payments that result from a financial transaction, at the moment those payments are due. The exposure to counterparty credit risk pertains to exposures arising from derivatives, repurchase transactions, securities or commodities lending or borrowing transactions, long settlement transactions and margin lending transactions. This section provides different perspectives on this counterparty credit risk as it pertains to BNG Bank.

Analysis of CCR exposure by approach (EU CCR1)

The credit risk of derivative transactions is relatively small, despite the fact that notional amounts totalled EUR 248 billion at year-end 2021 (2021: EUR 229 billion). With the exception of currency derivatives, these contractual principal amounts merely serve as accounting quantities and do not reflect the size of cash flows or the risk associated with the derivatives. The credit equivalent of the derivatives portfolio serves as a more accurate indicator in this regard. The credit risk is expressed in terms of credit equivalents, in accordance with central bank guidelines. The credit equivalent consists of the market value plus an add-on for future credit risk. Contracts with a positive value – where contractual default by the counterparty would cause the bank to miss out on revenue – are relevant in this regard. BNG Bank determines this value using the Mark-to-Market (MtM) method. The current replacement cost is calculated by including collateral received or posted. In addition, the principal amounts are multiplied by percentages based on the specific product and its maturity period in order to determine the potential credit risk exposure (PFE). The sum of these two values (credit equivalent) multiplied by the alpha of 1.4% indicates the net exposure to credit risk.

31-12-2022	Replacement cost (RC)	Potential future credit exposure (PFE)	EEPE	Alpha used for computing regulatory exposure value	Exposure value pre-CRM	Exposure value post-CRM	Exposure value	RWEA
EU - Original Exposure Method (for derivatives)	-	-		-	-	-	-	-
EU - Simplified SA-CCR (for derivatives)	-	-		-	-	-	-	-
SA-CCR (for derivatives)	989	1,219		1.4	3,090	3,090	3,090	1,095
IMM (for derivatives and SFTs)			-	-	-	-	-	-
Of which securities financing transactions netting sets			-		-	-	-	-
Of which derivatives and long settlement transactions netting sets			-		-	-	-	-
Of which from contractual cross-product netting sets			-		-	-	-	-
Financial collateral simple method (for SFTs)					-	-	-	-
Financial collateral comprehensive method (for SFTs)					2,683	87	87	17
VaR for SFTs					-	-	-	-
Total					**5,773**	**3,177**	**3,177**	**1,112**

31-12-2021	Replacement cost (RC)	Potential future credit exposure (PFE)	EEPE	Alpha used for computing regulatory exposure value	Exposure value pre-CRM	Exposure value post-CRM	Exposure value	RWEA
EU - Original Exposure Method (for derivatives)	-	-		-	-	-	-	-
EU - Simplified SA-CCR (for derivatives)	-	-		-	-	-	-	-
SA-CCR (for derivatives)	1,049	910		1.4	2,742	2,742	2,742	1,464
IMM (for derivatives and SFTs)			-	-	-	-	-	-
Of which securities financing transactions netting sets			-		-	-	-	-
Of which derivatives and long settlement transactions netting sets			-		-	-	-	-
Of which from contractual cross-product netting sets			-		-	-	-	-
Financial collateral simple method (for SFTs)					-	-	-	-
Financial collateral comprehensive method (for SFTs)					59	59	59	12
VaR for SFTs					-	-	-	-
Total					**2,801**	**2,801**	**2,801**	**1,476**

Transactions subject to own funds requirements for CVA risk (EU CCR2)

31-12-2022	Exposure value	RWEA
Total transactions subject to the Advanced method	n/a	n/a
(i) VaR component (including the 3× multiplier)		n/a
(ii) stressed VaR component (including the 3× multiplier)		n/a
Transactions subject to the Standardised method	1,410	1,410
Transactions subject to the Alternative approach (Based on the Original Exposure Method)	n/a	n/a
Total transactions subject to own funds requirements for CVA risk	**1,410**	**1,410**

31-12-2021	Exposure value	RWEA
Total transactions subject to the Advanced method	n/a	n/a
(i) VaR component (including the 3× multiplier)		n/a
(ii) stressed VaR component (including the 3× multiplier)		n/a
Transactions subject to the Standardised method	1,378	1,378
Transactions subject to the Alternative approach (Based on the Original Exposure Method)	n/a	n/a
Total transactions subject to own funds requirements for CVA risk	**1,378**	**1,378**

Standardised approach – CCR exposures by regulatory exposure class and risk weights (EU CCR3)

31-12-2022	Risk weight											
	0%	2%	4%	10%	20%	50%	70%	75%	100%	150%	Others	Total exposure value
Central governments or central banks	-	-	-	-	-	-	-	-	-	-	-	**-**
Regional government or local authorities	143	-	-	-	-	-	-	-	-	-	-	**143**
Public sector entities	-	-	-	-	4	-	-	-	-	-	-	**4**
Institutions	-	242	-	-	1,240	516	-	-	-	-	-	**1,999**
Corporates	-	338	-	-	1	199	-	-	494	-	-	**1,032**
Total exposure value	**143**	**581**	**-**	**-**	**1,244**	**715**	**-**	**-**	**494**	**-**	**-**	**3,177**

31-12-2021	Risk weight											
	0%	2%	4%	10%	20%	50%	70%	75%	100%	150%	Others	Total exposure value
Central governments or central banks	-	-	-	-	-	-	-	-	-	-	-	-
Regional governments or local authorities	521	-	-	-	-	-	-	-	-	-	-	521
Public Sector Entities	-	-	-	-	25	-	-	-	-	-	-	25
Institutions	-	53	-	-	662	242	-	-	193	-	-	1,150
Corporates	-	406	-	-	63	167	-	-	929	-	-	1,565
Total	**521**	**459**	**-**	**-**	**750**	**409**	**-**	**-**	**1,122**	**-**	**-**	**3,261**

Composition of collateral for CCR exposures (EU CCR5)

31-12-2022	Collateral used in derivative transactions				Collateral used in securities finance transactions			
	Fair value of collateral received		Fair value of collateral posted		Fair value of collateral received		Fair value of collateral posted	
Collateral type	Segregated	Unsegregated	Segregated	Unsegregated	Segregated	Unsegregated	Segregated	Unsegregated
Cash – domestic currency	-	1,173	0	4,055	-	-	-	89
Cash – other currencies	-	-	-	-	-	-	-	-
Domestic sovereign debt	-	-	-	-	-	-	34	-
Other sovereign debt	-	-	642	-	-	-	19	913
Government agency debt	11	-	659	-	-	-	-	93
Corporate bonds	-	-	-	-	-	-	-	488
Equity securities	-	-	-	-	-	-	-	-
Other collateral	-	-	844	-	-	2,012	-	332
Total	**11**	**1,173**	**2,144**	**4,055**	**-**	**2,012**	**53**	**1,915**

31-12-2021	Collateral used in derivative transactions				Collateral used in securities finance transactions			
	Fair value of collateral received		Fair value of collateral posted		Fair value of collateral received		Fair value of collateral posted	
Collateral type	Segregated	Unsegregated	Segregated	Unsegregated	Segregated	Unsegregated	Segregated	Unsegregated
Cash – domestic currency	-	1,046	-	13,209	-	8	-	20
Cash – other currencies	-	0	-	-	-	-	-	-
Domestic sovereign debt	-	-	-	-	-	-	-	-
Other sovereign debt	-	-	2,054	-	-	610	42	618
Government agency debt	-	-	334	-	-	-	-	-
Corporate bonds	-	-	-	-	-	-	-	585
Equity securities	-	-	-	-	-	-	-	-
Other collateral	11	-	223	-	-	1,074	-	326
Total	**11**	**1,046**	**2,611**	**13,209**	**-**	**1,692**	**42**	**1,549**

At year-end 2022, the collateral posted for derivative transactions amounted to EUR 4.5 billion (2021: EUR 14.6 billion). The deterioration of BNG Bank's rating by three notches would not increase this amount (2021: EUR nil). The strength of the bank's liquidity position is sufficient to meet, and to absorb fluctuations in collateral obligations.

Exposures to CCPs (EU CCR8)

31-12-2022	Exposure value	RWEA
Exposures to QCCPS (total)	**581**	**12**
Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	581	12
(i) OTC derivatives	*578*	*12*
(ii) Exchange traded derivatives	-	-
(iii) SFT's	3	0
(iv) Netting sets where cross-product netting has been approved	-	-
Segregated initial margin	-	
Non-segregated initial margin	-	-
Prefunded default fund contributions	-	-
Unfunded default fund contributions	-	-

31-12-2021	EAD post CRM	RWAs
Total exposures to QCCPS	**459**	**9**
Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	459	9
(i) OTC derivatives	*457*	*9*
(ii) Exchange traded derivatives	-	-
(iii) SFT's	*2*	*0*
(iv) Netting sets where cross-product netting has been approved	-	-
Segregated initial margin	-	
Non-segregated initial margin	-	-
Prefunded default fund contributions	-	-
Alternative calculation of own funds requirements for exposures	-	-

BNG Bank only has exposures with QCCPS, therefore items regarding exposures to non-QCCPS are not mentioned in the table above.

ENCUMBERED AND UNENCUMBERED ASSETS (ART 443 CRR)

Encumbered and unencumbered assets (EU AE1)

The value of the encumbered and unencumbered assets is related to the median value of the reporting year by broad categories of asset type.

2022	Carrying amount of encumbered assets		Fair value of encumbered assets		Carrying amount of unencumbered assets		Fair value of unencumbered assets	
		of which: notionally elligible EHQLA and HQLA		of which: notionally elligible EHQLA and HQLA		of which: EHQLA and HQLA		of which: EHQLA and HQLA
Assets of the reporting institution	**16,365**	**3,309**			**95,709**	**9,050**		
Equity instruments	-	-	-	-	0	-	0	-
Debt securities	3,669	3,309	3,688	3,309	11,995	9,050	11,804	8,887
- of which: covered bonds	1,017	1,017	1,017	1,017	671	671	671	671
- of which: asset-backed securities	162	32	160	31	5,246	3,257	5,195	3,231
- of which: issued by general governments	2,261	2,261	2,261	2,261	4,350	4,350	4,210	4,210
- of which: issued by financial corporations	1,178	1,048	1,176	1,048	6,655	4,510	6,585	4,484
- of which: issued by non-financial corporations	230	-	251	-	989	190	1,009	193
Other assets	12,695	-			83,714	-		

2021	Carrying amount of encumbered assets		Fair value of encumbered assets		Carrying amount of unencumbered assets		Fair value of unencumbered assets	
		of which: notionally elligible EHQLA and HQLA		of which: notionally elligible EHQLA and HQLA		of which: EHQLA and HQLA		of which: EHQLA and HQLA
Assets of the reporting institution	**46,083**	**3,169**			**103,279**	**9,612**		
Equity instruments	-	-	-	-	0	-	0	-
Debt securities	3,758	3,169	3,760	3,169	13,295	9,612	13,328	9,668
- of which: covered bonds	319	319	319	319	1,325	1,325	1,325	1,325
- of which: asset-backed securities	189	13	190	13	4,835	2,594	4,848	2,599
- of which: issued by general governments	2,938	2,938	2,938	2,938	5,095	5,049	5,146	5,100
- of which: issued by financial corporations	407	231	408	231	6,868	4,359	6,845	4,364
- of which: issued by non-financial corporations	412	-	415	-	1,332	205	1,337	205
Other assets	42,325	28,480			89,984	-		

Collateral received and own debt securities issued (EU AE2)

The value of the collateral received is related to the median value of the reporting year by broad categories of asset type.

2022	Fair value of encumbered collateral received or own debt securities issued		Unencumbered Fair value of collateral received or own debt securities issued available for encumbrance	
		of which: notionally elligible EHQLA and HQLA		of which: EHQLA and HQLA
Collateral received by the reporting institution	**0**	**0**	**2,156**	**11**
Loans on demand	-	-	-	-
Equity instruments	-	-	-	-
Debt securities	-	-	983	11
- of which: covered bonds	-	-	-	-
- of which: securitisations	-	-	*972*	-
- of which: issued by general governments	-	-	*9*	*9*
- of which: issued by financial corporations	-	-	*974*	*2*
- of which: issued by non-financial corporations	-	-	-	-
Loans and advances other than loans on demand	-	-	1,173	-
Other collateral received	-	-	-	-
Own debt securities issued other than own covered bonds or asset-backed securities	-	-	-	-
Own covered bonds and asset-backed securities issued and not yet pledged			-	-
Total assets, collateral received and own debt securities issued	**16,365**	**3,309**		

2021	Fair value of encumbered collateral received or own debt securities issued		Unencumbered Fair value of collateral received or own debt securities issued available for encumbrance	
		of which: notionally elligible EHQLA and HQLA		of which: EHQLA and HQLA
Collateral received by the reporting institution	-	-	**2,748**	**2,748**
Loans on demand	-	-	-	-
Equity instruments	-	-	-	-
Debt securities	-	-	1,694	1,694
- of which: covered bonds	-	-	-	-
- of which: securitisations	-	-	*1,074*	*1,074*
- of which: issued by general governments	-	-	*610*	*610*
- of which: issued by financial corporations	-	-	*1,084*	*1,084*
- of which: issued by non-financial corporations	-	-	-	-
Loans and advances other than loans on demand	-	-	1,054	1,054
Other collateral received	-	-	-	-
Own debt securities issued other than own covered bonds or asset-backed securities	-	-	-	-
Own covered bonds and asset-backed securities issued and not yet pledged	-	-	-	-
Total assets, collateral received and own debt securities issued	**46,083**	**3,169**		

Sources of encumbrance (EU AE3)

The value of the encumbered assets, collateral received and associated liabilities is related to the median value of the reporting year by broad categories of asset type.

	2022		2021	
	Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and ABSS encumbered	Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and ABSS encumbered
Carrying amount of selected financial liabilities	10,457	11,961	36,346	46,083

Accompanying narrative information (EU AE4)

Encumbered assets are assets involving a pledge or claim and include loans deposited at the central bank, issued paper collateral for repurchase agreements and derivative contracts, re-issued paper collateral and collateralised buy-backs of BNG Bank issues. In times of funding and liquidity needs, encumbered financial assets are not freely disposable to be able to meet these needs in the short term.

Selected financial liabilities consist of derivative positions with a negative balance sheet value which are covered by paper collateral. Collateral received by BNG Bank comprises of debt securities issued by governments and financial corporations and is used for money market transactions. BNG Bank also pledged a portfolio of loans with the Central Bank for monetary purposes. Since most of the bank's assets could serve as collateral, this may be further extended in the event of prolonged stress.

EXPOSURE TO MARKET RISK AND IRRBB (ART 445 & 448 CRR)

For the disclosure of market risk pursuant with policies and strategies, please refer to the chapter Risk management objectives and policies in the section 'market risk'. Below table MR1 shows the components of own funds requirements under the standardised approach for market risk. Only temporary small foreign exchange positions for which it is not efficient to hedge the risks may result in a limited capital charge in the interim. At 31 December 2022 and 2021 this position resulted in no capital requirement because our exposure on foreign exchange risk is below the threshold of 2% of eligible capital.

Market risk under the standardised approach (EU MR1)

	31-12-2022 RWEAs	31-12-2021 RWEAs
Outright products		
Interest rate risk (general and specific)	-	-
Equity risk (general and specific)	-	-
Foreign exchange risk	-	-
Commodity risk	-	-
Options		
Simplified approach	-	-
Delta-plus method	-	-
Scenario approach	-	-
Securitisation (specific risk)	-	-
Total	**-**	**-**

Interest rate risks of non-trading book activities (EU IRRBB1)

All interest rate (IRR) positions of BNG Bank in the total banking book are either hedged externally or transferred to the 'Treasury Book' portfolio by using internal swap transactions. This explains why the portfolio 'Treasury Book' represents the total IRRBB position of BNG Bank, regarding economic value of equity (EVE). Next to that, the interest rate position of ALCO is equal to the (modelled) investment of own equity in Dutch State 10 years moving average.

The bank has adopted two methodologies to manage its IRRBB risks:
1. The Internal IRRBB methodology is mainly based on the view that includes own equity. In addition to this, the bank also adopts the Outlier Criterion whereby own equity is excluded.
2. The net interest income (NII) methodology conducts calculations based on all books and portfolios, as a static balance sheet assumption is implemented.

IRRBB is managed in the 'Treasury book'. Treasury is authorized to operate within a limited bandwidth, which allows among others efficient hedging and flexibility for clients. The bank monitors the interest rate risk and its impact on positions and movements on a daily basis, which includes the EVE impact of the supervisory standard, internal shocks and corresponding limits. In addition, the actual positions and sensitivities are measured against limits, targets or early warnings.

The NII impact of the supervisory standard and internal shocks is calculated and reported on a monthly basis. The NII computations assume a static balance sheet and are based on all books and portfolios. The NII functionality is able to apply a dynamic balance sheet, but the parameters are set to have a static balance sheet. Parallel interest-rate shocks are applied in accordance with regulatory requirements and include an instantaneous shock (-/+ 200bps) without an interest rate floor. Furthermore, BNG bank uses several (internal) shocks, both gradual and instantaneous, to estimate the NII.

Regarding EVE shocks, BNG bank includes the 6 BCBS scenarios, several internal scenarios and a reverse scenario. The EVE impact is determined by applying full revaluation at the level of individual transactions. The computation for the economic value of the banking book is based on the Treasury Book, which includes interest rate swap transactions and internal swaps representing the interest rate risk position of assets and liabilities in the banking book (e.g. margin book).

The bank uses OIS discounting for calculating the present values as well as for the full revaluation of the products under the given shocks. All IRR positions in the margin books are either hedged externally immediately (micro hedging) or transferred internally to the Treasury book using internal interest rate swaps. The remaining interest position in the "Treasury book" is managed by the treasury department and hedged within limits by macro hedging. Both micro and macro hedging is conducted on accrual basis. All non-EUR cash flows are cash flow hedged.

It should be noted that embedded options are always hedged directly conform the policy of the bank. Non maturity deposits (NMDs), which include current accounts, collateral deposits and an ECB account have short-term repricing dates (shorter than one year, but predominantly shorter than one month) and therefore have a low EVE sensitivity. There is no spread component present since repricing is linked to 1-month EURIBOR or EONIA. NMD repricing dates are assumed to fall within the buckets with the shortest maturity.

Since NMDs are assumed to have a negligible EVE impact they are excluded in the IRRBB cash flows in IRRBB1 (EVE part). Regarding implied zero percent floors, this is relevant for investments in residential mortgage-backed securities and for some Design Build Finance Maintain Operate contracts (DBFMO) and is therefore taken into account. The outcome of Earnings at risk is limited and well within our risk appetite. This also holds for EVE and moreover the outlier criterium is respected.

	Changes of the economic value of equity		Changes of the net interest income	
	31-12-2022	**31-12-2021**	**31-12-2022**	**31-12-2021**
Parallel up	-269	-421	-45	60
Parallel down	335	180	44	119
Steepener	-84	-76		
Flattener	42	12		
Short rates up	-46	-119		
Short rates down	48	107		

As a consequence of the increased interest rates during 2022, the total interest rate sensitivity in the banking book declined compared to end of 2021. In general this leads to lower “Changes of the economic value of equity”. However, this does not apply to downward scenarios where the imposed floor is no longer hit, for example the “Parallel down” scenario. Furthermore, the “Changes of the net interest income” have normalised. This is mainly due to reduced exposure in TLTRO and the fact that the floor in the scenarios is no longer hit as a consequence of the increased interest rates.

DISCLOSURE OF OPERATIONAL RISK MANAGEMENT (ART 446 CRR)

Operational risk own funds requirements and risk-weighted exposure amounts (EU OR1)

31-12-2022

	Relevant indicator			Own funds requirements	Risk exposure amount
	Year-3	Year-2	Last year		
Banking activities subject to basic indicator approach (BIA)	-	-	-	-	-
Banking activities subject to standardised (TSA) / alternative standardised (ASA) approaches	430	446	579	73	912
- Subject to TSA	430	446	579		
- Subject to ASA	-	-	-		
Banking activities subject to advanced measurement approaches AMA	-	-	-	-	-

31-12-2021

	Relevant indicator			Own funds requirements	Risk exposure amount
	Year-3	Year-2	Last year		
Banking activities subject to basic indicator approach (BIA)	-	-	-	-	-
Banking activities subject to standardised (TSA) / alternative standardised (ASA) approaches	469	430	446	67	843
- Subject to TSA	469	430	446		
- Subject to ASA	-	-	-		
Banking activities subject to advanced measurement approaches AMA	-	-	-	-	-

REMUNERATION (ART 450 CRR)

The remuneration policy is compatible with the legal and policy frameworks for institutions established in the Netherlands. In 2022, the following laws and regulations were instrumental in determining the remuneration policy:
- the Dutch Corporate Governance Code;
- European and national financial supervision rules, including the Capital Requirements Regulation, the Financial Supervision Act, the Regulation on Sound Remuneration Policies, the Remuneration Policy (Financial Enterprises) Act, and the Work and Security Act;
- the Banking Code.

In addition to satisfying legal and regulatory requirements, the remuneration policy also complies with the central government's guidelines for state-owned enterprises. Disclosure on the remuneration policies, responsible committees, governance processes, applied criteria and amounts involved are provided in the annual report as well as on the website (e.g. remuneration report)[8].

Remuneration awarded for the financial year (EU REM1)

2022		MB Supervisory function	MB Management function	Other senior management	Other identified staff
Fixed remuneration	Number of identified staff	8	5	28	17
	Total fixed remuneration	283	1,454	3,339	2,000
	- Of which: cash-based	283	1,454	3,339	2,000
	(Not applicable in the EU)				
	- Of which: shares or equivalent ownership interests				
	- Of which: share-linked instruments or equivalent non-cash instruments				
	- Of which: other instruments				
	(Not applicable in the EU)				
	- Of which: other forms				
	(Not applicable in the EU)				
Variable remuneration	Number of identified staff				
	Total variable remuneration				
	- Of which: cash-based				
	- Of which: deferred				
	- Of which: shares or equivalent ownership interests				
	- Of which: deferred				
	- Of which: share-linked instruments or equivalent non-cash instruments				
	- Of which: deferred				

[8] Annual report (pp. 45-46, 72-73, 87-89, 95, 213-217)

Continuation of previous page **2022**	MB Supervisory function	MB Management function	Other senior management	Other identified staff
- Of which: other instruments				
- Of which: deferred				
- Of which: other forms				
- Of which: deferred				
Total remuneration (2 + 10)	283	1,454	3,339	2,000

Special payments to staff whose professional activities have a material impact on institutions' risk profile (identified staff) (EU REM2)

2022	MB Supervisory function	MB Management function	Other senior management	Other identified staff
Guaranteed variable remuneration awards				
Guaranteed variable remuneration awards - Number of identified staff	-	-	-	-
Guaranteed variable remuneration awards -Total amount	-	-	-	-
- Of which guaranteed variable remuneration awards paid during the financial year, that are not taken into account in the bonus cap	-	-	-	-
Severance payments awarded in previous periods, that have been paid out during the financial year				
Severance payments awarded in previous periods, that have been paid out during the financial year - Number of identified staff	-	-	-	-
Severance payments awarded in previous periods, that have been paid out during the financial year - Total amount	-	-	-	-
Severance payments awarded during the financial year				
Severance payments awarded during the financial year - Number of identified staff	-	-	3	-
Severance payments awarded during the financial year - Total amount	-	-	625	-
- Of which paid during the financial year	-	-	625	-
- Of which deferred	-	-	-	-
- Of which severance payments paid during the financial year, that are not taken into account in the bonus cap	-	-	-	-
- Of which highest payment that has been awarded to a single person	-	-	220	-

Information on remuneration of staff whose professional activities have a material impact on institutions' risk profile (identified staff) (EU REM5)

2022 (in thousands)	Management body remuneration			Business areas						Total
	MB Supervisory function	MB Management function	Total MB	Investment banking	Retail banking	Asset management	Corporate functions	Independent internal control functions	All other	
Total number of identified staff										58
Of which: members of the MB	8	5	13							
Of which: other senior management							9	5	14	
Of which: other identified staff							1	5	11	
Total remuneration of identified staff	283	1,454	1,737				1,365	1,340	3,259	
Of which: variable remuneration	-	-	-				216	220	190	
Of which: fixed remuneration	283	1,454	1,737				1,149	1,120	3,070	

2021 (in thousands)	Management body remuneration			Business areas						Total
	MB Supervisory function	MB Management function	Total MB	Investment banking	Retail banking	Asset management	Corporate functions	Independent internal control functions	All other	
Total number of identified staff										45
Of which: members of the MB		6	6							
Of which: other senior management							8	4	9	
Of which: other identified staff							1	6	11	
Total remuneration of identified staff		1,778	1,778				1,159	968	2,958	
Of which: variable remuneration		419	419				-	-	417	
Of which: fixed remuneration		1,359	1,359				1,159	968	2,541	

Notes:
- The Supervisory Board is considered identified staff since 2022.
- Variable remuneration consist of severance payments.
- The number of identified staff under "Business areas" is conform requirement presented in number of FTE.

LEVERAGE RATIO (ART 451 CRR)

Summary reconciliation of accounting assets and leverage ratio exposures (EU LR1)

		31-12-2022	31-12-2021
1	Total assets as per published financial statements	112,074	149,057
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of prudential consolidation	0	306
3	(Adjustment for securitised exposures that meet the operational requirements for the recognition of risk transference)	-	-
4	(Adjustment for temporary exemption of exposures to central bank (if applicable))	-	-9,264
5	(Adjustment for fiduciary assets recognised on the balance sheet pursuant to the applicable accounting framework but excluded from the leverage ratio total exposure measure in accordance with point (i) of Article 429a(1) CRR)	-	-
6	Adjustment for regular-way purchases and sales of financial assets subject to trade date accounting	-	-
7	Adjustment for eligible cash pooling transactions	-	-
8	Adjustments for derivative financial instruments	-1,391	-3,232
9	Adjustments for securities financing transactions "SFTs"	24	0
10	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	4,281	4,330
11	(Adjustment for prudent valuation adjustments and specific and general provisions which have reduced Tier 1 capital)	-2,129	-
EU-11a	(Adjustment for exposures excluded from the leverage ratio total exposure measure in accordance with point (c) of Article 429a(1) CRR)	-	-
EU-11b	(Adjustment for exposures excluded from the leverage ratio total exposure measure in accordance with point (j) of Article 429a(1) CRR)	-	-
12	Other adjustments	-79,938	-95,920
13	**Total leverage ratio exposure**	**32,920**	45,277

Leverage ratio common disclosure (EU LR2)

Table LRCom: Leverage ratio common disclosure

		CRR Leverage ratio exposures	
		31-12-2022	31-12-2021
On-balance sheet exposures (excluding derivatives and SFTs)			
1	On-balance sheet items (excluding derivatives, SFTs, but including collateral)	116,928	134,322
2	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	-	-
3	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	-4,055	-13,209
4	(Adjustment for securities received under securities financing transactions that are recognised as an asset)	-	-
5	(General credit risk adjustments to on-balance sheet items)	-	-
6	(Asset amounts deducted in determining Tier 1 capital)	-41	-13
7	**Total on-balance sheet exposures (excluding derivatives, SFTs)**	**112,831**	**121,100**
Derivative exposures			
8	Replacement cost associated with SA-CCR derivatives transactions (ie net of eligible cash variation margin)	587	1,114
EU-8a	Derogation for derivatives: replacement costs contribution under the simplified standardised approach	-	-
9	Add-on amounts for potential future exposure associated with SA-CCR derivatives transactions	1,759	1,821
EU-9a	Derogation for derivatives: Potential future exposure contribution under the simplified standardised approach	-	-
EU-9b	Exposure determined under Original Exposure Method	-	-
10	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	-	-
EU-10a	(Exempted CCP leg of client-cleared trade exposures) (simplified standardised approach)	-	-
EU-10b	(Exempted CCP leg of client-cleared trade exposures) (original exposure method)	-	-
11	Adjusted effective notional amount of written credit derivatives	-	-
12	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	-	-
11	**Total derivative exposures**	**2,346**	**2,935**
Securities financing transaction exposures			
14	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	919	654

Continuation of previous page		CRR Leverage ratio exposures	
15	(Netted amounts of cash payables and cash receivables of gross SFT assets)	-836	-592
16	Counterparty credit risk exposure for SFT assets	3	-
EU-16a	Derogation for SFTs: Counterparty credit risk exposure in accordance with Articles 429e(5) and 222 CRR	-	-
17	Agent transaction exposures	-	-
EU-17a	(Exempted CCP leg of client-cleared SFT exposure)	-	-
18	**Total securities financing transaction exposures**	**87**	**62**
Other off-balance sheet exposures			
19	Off-balance sheet exposures at gross notional amount	11,164	10,860
20	(Adjustments for conversion to credit equivalent amounts)	-9,013	-6,530
21	(General provisions associated with off-balance sheet exposures deducted in determining Tier 1 capital)	-	-
22	**Off-balance sheet exposures**	**2,151**	**4,330**
Excluded exposures			
EU-22a	(Exposures excluded from the leverage ratio total exposure measure in accordance with point (c) of Article 429a(1) CRR)	-	-
EU-22b	(Exposures exempted in accordance with Article 429 (14) of Regulation (EU) No 575/2013 (on and off balance sheet))	-	-
EU-22c	(-) Excluded exposures of public development banks - Public sector investments	-	-
EU-22d	(Excluded promotional loans of public development banks: - Promotional loans granted by a public development credit institution - Promotional loans granted by an entity directly set up by the central government, regional governments or local authorities of a Member State - Promotional loans granted by an entity set up by the central government, regional governments or local authorities of a Member State through an intermediate credit institution)	-84,495	-83,149
EU-22e	(Excluded passing-through promotional loan exposures by non-public development banks (or units): - Promotional loans granted by a public development credit institution - Promotional loans granted by an entity directly set up by the central government, regional governments or local authorities of a Member State - Promotional loans granted by an entity set up by the central government, regional governments or local authorities of a Member State through an intermediate credit institution)	-	-
EU-22f	(Excluded guaranteed parts of exposures arising from export credits)	-	-
EU-22g	(Excluded excess collateral deposited at triparty agents)	-	-

Continuation of previous page		CRR Leverage ratio exposures	
EU-22h	(Excluded CSD related services of CSD/institutions in accordance with point (o) of Article 429a(1) CRR)	-	-
EU-22i	(Excluded CSD related services of designated institutions in accordance with point (p) of Article 429a(1) CRR)	-	-
EU-22j	(Reduction of the exposure value of pre-financing or intermediate loans)	-	-
EU-22k	**(Total exempted exposures)**	**-84,495**	**-83,149**
Capital and total exposures			
23	Tier 1 capital	4,274	4,813
24	Total exposure measure	32,920	45,277
Leverage ratio			
25	Leverage ratio	12.98%	10.63%
EU-25	Leverage ratio (without the adjustment due to excluded exposures of public development banks - Public sector investments) (%)	3.64%	10.63%
25a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves)	12.98%	9.83%
26	Regulatory minimum leverage ratio requirement (%)	3.00%	3.79%
EU-26	Additional leverage ratio requirements (%)	0.00%	0.00%
EU-27	Required leverage buffer (%)	0.00%	0.00%
Choice on transitional arrangements and amount of derecognised fiduciary items			
EU-27	Choice on transitional arrangements for the definition of the capital measure	n/a	n/a
Disclosure of mean values			
28	Mean value of gross SFT assets, after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivable	149	127
29	Quarter-end value of gross SFT assets, after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables	84	61
30	Total exposures (including the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	32,986	45,342
30a	Total exposures (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	32,986	54,605
31	Leverage ratio (including the impact of any applicable temporary exemption of central bank reserves) incorporating mean values	12.96%	10.61%

Continuation of previous page		CRR Leverage ratio exposures	
	from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)		
31a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	12.96%	8.81%

Split-up of on balance sheet exposures (excluding derivatives, SFTs and exempted exposures) (EU LR3)

Table LRCom: Leverage ratio common disclosure

		CRR Leverage ratio exposures	
		31-12-2022	**31-12-2021**
On-balance sheet exposures (excluding derivatives and SFTs)			
EU-1	**Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:**	**28,377**	**37,965**
EU-2	Trading book exposures	-	-
EU-3	Banking book exposures, of which:	28,377	37,965
EU-4	Covered bonds	1,688	1,643
EU-5	Exposures treated as sovereigns	13,127	8,052
EU-6	Exposures to regional governments, MDB, international organisations and PSE **not** treated as sovereigns	33	37
EU-7	Institutions	461	607
EU-8	Secured by mortgages of immovable properties	-	102
EU-9	Retail exposures	-	-
EU-10	Corporate	6,839	8,605
EU-11	Exposures in default	720	326
EU-12	Other exposures (eg equity, securitisations, and other non-credit obligation assets)	5,510	18,593

Disclosure of LR qualitative information (EU LRA)

(a)	Description of the processes used to manage the risk of excessive leverage	The leverage ratio requirement is applicable to BNG Bank from a regulatory perspective. Public development credit institutions such as BNG Bank are allowed to deduct promotional loans from the exposure measure. Internally BNG Bank also defines a minimum requirement for the unadjusted leverage ratio. The unadjusted leverage ratio is the leverage ratio defined in CRR2 without deducting promotional loans from the exposure measure. A minimum target capitalization is applied for the leverage ratio, as well as for the unadjusted leverage ratio. The minimum targets are based on regulatory requirements, rating agency requirements and the capitalization of peers. On top of that, a buffer is defined to take into account additional risks, such that the minimum requirements are not breached in institution specific adverse scenarios. The business planning is such that the targets are adhered to. As described in the section “Capital Management Strategy” of this report, on an ongoing basis, capital adequacy is measured and monitored against target capital ratios. In case the capital planning for the leverage ratio would show a potential shortfall, the bank would consider capital measures as well as balance sheet measures, with a preference to capital measures in order not to curtail client lending.
(b)	Description of the factors that had an impact on the leverage Ratio during the period to which the disclosed leverage Ratio refers	The leverage ratio at year-end 2022 was 12.98%, significantly higher than the 10.63% at the end of 2021. The option of excluding the ECB balance as a result of exceptional market conditions expired on 1 April 2022. Nevertheless, the leverage ratio was higher in 2022 than in 2021 because the balance sheet total decreased significantly, from EUR 149.1 billion to EUR 112.1 billion. Without adjustment for promotional loans the leverage ratio would have decreased by 9.34% to 3.64%.

EXPOSURE TO SECURITISATION POSITIONS (ART 449 CRR)

Qualitative disclosure requirements related to securitisation exposures (EU SECA)

BNG Bank acts primarily as an investor in the most senior tranches of securitisations for the ALM portfolio; these investments in securitisations are part of the banking book. The underlying assets are mostly residential mortgages. The bank does not invest in synthetic securitisations or re-securitisations. As well as acting as an investor in securitisations, BNG Bank fulfils a number of additional roles, albeit to a limited extent. These include the role of Issuer Account Bank and the role of Cash Advance Facility Provider in that the bank provides liquidity facilities to finance securitisations. BNG Bank does not act as an originator or sponsor. This means that the bank has not transferred any assets to securitisations and does not support securitised assets.

At year-end 2022 the balance sheet value amounted to EUR 5.3 billion (2021: EUR 5.0 billion) in securitisation positions. The off-balance sheet securitisation commitments at year-end 2022 amounted to EUR 0.1 billion (2021: EUR 0.1 billion) and concerned liquidity facilities. BNG Bank considers the credit risk of these facilities to be virtually zero. The facilities may only be drawn on under strict conditions (e.g. in the event of technical payment problems), and in that case BNG Bank's claim will have preference over all other claims. All securitisations in the bank's portfolio have at least one external rating from S&P, Moody's, Fitch or DBRS. Any interest rate risks are hedged with derivatives, in conformity with policy. The aforementioned risks are monitored by the Investment Committee. All securitisations are subjected to an impairment test twice a year. As investments are limited to the most senior tranches the liquidity risk for BNG Bank is considered limited as these senior tranches are impacted last if liquidity issues would arise for the underlying securitisation.

Under CRD IV, BNG Bank applies the Standardised Approach (SA) in calculating risk-weighted exposure values of securitisations in relation to credit risk. Most of the securitisation positions have a 10% weighting. In 2022 no securitisations have a 1250% weighting because of the rating. If these items occur BNG Bank takes advantage of the option to offset these items against the CET1 capital.

Securitisation exposures in the non-trading book (EU SEC1)

31-12-2022	Institution acts as investor			
	Traditional		Synthetic	Sub-total
	STS	non-STS		
Total exposures	**4,092**	**1,347**	**-**	**5,439**
Retail (total)	4,092	1,329	-	5,420
- residential mortgage	4,092	1,329	-	5,420
- credit card	-	-	-	-
- other retail exposures	-	-	-	-
- re-securitisation	-	-	-	-
Wholesale (total)	-	19	-	19
- loans to corporates	-	-	-	-
- commercial mortgage	-	-	-	-
- lease and receivables	-	19	-	19
- other wholesale	-	-	-	-
- re-securitisation	-	-	-	-

31-12-2021	Institution acts as investor			
	Traditional		Synthetic	Sub-total
	STS	non-STS		
Total exposures	**3,410**	**1,712**	**-**	**5,122**
Retail (total)	3,410	1,655	-	5,066
- residential mortgage	3,410	1,655	-	5,066
- credit card	-	-	-	-
- other retail exposures	-	-	-	-
- re-securitisation	-	-	-	-
Wholesale (total)	-	57	-	57
- loans to corporates	-	-	-	-
- commercial mortgage	-	-	-	-
- lease and receivables	-	22	-	22
- other wholesale	-	35	-	35
- re-securitisation	-	-	-	-

Securitisation exposures in the non-trading book and associated regulatory capital requirements - institution acting as investor (EU SEC4)

31-12-2022	Exposure values (by RW bands/deductions)					Exposure value	RWEA	Capital charge after cap
	≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW/ deductions	SEC-ERBA (including IAA)	SEC-ERBA (including IAA)	SEC-ERBA (including IAA)
Total exposures	**5,023**	**375**	**25**	**15**	**-**	**5,439**	**785**	**61**
Traditional securitisation	5,023	375	25	15	-	5,439	785	61
Securitisation	5,023	375	25	15	-	5,439	785	61
Retail underlying	5,005	375	25	15		5,420	766	61
Of which STS	4,092	-	-	-		4,092	409	32
Wholesale	19	-	-	-		19	3	-
Of which STS	-		-	-		-	-	-
Re-securitisation								
Synthetic securitisation								
Securitisation								
Retail underlying								
Wholesale								
Re-securitisation								

31-12-2021	Exposure values (by RW bands/deductions)					Exposure value	RWEA	Capital charge after cap
	≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW/ deductions	SEC-ERBA (including IAA)	SEC-ERBA (including IAA)	SEC-ERBA (including IAA)
Total exposures	**4,610**	**435**	**60**	**17**	**-**	**5,123**	**815**	**63**
Traditional securitisation	4,610	435	60	17	-	5,123	815	63
Securitisation	4,610	435	60	17	-	5,123	815	63
Retail underlying	4,587	435	25	17	-	5,065	789	61
Of which STS	3,410	-	-	-	-	3,410	341	26
Wholesale	22	-	35	-	-	57	26	2
Of which STS	-	-	-	-	-	-	-	-
Re-securitisation								
Synthetic securitisation								
Securitisation								
Retail underlying								
Wholesale								
Re-securitisation								

ESG RISKS (ART 449A CRR)

In 2022, the EBA published binding standards for Pillar 3 disclosures on ESG risks. To comply with the latest requirements, BNG bank has included a new section in this Pillar 3 Disclosure Report on Environmental, Social and Governance (ESG) risks.

The EBA allows banks to gradually implement the ESG guidelines until June 2024. This applies to Scope 3 emissions, the disclosures on the Green Asset Ratio (GAR) and the Banking Taxonomy Alignment Ratio (BTAR).

ESG risk is the risk of (in)direct financial or reputational damage to the bank due to ESG events or inadequate response to public expectations with respect to ESG events. ESG risks are classified as follows:
- **Environmental risk** - the risk of (in)direct financial or reputational damage to the bank, due to acute or chronic physical environmental risk drivers, or the role in the transition to an environmentally sustainable economy of the bank itself or of associated third parties.
- **Social risk** - Social risk is the risk of (in)direct financial or reputational damage to the bank, due to violations of human rights, employee rights, poverty, and customer relationships committed by the bank itself or by associated third parties.
- **Governance risk** - Governance risk is the risk of (in)direct financial or reputational damage to the bank, due to inadequate corporate governance, unethical management and transparency by the bank itself or by associated third parties.

The following sections will provide more details on the bank's strategy, governance, risk management, and developments in connection to each of the ESG risks mentioned above.

The mandatory ESG templates are compiled on best effort and represent the best estimates at this time. The bank expects that challenges regarding data and calculation methodologies will be resolved as a result of developments in data quality, collaborations between stakeholders and evolving regulations.

ESG at BNG Bank

Strategy

BNG Bank is a publicly owed bank serving the public sector in the Netherlands. BNG Bank's purpose is not driven by profit, but 'Driven by social impact' instead. BNG Bank conducts its activities with respect to the environment, to society, and in a fair and transparent way. The bank does this by linking the three dimensions of the ESG model (Environment, Social, Governance) to its main activities: lending, funding, internal operations and HR policy.

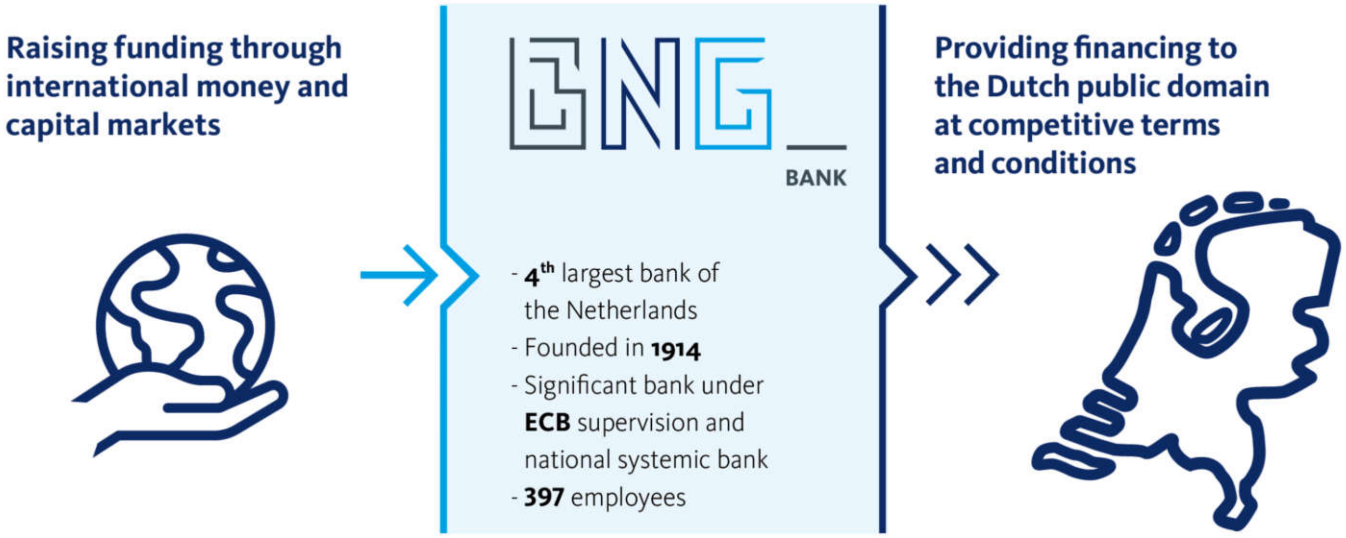
BNG Bank's sustainability criteria are covered in the ESG Policy, which is a key element for the strategy and business activities. This policy will be updated in 2023. The same document stipulates the exclusion criteria that BNG Bank applies to its lending. The way in which BNG Bank respects human rights in the chain is set out in the Human Rights Policy.

Exclusion Criteria

Excluded sectors	Excluded ways of acting
- Exploration and/or extraction of new coal, oil and gas reserves	- Corruption, fraud, infringement of codes of ethics
- The fur industry	- Inadequate corporate governance
- The tobacco industry	- Structural human rights violations
- The arms industry	- The use of child labour
- Parties which, at the time of the loan application, are listed on the Dutch Authority for the Financial Markets' 'Indicative exclusion list for cluster munitions', and parties that are part of the same economic entity as such parties. The same applies to projects in which products are purchased from these parties.	- Structural infringement of environmental laws and regulations
- Pornography	- Structural employment law and workers' rights violations
- Gambling, with the exception of organisations that devote a majority of their net income to supporting social organisations and activities.	- Structural violation of international laws and conventions.
- Animal testing (unless required for medical purposes)	
- Factory farming	
– Intensive livestock farming in a very small space	

BNG Bank's credit risk exposure is relatively low. The majority of the loans and the securities portfolio consists of receivables from or guaranteed by public authorities with a 0% risk weighting. The clients are local authorities, housing associations, healthcare, education, energy and infrastructure. Due to this restricted business model and the conservative risk strategy, the climate and environmental related risk exposure is relatively limited. Therefore, the bank has not yet defined its short-term, medium-term and long-term targets in relation to its climate and environmental risks.

Business model



The strategy 'Our Road to Impact' defines how to further develop the banks reputation as being a natural partner in solving social challenges. One of the objectives for 2023 is to integrate sustainability in the day to day processes of the bank.

Governance

The ExCo is responsible for the bank's strategic direction and business model including ESG related topics. Furthermore the ExCo supervises and monitors the progress of the strategic objectives to ensure effective and timely implementation. The ExCo is responsible for defining and approving the bank's business model and is familiar with the associated risks since it also approves the RAS and the RAF. The ExCo approves the main internal regulations, policies and codes. Which all include ESG related topics.

In 2022, BNG Bank has appointed the CEO to take charge of activities regarding sustainability (including environmental and social issues) and the actions to be implemented and monitored, including the foundation of a Sustainable Banking Committee (SBC) as a subcommittee of the ExCo. The responsibility and task of the SBC is to ensure that BNG Bank has an integrated sustainability policy, to implement it and to report on it. In 2023, further roles and responsibilities in the sustainability area will be defined (including climate and environmental issues), and the ESG strategy and ESG risk governance will be specified in more detail.

To implement the bank's strategic sustainability goals, a governance structure has been defined in 2022 and came into force in early 2023. There are three main governing bodies within this structure: the Sustainable Banking Committee (SBC), the Sustainability Task Force (STF) and the ESG RCF working group.
- The RCF ESG Committee identifies upcoming legislation and the impact on the bank’s own ESG ambitions.
- The STF consists of business owners who are collaborating to realize the bank’s ESG ambitions.
- The SBC monitors progress on ESG commitments and goals and is chaired by the CEO.

Risk Management

ESG is an integral part of BNG Bank's highest policy level, the RMF. The RMF contains the overarching policy on general and specific risk-related subjects, such as risk governance, the RAS, and the RAF. For more information please refer to chapter 'Risk Management objectives and policies'. Further translation to the various risk categories and implementation in the business processes is a continuous process.

The ExCo is responsible for formulating, adopting, and monitoring the RAS and its translation to limits, targets and information triggers. The risk policies address how risk management is organized for the individual risk types (including ESG risk drivers) and the various risk mitigating measures to stay within the risk appetite. The various ExCo committees are responsible for assessing and monitoring the impact that ESG factors can have for each risk type. BNG Bank started reporting on ESG risks in the quarterly Integrated Risk Report to the ExCo and the Supervisory Board. Following the recent developments on sustainability, reporting disclosures will be further expanded.

The SBC coordinates all ESG related activities. The SBC is responsible for the preparation of decision making and for advising on BNG Bank's sustainability policy, which includes the short-, medium- and long-term effects of environmental factors and risks. When it comes to an ESG factor for a specific risk (e.g. credit risk), the corresponding risk committee is responsible. The SBC also monitors the implementation of the sustainability policy. Based on the 3-lines of defence model, each department and function fulfils its own tasks and responsibilities in the risk management process with regard to ESG.

An ESG Risk Identification and Materiality Assessment (RI&MA) is carried out in 2022. This provided insight into how ESG factors may influence BNG Bank's risk positions, the potential impact, and the criteria that can be used to measure this impact. The assessment has identified areas of focus for next steps.

Methodologies and standards used for identifying and managing ESG risks are in line with the EBA 'Report on management and supervision of ESG risks for credit institutions and investment firms', the study for the European Commission on "The development of tools and mechanisms for the integration of ESG factors into the EU banking prudential framework and into banks' business strategies and investment policies". This has been supplemented with ESG factors and transmission channels identified by means of expert judgement employed via internal sector working groups involving e.g. risk managers, credit risk assessors, financial specialists, sector specialists, account managers and business developers as well as a consultancy agency specialized in ESG. These stakeholders also verified the results.

BNG Bank performs an ESG credit risk assessment for each internally defined client sector. This includes: (1) the identification of ESG factors, (2) the identification of transmission channels by means of which the identified ESG factors might negatively impact the credit risk drivers of counterparties in a particular sector, (3) assessing the materiality of all identified ESG factors that might negatively impact credit risk drivers, and (4) the development of metrics for material ESG credit risks. This process has been completed for the client sectors Housing associations, Healthcare, Networks, Environment, and Energy; whereas Education, Public Sector, and Mobility are scheduled to be finalized in the first quarter of 2023. The assessment is being performed with a time horizon of 10 years. BNG Bank has set up the first metric for the monitoring of transition risks. For Market, Liquidity, and Operational risk the ESG risk materiality assessments have been completed as well.

The results of the in-depth ESG RI&MA show that the 'environmental' component of ESG, specifically including transition risks, is considered the most material for most assessed portfolios, followed by physical risks. The impact of social and governance factors (the 'S' and the 'G' of ESG) are considered less material. The results of the ESG RI&MA will be used for future choices and approaches for the integration of ESG risks in the risk management processes. The focus will be on the most material ESG factors first. For the material risks, KRIs are being developed that enable assessment, monitoring, and managing/steering of the above mentioned risks. These will be based on the identified metrics. The metrics capture all relevant transmission channels. As such targets and limits based on these metrics will capture all transmission channels and effectively mitigate risks.

Remuneration

BNG Bank aims for a restrained remuneration policy that corresponds with its identity and strategy. The remuneration policy discusses the relationship between remuneration and the social function of the bank. The remuneration policy discourages employees from taking more risks than acceptable, and avoids incentivising dishonest behaviour. Accordingly, ExCo and Supervisory Board members do not receive variable remuneration. Nor do employees receive variable remuneration for their work. In situations of outstanding performance, employees may receive a one-off payment.

The Supervisory Board monitors the remuneration policy. The general principles of the remuneration policy for the ExCo and employees have been approved by the Supervisory Board. The implementation of the remuneration policy is reported to the Supervisory Board annually. To this end, Risk Management participates in a Remuneration Policy Working Group and annually conducts a risk analysis for various components of the remuneration policy and its execution. Every year, the Supervisory Board assesses whether the remuneration policy complies with the principles for a sound remuneration policy.

Qualitative information on Environmental Risk

STRATEGY AND PROCESSES

BNG Bank's dedication to the public sector will remain its priority in the short and long term perspective. In line with the purpose of BNG Bank, which is 'driven by social impact', the bank has committed to achieve a 10% increase in social impact between 2021 and 2023. The bank has set this ambitious target in order to bring the organisation in motion regarding ESG. To achieve this ambition, an important element is to measure and increase the bank's social impact through a client partnership process. BNG Bank measures this impact of its clients in relation to five Sustainable Development Goals (SDGs) that are relevant to both the clients and to BNG Bank. The bank reports on the outcomes in its annual report.

Sustainable Development Goals (SDG's)

SDG 11 Sustainable cities and communities:
- As a partner of social housing associations, BNG Bank contributes to better and liveable communities.
- As a partner of municipalities, BNG Bank contributes to affordable and better public provisions.

SDG 3 Good health and well-being:
- BNG Bank contributes to affordable health care for everyone.
- BNG Bank is a partner in improving sustainability of hospitals and other health care facilities.

SDG 4 Quality education:
- BNG Bank contributes to affordable and high quality school buildings.
- BNG Bank is a partner in improving sustainability of schools and other educational buildings.

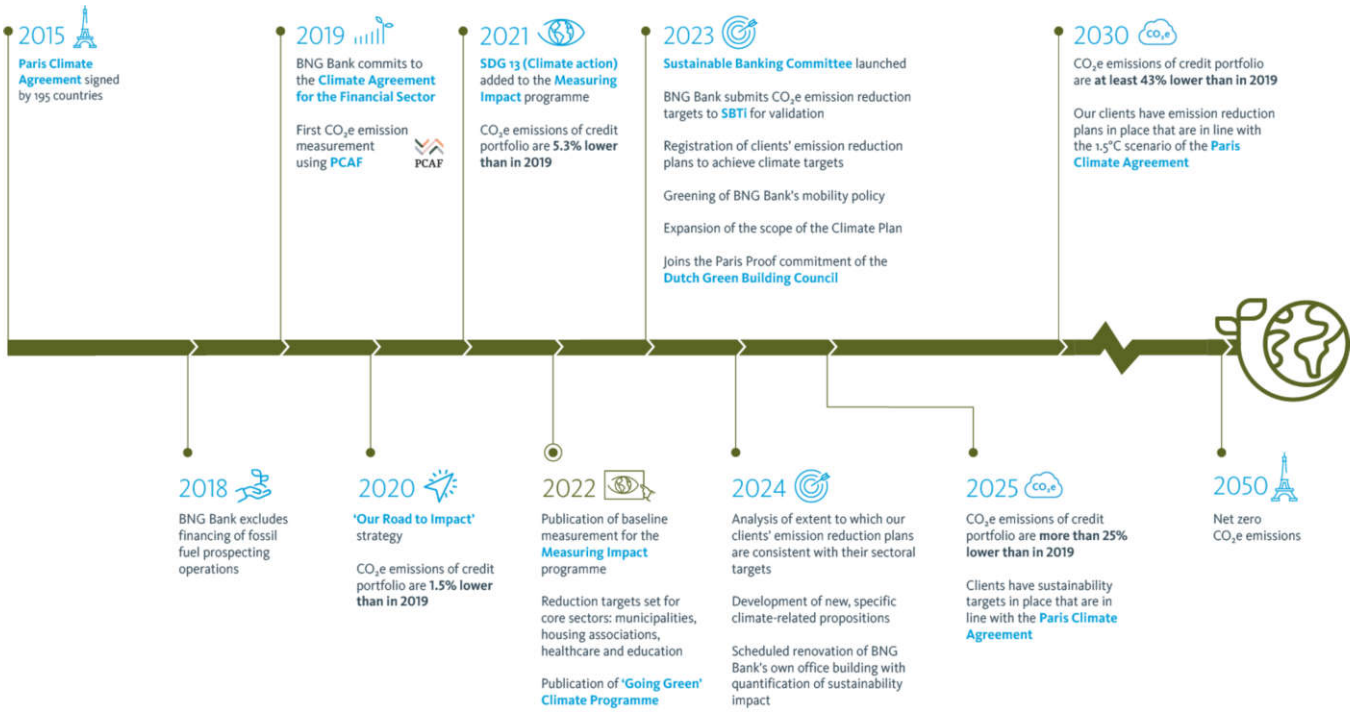
SDG 7 Affordable and clean energy:
- BNG Bank contributes to a larger share of renewable energy in the energy mix.
- BNG Bank contributes to energy savings and more energy efficiency.

SDG 13 Climate action:
- BNG Bank contributes to the reduction of greenhouse gases.

In addition, there are other important limits and commitments that drive the impact of the bank's investments.
- Signing the climate commitment for the financial sector has led to the BNG Bank climate action plan ‘Going Green’;
- By issuance of ESG bonds as a special category of public issues; these bonds are issues in line with the bank’s sustainability Finance Framework and are used to finance municipalities and housing associations that have their finances linked to the Sustainable Development Goals of the United Nations;
- By applying due diligence in accordance with the Customer Due Diligence policy, the Exclusion Criteria, the OECD guidelines, the UN Guiding Principles of business and human rights and the Equator principles;
- By creating the BNG Sustainability Fund to finance specific sustainability projects.

In 2019, BNG Bank subscribed to the Climate Commitment for the Financial Sector to achieve a 49% reduction of CO_2 emissions of its loan portfolio by 2030 – a target that chimes in with the worldwide Paris Climate Agreement. Before that, in 2018, BNG Bank had already decided to exclude all forms of fossil fuel extraction from financing.

The exclusion policy may be further restricted in the future – for instance, if clients' climate performance falls short of the effort required to achieve the CO_2 reduction target. 2019 was also the first year in which BNG Bank mapped out the CO_2 emission levels of the credit portfolio. In this respect, BNG Bank has joined the Partnership for Carbon Accounting Financials (PCAF), which develops methodologies to calculate CO_2 emissions by financial institutions. According to the PCAF methodology, clients' direct and indirect emissions are attributed to the bank based on a set of comprehensive valuation rules. Annually BNG Bank reports on their clients' progress on the assessed indicators and on the reduction of CO_2 emissions associated with the loan portfolio. The PCAF methodology is used by most Dutch and several foreign banks. Since BNG Bank has joined the PCAF, the Global GHG Accounting and Reporting Standard for the Financial Industry is taken in to account as well.



The strategy to bring emissions from the credit portfolio and those arising from the own operations in line with the Paris Agreement is included in the banks Climate Plan, 'Going Green', which was published in the fourth quarter of 2022. The Climate Plan sets out how the bank aims to reduce CO_2 emissions by joining forces with partners in the four largest sectors in which it operates: housing associations, municipalities, healthcare and education. Concentrating on the direct and indirect emissions caused by the energy consumption of real estate in these sectors, BNG Bank was able to map 95% of the emissions from these sectors. The bank reports on the outcomes in its annual report.

In the Climate Plan, the bank has set clear targets at sector level. For each sector, actions that the bank expects from its clients in order to reduce their CO_2 emissions are described. These targets motivate them to create an emissions reduction road map. If clients have not formulated an action plan by 2025, then in the future, for every new real estate financing application of € 5 million or more, they will have to provide a plan demonstrating that the investment is in line with the Paris Climate Agreement and that the investment contributes towards the 1.5°C scenario.

When housing associations and municipalities want to improve the sustainability of their real estate portfolio, BNG Bank provides balance sheet financing. The bank has set up the BNG Sustainability Fund to finance small business initiatives that contribute to the sustainability goals of municipalities and provinces. The BNG Sustainability Fund reports independently on its activities and (financial and non-financial) results.

In addition to the option to offer investors bonds that are linked to the general social impact of municipalities and housing associations, the bank has occasionally issued 'green' bonds linked to a specific energy transition project.

By combining BNG Bank's financial expertise and knowledge of relevant environmental and social issues, the bank is a valuable partner for clients to support them in achieving their sustainability goals. Through the strategic customer partnership policy, BNG Bank aims to increase social impact together with its clients.
- The bank measures the total impact of the loan portfolio annually through recognized methods such as the methodologies developed by PCAF.
- The relationship managers include the topic of the impact of the loans that BNG Bank provides in their conversations with clients.
- In accordance with the commitments in the climate action plan and the goal to increase our clients' impact by 10% in 2023 compared to 2021, the bank is increasing the level of ambition that is asked of clients.

Through its customer relationship management systems, the bank tracks progress on the ambitions per client and can adjust the approach accordingly.

GOVERNANCE

ESG is an integral part of BNG bank Bank's Risk Management Framework (RMF) and embedded in the governance of the bank. Further translation to the various risk categories and implementation in the business processes is a continuous process. For more information see the previous section 'ESG by BNG Bank'.

RISK MANAGEMENT

The processes BNG Bank uses to identify and measure environmental risks is by conducting the ESG credit risk assessment which identifies transmission channels that negatively affect credit risk drivers, determines materiality of the ESG factors that are found to negatively affect credit risk drivers, as well as metrics that cover all identified transmission channels. This has been done at the sector level. Based on the metrics, limits and targets are being developed that will enable monitoring. Specifically, emission- and carbon price related KRIs are under development. BNG Bank has explored possible limits to environmental risks (as drivers of traditional risks) that can be set to triggering escalation in the case of a breach. All limits are described in an unambiguous manner. After KRIs have been developed and implemented, limits can be set where relevant. The next step concerns further elaboration of the transmission channels and integration of ESG in credit risk management processes and in the individual materiality assessment.

BNG Bank uses climate scenarios from the Climate Impact Atlas, Geographic Information system and address geocoder as tools for the measurement of environmental risk. For now this is mainly used for the purpose of Pillar 3 disclosures on ESG risk. The methodology is further described in the quantitative section of this chapter. Climate risk is embedded in the bank's stress testing program. In the bank's most recent ICAAP, the impact of climate risk was assessed in an adverse scenario. In ILAAP no environmental risks are included.

Qualitative information on Social Risk

STRATEGY AND PROCESSES

BNG Bank's ambition and strategy with regard to social impact is desribed in the general section 'ESG at BNG Bank'. The bank is there for the public sector in the Netherlands. In addition to government bodies, this also includes organizations that perform a government task, such as housing associations, healthcare institutions and educational institutions, but also organisations whose share capital is provided for half or more by the government and/or activities for which the government provides a 100% guarantees for loans.

Article 2 of the articles of association of BNG Bank sets the framework for the eligible institutions. In addition to the statutory demarcation, the bank has formulated a number of general exclusion criteria (Exclusions Policy). These exclusion criteria decrease the chance that loans will be provided to entities with a high risk of causing environmental damage and violating human rights.

In addition to regular bonds, BNG Bank issues ESG bonds under its Sustainable Finance Framework. The ESG bonds offer opportunities for indirect investment in Dutch municipalities and social housing associations and connect their expenditures to the 17 SDGs of the United Nations. The BNG Bank Sustainable Finance Framework consists of two sub-frameworks for Dutch municipalities and Dutch housing associations respectively, and ranks the bank’s clients on quantitative and qualitative sustainability indicators.

The Sustainable Bond for Municipalities is linked to the positive impact of municipalities on society. The Social Housing Bond has a similar link regarding the positive impact of housing associations on society. BNG Bank has the ambition to gradually increase the issuance frequency and size of ESG Bonds under its Sustainable Finance Framework.

To promote sustainable capital markets, BNG Bank and the Government Pension Investment Fund (GPIF) from Japan, the world's largest pension fund, have teamed up. BNG Bank's sustainable bonds offer GPIF asset managers the opportunity to contribute to a sustainable society and BNG Bank increases its social impact through the collaboration.

GOVERNANCE

The ExCo is responsible for the general RMF which includes the product approval and review process. Also, the ExCo is responsible for setting policies regarding employee relationships, labour standards and human rights.

BNG applies the Equator Principles to project financing. In this context, customers who request this kind of financing, must report annually on how their project complies with the Equator Principles or ensure that such a report is provided. For the financing of export credits covered by a Dutch government guarantee, the CSR analysis by Atradius must be taken into consideration. This assessment is performed based on OECD guidelines, labour standards from the International Labour Organisation (ILO), and the principles of the UN Global Compact.

The duty of care to act in the customer’s best interest is a priority in the provision of services. Accordingly, BNG Bank strives to offer straightforward and transparent products that meet the needs of its customers and where the associated risks are clearly visible to customers. Considerable attention is paid to informing customers in a clear and concise manner and warning them of the risks attached to certain products. For this purpose, BNG Bank has a product approval and review process (PARP) for the development of new products and periodic evaluation of existing products that also covers compliance with regulations and internal risk management.

RISK MANAGEMENT

The general section describes the way in which roles and responsibilities regarding ESG are assigned within the RMF, the lines and frequency of reporting and the remuneration policy. The processes with regard to Social risk are the same as those for Environmental risk.

BNG Bank perceives ESG risks as drivers of traditional risk categories (i.e. credit, market, liquidity and operational). As such there is no separate social risk management framework, instead ESG risks are (being) integrated in the existing RMF.

As described in the general section the process for identifying social risk consists of an ESG materiality assessment, including transmission channels. BNG Bank has signed the Dutch Banking Sector Agreement (DBA) and excludes clients that are based in so called 'high risk countries' related to human rights issues as provided by United Nations Environmental Program (UNEP). In order to adhere to the responsibilities set out in this covenant, BNG Bank has developed a so called High Risk Assessment (HRA) on human rights based on the UNEP human rights toolkit.

As discussed earlier the Risk Materiality Assessments are employed in order to identify social risks and transmission channels as well as assessing their materiality. The most material risks are mainly environmental and thus the management of these risks has priority over the other ESG risks. However, an exclusion on exposure to high human rights risk countries has been implemented.

Qualitative information on Governance Risk

GOVERNANCE

BNG Bank is a national promotional bank. BNG Bank's clients are almost exclusively public institutions established in the Netherlands. Due to the nature of its business model, BNG Bank has no integration to the governance arrangements of its clients. The highest administrative body of these institutions must comply with Dutch standards with regard to working conditions, principles of equivalence and transparency.

In order to ensure the maximum possible cover for loan portfolio risks, the bank's generic CDD policy is aimed at clients of the bank to whom loans are provided, parties from whom interest bearing securities are purchased for the liquidity portfolio, and financial counterparties with whom derivative transactions are entered into in the portfolio. The identification of institutions and their board members and/or owners is an important pillar of the CDD investigation. The procedures set out in the CDD policy are always followed before entering into a transaction with a new client. Existing client are reviewed periodically at a frequency depending on the risk category assigned to the client

For new loan applications and for credit reviews, BNG Bank identifies and assesses the credit risk on the basis of the Credit Risk Assessment Framework (CRAF). The CRAF provides a risk approach based on financial and non-financial indicators of the client. The ESG information included in the non-financial review is currently limited. The governance factor takes the counterparties' non-financial reporting on their governance arrangements into account. However, availability of such information is limited.

BNG is further integrating the review and measurement of the governance performance of its counterparties, addressing strategy and risk management, ethical considerations, inclusiveness, transparency, management of conflict of interest and internal communication on critical concern.

RISK MANAGEMENT

In the ESG risk materiality assessments the link (transmission channels) between ESG risks and credit, liquidity and funding, market, and operational risk have been identified and described. The next step concerns further elaboration of the transmission channels and integration of ESG in credit risk management processes and in the individual materiality assessment.

Template 1: Banking book – climate change transition risk: credit quality of exposures by sector, emissions and residual maturity

31-12-2022	Gross carrying amount/nominal amount					Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions			GHG financed emissions (scope 1, scope 2 and scope 3 emissions of the counterparty) (in tons of CO2 equivalent)[1]		GHG emissions (column i): gross carrying amount percentage of the portfolio derived from company-specific reporting	<= 5 years	> 5 year <= 10 years	> 10 year <= 20 years	> 20 years	Average weighted maturity
(in million EUR)		Of which exposures towards companies excluded from EU Paris-aligned Benchmarks in accordance with points (d) to (g) of Article 12.1 and in accordance with Article 12.2 of Climate Benchmark Standards Regulation	Of which environmentally sustainable (CCM)	Of which stage 2 exposures	Of which non-performing exposures		Of which: Stage 2 exposures	Of which: snon-performing exposures		Of which Scope 3 financed emissions						
Exposures towards sectors that highly contribute to climate change*	**49,734**	**816**	**-**	**205**	**551**	**-87**	**-5**	**-78**	**598,318**	**5,563**	**-**	**8,036**	**9,026**	**12,853**	**19,732**	**122**
A - Agriculture, forestry and fishing	0	-	-	0	-	-0	-0	-	-	-	-	0	-	-	-	-
B - Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B.05 - Mining of coal and lignite	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B.06 - Extraction of crude petroleum and natural gas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B.07 - Mining of metal ores	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B.08 - Other mining and quarrying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B.09 - Mining support service activities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C - Manufacturing	57	-	-	0	48	-43	-0	-43	-	-	-	2	8	5	-	11
C.10 - Manufacture of food products	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.11 - Manufacture of beverages	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.12 - Manufacture of tobacco products	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.13 - Manufacture of textiles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.14 - Manufacture of wearing apparel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.15 - Manufacture of leather and related products	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Continuation of previous page

31-12-2022

(in million EUR)	**Gross carrying amount/nominal amount**	Of which exposures towards companies excluded from EU Paris-aligned Benchmarks in accordance with points (d) to (g) of Article 12.1 and in accordance with Article 12.2 of Climate Benchmark Standards Regulation	Of which environmentally sustainable (CCM)	Of which stage 2 exposures	Of which non-performing exposures	**Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions**	Of which: Stage 2 exposures	Of which: snon-performing exposures	**GHG financed emissions (scope 1, scope 2 and scope 3 emissions of the counterparty) (in tons of CO2 equivalent)**[1]	Of which Scope 3 financed emissions	GHG emissions (column i): gross carrying amount percentage of the portfolio derived from company-specific reporting	<= 5 years	> 5 year <= 10 years	> 10 year <= 20 years	> 20 years	Average weighted maturity
C.16 - Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.17 - Manufacture of pulp, paper and paperboard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.18 - Printing and service activities related to printing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.19 - Manufacture of coke oven products	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.20 - Production of chemicals	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.21 - Manufacture of pharmaceutical preparations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.22 - Manufacture of rubber products	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.23 - Manufacture of other non-metallic mineral products	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.24 - Manufacture of basic metals	48	-	-	-	48	-43	-	-43	-	-	-	0	5	-	-	2
C.25 - Manufacture of fabricated metal products, except machinery and equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.26 - Manufacture of computer, electronic and optical products	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.27 - Manufacture of electrical equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.28 - Manufacture of machinery and equipment n.e.c.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.29 - Manufacture of motor vehicles, trailers and semi-trailers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.30 - Manufacture of other transport equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.31 - Manufacture of furniture	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C.32 - Other manufacturing	9	-	-	0	-	-0	-0	-	-	-	-	2	2	5	-	9
C.33 - Repair and installation of machinery and equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D - Electricity, gas, steam and air conditioning supply	1,042	267	-	67	33	-23	-2	-20	-	-	-	201	158	659	2	25

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(in million EUR)	Gross carrying amount/nominal amount	Of which exposures towards companies excluded from EU Paris-aligned Benchmarks in accordance with points (d) to (g) of Article 12.1 and in accordance with Article 12.2 of Climate Benchmark Standards Regulation	Of which environmentally sustainable (CCM)	Of which stage 2 exposures	Of which non-performing exposures	Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions	Of which: Stage 2 exposures	Of which: snon-performing exposures	GHG financed emissions (scope 1, scope 2 and scope 3 emissions of the counterparty) (in tons of CO2 equivalent)[1]	Of which Scope 3 financed emissions	GHG emissions (column i): gross carrying amount percentage of the portfolio derived from company-specific reporting	<= 5 years	> 5 year <= 10 years	> 10 year <= 20 years	> 20 years	Average weighted maturity
D35.1 - Electric power generation, transmission and distribution	281	148	-	5	10	-2	-0	-2	-	-	-	140	39	101	-	4
D35.11 - Production of electricity	673	30	-	62	22	-21	-2	-18	-	-	-	61	119	470	2	6
D35.2 - Manufacture of gas; distribution of gaseous fuels through mains	88	88	-	-	-	-	-	-	-	-	-	-	-	88	-	15
D35.3 - Steam and air conditioning supply	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E - Water supply; sewerage, waste management and remediation activities	1,261	-	-	45	-	-1	-1	-	25,906	5,459	-	448	448	348	15	8
F - Construction	2,518	-	-	0	161	-14	-	-13	13,304	-	-	573	382	525	1,023	27
F.41 - Construction of buildings	2,209	-	-	-	161	-14	-	-13	12,969	-	-	536	353	426	879	11
F.42 - Civil engineering	282	-	-	-	-	-0	-	-	335	-	-	27	21	91	144	11
F.43 - Specialised construction activities	27	-	-	0	-	-0	-	-	-	-	-	10	9	8	-	5
G - Wholesale and retail trade; repair of motor vehicles and motorcycles	63	29	-	15	-	-0	-0	-	15	-	-	0	9	54	-	-
H - Transportation and storage	785	514	-	42	155	-1	-1	-	16,441	104	-	163	435	52	134	35
H.49 - Land transport and transport via pipelines	144	-	-	-	-	-	-	-	1,095	-	-	13	-	-	131	20
H.50 - Water transport	7	-	-	-	-	-0	-	-	-	-	-	-	6	-	-	6
H.51 - Air transport	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
H.52 - Warehousing and support activities for transportation	635	514	-	42	155	-1	-1	-	15,346	104	-	150	429	52	3	9
H.53 - Postal and courier activities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I - Accommodation and food service activities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L - Real estate activities	44,008	7	-	36	154	-5	-1	-2	542,652	-	-	6,650	7,587	11,210	18,558	16
Exposures towards sectors other than those that highly contribute to climate change*	**5,266**	**-**	**-**	**850**	**212**	**-49**	**-13**	**-35**	**127,605**	**11,574**	**-**	**917**	**1,121**	**1,722**	**1,457**	**24**

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31-12-2022

(in million EUR)	Gross carrying amount/nominal amount					Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions			GHG financed emissions (scope 1, scope 2 and scope 3 emissions of the counterparty) (in tons of CO2 equivalent)[1]		GHG emissions (column i): gross carrying amount percentage of the portfolio derived from company-specific reporting	<= 5 years	> 5 year <= 10 years	> 10 year <= 20 years	> 20 years	Average weighted maturity
		Of which exposures towards companies excluded from EU Paris-aligned Benchmarks in accordance with points (d) to (g) of Article 12.1 and in accordance with Article 12.2 of Climate Benchmark Standards Regulation	Of which environmentally sustainable (CCM)	Of which stage 2 exposures	Of which non-performing exposures		Of which: Stage 2 exposures	Of which: snon-performing exposures		Of which Scope 3 financed emissions						
K - Financial and insurance activities	879	-	-	0	3	-0	-0	-	-	-	-	273	14	115	477	9
Exposures to other sectors (NACE codes J, M - U)	4,387	-	-	850	209	-49	-13	-35	127,605	11,574	-	644	1,107	1,608	980	15
TOTAL	**55,001**	**816**	**-**	**1,055**	**763**	**-136**	**-18**	**-113**	**725,923**	**17,137**	**-**	**8,953**	**10,147**	**14,575**	**21,189**	**146**

1 There is no data availability in 2022 for the Financed Emission columns, therefore we used 2020/2021 data.

The data in this template includes exposures to non-financial corporations with activities in the defined sectors, classified according to their NACE code. The predominant sector in this overview is "L: real estate". This sector includes the exposures of BNG Bank to housing associations, which is one of the main financing sectors of BNG Bank. Local governments, another import financing sector for BNG Bank is not included in this overview.

General

Template 1 provides an overview of the financed emissions (i.e. BNG Banks scope 3 emissions) at the NACE sector level. Emissions related to BNG Bank's loan portfolio have been estimated at the borrower level.
The estimation method differs per (internally demarcated) sector. For the following sectors emission are estimated and reported: social housing, healthcare, education, networks (specifically drinking water utilities), and mobility and other projects. As the emission data does not cover all sectors and only counterparties related to the loan portfolio, not all exposure reported in this template has related emissions. For 90% (60%) of the exposures (counterparties) reported under pillar 3 scope 1 and 2 emissions are estimated and for 5% (15%) of the exposure (counterparties) scope 3 is estimated. The estimation method is incrementally improved in validity, scope and exposure/counterparty coverage each reporting year.

General methodology

BNG Bank uses the PCAF methodology in the measurement and calculation of the emissions of its counterparties and the associated financed amount. Financed emissions have been calculated by multiplying the GHG emissions of individual counterparties by the proportionate share of the outstanding loan volume with BNG Bank in the total balance sheet (equity + debt) of the client.

Note that some steps in the calculation process are not described in this report. The full PCAF report is published on the website of BNG Bank including a detailed description of all the calculations and data sources used.

Methodology for the housing association sector

For this type of clients scope 1 emissions mainly comprise of natural gas use in owned and rented dwellings. Scope 2 emmissions consist of electricity and district heating use in said dwellings. Emissions were estimated based on physical activities: the energy use (gas, electricity, and district heating) of housing association dwellings at the municipal level was attributed to individual housing associations.

Data scope 1 & 2

The following datasets were used in the calculation process:
- The number of dwellings of housing associations per municipality (Data Overheid – Verantwoordingsinformatie Wongingcorporaties);
- Gas, electricity, and district heating use of all housing associations in a given municipality (CBS micro data).

Calculation scope 1 & 2

The energy use of specific housing associations is estimated by means of these datasets in two steps: (1) first the percentage of dwellings a housing association owns compared to all the housing associations dwellings in a given municipality was calculated, after which (2) this factor was multiplied by the energy usage of all the housing associations in that particular municipality. This has been done for each municipality a housing association owns dwellings in, after which estimated energy use was summed up to get the total energy use of a housing association. The related emissions were calculated by multiplying each energy source with a corresponding emission factor. By being based on the (gas and electricity) use of housing associations dwellings, it is a physical activity estimate.

Methodology for the healthcare sector

This sector comprises of healthcare organisations. For these types of clients scope 1 emissions include natural gas use for the heating of buildings and disinfecting medical tools, scope 2 emissions include the use of electricity, and scope 3 emissions consist of employee commuting. Emissions were estimated based on physical activities: energy use (gas and electricity) of the buildings of healthcare institutions was retrieved from grid operators in clusters of 15 buildings and attributed to single healthcare institutions. Scope 3 emissions are based on distance and mode of transport of commuters and as such a physical estimate as well.

Data Scope 1 & 2

The following data was used to estimate these emissions:
- Buildings owned, and surface area size, by healthcare institutions (by means of cadastral datasets, specifically by combining BAG (Basisregistratie Adressen en gebouwen) and VBO (Verblijfsobject) IDs;
- Energy consumption data by (grouped) buildings from network operators.

Calculation scope 1 & 2

Energy use was calculated as follows. Firstly, based on cadastral data, the addresses of buildings owned by healthcare clients were retrieved. After this was known, network operators were requested for energy consumption data of those specific buildings (based on the BAG-EAN link, which couples cadastral building IDs to energy network connections). However, due to privacy reasons network operators are not allowed to provide energy consumption data for individual buildings, only for clusters (10 to 15 buildings). Therefore clusters of at least 15 addresses were made. Where possible clusters were made for buildings owned by the same healthcare institution. Where this was not possible, the average surface area of the buildings was calculated at the level of the healthcare institution (based on cadastral data), after which clusters of at least 15 buildings were made by combining buildings of those healthcare institutions that have a comparable average surface area size. For these clusters, actual energy consumption data, in the form of standard annual consumption (SJV) was received by network operators. This was divided by the average surface area of the buildings in the cluster to retrieve energy consumption per m^2. The last step consisted of multiplying this factor with the building surface area size in the corresponding cluster. Emissions were estimated by multiplying energy use with corresponding emission factors.

For buildings with missing data a proxy was used based on the average electricity and gas use differentiated by building period and surface area. Consecutively this factor of energy use was multiplied with similar buildings.

Data scope 3

The following data was used to estimate scope 3 emissions.
- Average traveling distance per means of transport (bus, trams=, metro, train, bike, car, foot, and other) per person per region (province) per year (source: CBS);
- Average traveled commuting distance (km) per person (12 years and older) per region (province) per year (Source: CBS);
- Number of FTEs per healthcare institution (Ministry of Health, Welfare an Sports, 2021).

The scope 3 commuting emissions where estimated by means of the following steps. First, the ratio of the different means of transporta Dutch inhabitant uses when traveling (based on average yearly traveling distance per transport mode) were calculated . These factors were then multiplied with the average yearly traveled distance of a person (12 year and older) per province. This provides an estimate of how much an average person travels by which types of transport per province. The next step consisted of multiplying these ratios with the average commuting distance per person per year in a given province to be able to differentiate the average commuting distance by means of transport. Consecutively this was multiplied with the amount of FTE's of each healthcare institution to get the estimated amount of yearly travelled commuting distance for each transport mode. The last step consisted of multiplying each of these kms by the corresponding transport type emission factor and adding it all up.

Methodology for the education sector

Estimated scope 1 emissions of educational institutions consists of natural gas use for, but not limited to, heating owned buildings. Scope 2 emissions entail purchased electricity (heat and steam are unknown). No scope 3 emissions were estimated. The estimation method is based on economic activity data: the costs of energy made by educational institutions was used. A proxy was used to divide these costs in gas and electricity.

Data scope 1 & 2

The following data was used to estimate the scope 1 & 2 emissions.
- Data on the supplied amount of natural gas and electricity to the education sector per year per municipality (Dutch Central Statistical Office (CBS));
- Data on the transaction prices for natural gas and electricity for end consumers of energy (CBS);
- Registration numbers, addresses of buildings, number of pupils/students, costs for energy, and total assets per educational institution (open data Dienst Uitvoering Onderwijs (DUO)).

Calculation scope 1 & 2

First total costs for natural gas and electricity made by the education sector per municipality were calculated. This was done by multiplying the supplied amount of gas and electricity to the education sector (at the municipal level) with the prices of gas and electricity. Secondly, this was used to calculate the ratio of gas/electricity relative to the total costs of gas and electricity by dividing the gas costs by total energy costs and parallel the electricity costs by total energy costs. This provides at the municipal level the (average) ratio of electricity versus gas of the energy mix of an educational institution. Thirdly, as the total energy costs of educational institutions is reported by DUO, this ratio can be applied to said total energy costs to estimate the costs an individual educational institution made on gas and on electricity. However, the gas/electricity ratio is at the municipal level whereas the total energy costs are at the institutional level. As educational institutions can have buildings in multiple municipalities, this results in a discrepancy on the level of granularity. This has been corrected for by weighting the gas/electricity ratio of different municipalities based on the amount of students that an institution has in each of the municipalities. The fourth step consisted of dividing the costs of gas and the costs of electricity that an institution made in a given year by the corresponding price to get the amount (in m3 and kWh). Lastly, these amounts were multiplied with emission factors to estimate the scope 1 and 2 emissions.

Methodology for the network sector

Only the drinking water utilities are covered in the Network sector. These companies have jointly developed a method on how to measure their scope 1, 2 and 3 emissions[1]. The emissions are reported by these companies, and includes the following:

Scope 1:
- CH_4 and CO_2 emissions during extraction and treatment of groundwater;
- Emissions due to natural gas use;
- Emissions for the use of aggregates;
- Emissions of the vehicle fleet;

- Emissions linked to the generation of energy.

Scope 2:
- Indirect emissions from purchased energy.

Scope 3:
- Commuting traffic (for some drinking water utilities);
- (Air) Travel;
- Chemicals;
- Transport by third parties (suppliers);
- Transport of drinking water production residues.

Methodology for the mobility sector and diverse sector

For mobility and other, where available the reported emissions were used for these clients. However, most clients do not report emissions. For these clients scope 1 and 2 were estimated based on economic activity data: a sector specific GHG emission factor based on revenues was calculated. As a result, no division can be made between scope 1 and 2: they are grouped.

Data scope 1 & 2
- GHG emissions to air by the Dutch economy at the sector level (CBS);
- Net revenue of the Dutch economy at the sector level (CBS).

Calculation scope 1 & 2

The emissions to air by a given sector were divided by the net revenue of that sector to give a sector-level emission factor expressed in CO_2e/€ revenue. Consecutively this emission factor was multiplied by the revenues of the counterparties in the corresponding sector to estimate their combined scope 1 and 2 emissions.

[1] https://www.praktijkcodesdrinkwater.nl/opbrengst/klimaatneutraliteit/?search=klimaat

Template 2: Banking book – climate change transition risk: loans collateralised by immovable property – energy efficiency of the collateral

Not applicable. In template 2, banks are required to disclose the climate transition risk related to loans collateralised by immovable property as per 31-12-2022. BNG Bank does not hold such loans in its portfolio.

Template 4: Exposures in the banking book to the top 20 carbon-intensive firms in the world

Not applicable. In the determination of a top 20 list, the following criteria were assessed: the measurement date of the emission data used; the selection of companies made, the scope of the emission data used and the Carbon equivalents included. Based on these criteria BNG has selected the top 20 list of the Carbon Majors Database. BNG does not have any exposures to companies included in this list.

Template 5: Banking book – climate change physical risk: exposures subject to physical risk

31-12-2022	Gross carrying amount/nominal amount													
		of which exposures sensitive to impact from climate change physical events												
		Breakdown by maturity bucket				Average weighted maturity	of which exposures sensitive to impact from chronic climate change events	of which exposures sensitive to impact from acute climate change events	of which exposures sensitive to impact both from chronic and acute climate change events	Of which Stage 2 exposures	Of which non-performing exposures	Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions		
(in million EUR)		<= 5 years	> 5 year <= 10 years	> 10 year <= 20 years	> 20 years								Of which Stage 2 exposures	Of which non-performing exposures
A - Agriculture, forestry and fishing	0	0	-	-	-	-	-	0	-	0	-	-0	-0	-
B - Mining and quarrying	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C - Manufacturing	57	42	9	1	-	4	-	8	-	0	48	-43	-0	-43
D - Electricity, gas, steam and air conditioning supply	1,042	102	27	182	-	6	-	310	-	5	-	-1	-0	-
E - Water supply; sewerage, waste management and remediation activities	1,261	362	365	207	15	7	68	910	30	-	-	-0	-	-
F - Construction	2,518	100	25	28	171	6	4	319	-	-	-	-0	-	-
G - Wholesale and retail trade; repair of motor vehicles and motorcycles	63	-	-	-	-	-	-	-	-	-	-	-	-	-
H - Transportation and storage	785	119	57	15	3	9	4	189	-	14	155	-0	-	-
L - Real estate activities	44,008	2,405	2,736	3,866	6,012	15	2,227	12,917	126	34	-	-1	-1	-

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31-12-2022

(in million EUR)	**Gross carrying amount/nominal amount**													
		of which exposures sensitive to impact from climate change physical events												
		Breakdown by maturity bucket				**Average weighted maturity**	**of which exposures sensitive to impact from chronic climate change events**	**of which exposures sensitive to impact from acute climate change events**	**of which exposures sensitive to impact both from chronic and acute climate change events**	**Of which Stage 2 exposures**	**Of which non-performing exposures**	**Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions**		
		<= 5 years	> 5 year <= 10 years	> 10 year <= 20 years	> 20 years								Of which Stage 2 exposures	Of which non-performing exposures
Loans collateralised by residential immovable property	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loans collateralised by commercial immovable property	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repossessed colalterals	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other relevant sectors (breakdown below where relevant)	5,267	559	436	568	791	10	120	2,207	-	392	75	-28	-6	-21

The exposures reported in this template include loans and advances, debt securities and equity instruments in the banking book of BNG Bank toward non-financial corporates in the Netherlands that are exposed to potential chronic and / or acute physical climate-related risks. BNG Bank does not have any significant exposures in other geographical areas.

Methodology

In template 5 exposures subject to both acute and chronic physical climate risk aggregated to NACE sector levels are reported. For this iteration of the Pillar 3 report a proxy methodology is used based on the statutory location of clients, because the asset locations are not yet available.

The process of estimating whether counterparties are sensitive to physical risks generally consists of four steps: (1) assessing the materiality of physical risk events, (2) developing indicators that enable the measurement of these physical risks, (3) measuring physical risk indicators, and (4) determining sensitivity. These methodological steps will be discussed consecutively.

Materiality assessment

The internal ESG credit risk materiality assessments are used as a starting point for the estimation of physical risk sensitivity. This assessment was performed for each sector and includes a rough estimation of the financial impact of physical climate events on identified transmission channels. For each sector these assessments showed that pole rot, wildfire and floods are relevant risks (note that this is a simplification, lacks intra- and intersectoral depth and will be finetuned and improved incrementally for subsequent iterations). The time-horizon of the materiality assessment is 10 years and will be extended for upcoming reports to include the short- and long-term as well. As the exact methodology of the materiality assessment is beyond the scope of this report, a detailed description is not included.

Indicator development

Based on the in the materiality assessment identified material physical climate events, indicators are formulated. The following indicators are used to measure pole rot, wildfire and flood depth at the counterparty level:
- Pole rot: statutory location in a geographic area that currently has a moderate to very high exposure to pole rot;
- Wildfire: statutory location within 2000 meters distance of a geographic area with currently a high likelihood of wildfires per housing association;
- Flooding: statutory location in geographic areas with a potential flood depth of 1 meter or higher in the current medium likelihood scenario per housing association.

Note that this is a proxy methodology, necessitated due to data availability constraints, that uses the statutory postal codes of counterparties. This does not accurately reflect the location were the impact of the physical climate events is felt and as such lacks validity. The collection of relevant locations is an ongoing process and this shortcoming will be incrementally alleviated in subsequent reports.

Measurement

As can be deduced from the developed indicators, a physical risk indicator principally consist of two components that need to be measured: (1) climate events and (2) locations. By connecting these components, the degree to which a location (often an asset or activity in this context) is exposed to physical climate events is estimated. Connecting these data components is done by means of a Geographic Information System (GIS) as they both consist of geographically referenced information.

As already discussed the locations are the statutory addresses of counterparties. The climate scenarios are retrieved from the Klimaat Effect Atlas (KEA), which is an organisation consisting of government entities and research institutes that is dedicated to developing and sharing national climate information. The scenarios have a regional scale and reflect the best data publicly available. The geographic area of these scenarios is the Netherlands. As almost all of the clients of BNG Bank consist of counterparties based in the Netherlands, this is a suitable area. Specifically the following scenarios were used corresponding respectively to the beforementioned indictors:

- Risk of pole rot | current situation
  Scenario indicates the risk of pole rot at the neighbourhood level estimated by combining the percentage of buildings in a neighbourhood on wooden pile foundations and the vulnerability of these wooden pile foundations to damage as measured by e.g. the mean lowest groundwater level, type of subsoil and year of construction.
- Wildfires | current situation
  Provides the probability of wildfires developing in an area based on e.g. flammable vegetation, precipitation deficit, average lowest groundwater level, and soil type.
- Flood depth | medium probability
  Provides the estimated maximum flood depth in an area with a probability of flooding once every 100 years.

By coupling these scenario's to the statutory locations of counterparties, their exposure to chronic and acute physical climate events is estimated. As can be derived from the scenario names, the selected time horizon is 'current' with the reason being that this best fits the most recent ESG credit risk materiality assessment. Note that out of the 661 counterparties, 5 counterparties with a combined exposure of EUR 155 million are based outside of the Netherlands and thus were not covered by these scenarios. These were in comparison to the total exposure of EUR 55 billion deemed as immaterial and were excluded in the physical risk assessment.

Determining sensitivity

Ideally sensitivity is determined by translating the impact of the physical climate events on the counterparties to a financial value and use that value to develop a sensitivity threshold. Such a method is not yet developed and therefore a simplification was adopted that simply set a threshold at the level of the climate event. Specifically, a counterparty is deemed to be sensitive to pole rot when the value in this scenario corresponding to its statutory postal code is moderate to very high, for wildfire when the maximum value in a 2km radius is high, and for flood depth when the value is 1 meter or higher.

Template 10: Other climate change mitigating actions

Not applicable. The portfolio of BNG Bank does not contain financial instruments that serve to mitigate climate risk (transition risk or physical risk) that are not covered by the EU Taxonomy Regulation.

OVERVIEW OF PILLAR 3 REFERENCES

Following the mandate in Article 434a of CRR2, the EBA has implemented a comprehensive, standardised approach in terms of its policy regarding institutions' Pillar 3 disclosures. For this purpose the EBA has implemented the comprehensive final draft ITS on institutions' public disclosures, applicable to all institutions subject to the disclosure requirements under Part Eight of the CRR.

The templates in the below table have been identified as not applicable to BNG Bank and therefore are not included in this report.

Reference templates	**Rationale for exclusion**
EU INS1, EU INS2	The bank does not have own funds instruments held in insurance.
EU PV1	Not applicable to BNG Bank due to threshold defined in Article 4(1) of Delegated Regulation (EU) 2016/101.
EU CQ2, EU CQ4 (coloumns b & d), EU CQ5 (columns b & d), EU CQ6, EU CQ8 and EU CR2a	The NPL ratio of BNG Bank does not exceed the threshold of 5%. Hence, these templates are not applicable.
EU CR6, EU CR6-A, EU CR7, EU CR7-A, EU CR8, EU CR9, EU CR9.1, EU CR10	BNG Bank does not apply IRB approach.
EU CCR4, EU CCR6, EU CCR7	BNG Bank does not apply IRB approach or internal model method for CCR and does not have credit derivative exposure.
EU SEC2	BNG Bank does not have a trading book.
EU SEC3, EU SEC5	BNG Bank has not acted as an originator or sponsor in transactions with securisation exposures.
EU MR2-A, EU MR2-B, EU MR3, EU MR4	BNG Bank does not apply the Internal Model Approach (IMA) for market risk.
COVID-19 disclosure templates	The relevant templates are not included as all requested figures for the reporting period are nil.
EU REM3	BNG Bank does not have deferred remuneration.
EU REM4	BNG Bank does not have high earners with remuneration of EUR 1m or above.
ESG Template 2	BNG Bank does not have exposure to loans collateralised by immovable property.
ESG Template 4	BNG Bank does not have exposures to the list of top 20 carbon-intensive firms.

CRR	Description	Additional guidelines or standards	Clarification	Location Pillar 3 report
		Applicable tables or templates		
Article 435	Risk management objectives and policies	EU OVA EU CRA EU CRC EU CRD EU CCRA EU MRA EU LIQA	This section provides a comprehensive overview on the risk management objectives and policies. Note that quantitative targets on individual risks are not disclosed due to their confidential nature.	pp. 12 - 56
		EU ORA		pp. 44 and 48

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CRR	Description	Additional guidelines or standards	Clarification	Location Pillar 3 report
		EU OVB		pp. 15 and 16
			See also information in CCR Art 438 & 446.	
			Information regarding the governance arrangements with respect to the members of the ExCo and Supervisory Boards is not included again in this report. The latest information on this can be found on the website of BNG Bank. The annual report includes a comprehensive overview on this as at end of year 2022.	
Article 436	Scope of application	EU LI1 EU LI2 EU LIA EU LI3		pp. 57 - 62
Article 437	Own funds	EU CC2 EU CCA EU CC1	BNG Bank's own funds consists of share capital and hybrid capital. The hybrid capital instruments are issued privately to a limited number of investors. The terms and conditions for these instruments are not part of the disclosure as they are only made available to these parties on the basis of confidentiality.	pp. 63 - 71
Article 437a	Own funds and eligible liabilities		BNG Bank is not considered an institution of global systemic importance.	

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CRR	Description	Additional guidelines or standards	Clarification	Location Pillar 3 report
Article 438	Own funds requirements and risk-weighted exposure amounts	EU OVC EU KM1 EU OV1	This section provides a comprehensive overview on the risk-weigted exposure amount and key metrics regarding the main prudential and regulatory information and ratios covered by the CRR.	pp. 72 - 78
Article 439	Exposure to counterparty credit risk	EU CCR1 EU CCR2 EU CCR3 EU CCR5 EU CCR8		pp. 104 - 110
Article 440	Countercyclical capital buffer	EU CCyB1 EU CCyB2		pp. 79 - 81
Article 441	Indicator of global systemic importance		BNG Bank is not considered as an institution of global systemic importance.	
Article 442	Exposures to credit risk and dilution risk	EU CRB EU CR1 EU CR1-A EU CR2 EU CQ1 EU CQ3 EU CQ4 EU CQ5 EU CQ7	This section covers details on BNG Bank's credit quality including forbone exposures, non-performing exposures by geography and credit quality of loans and advances by industry.	pp. 82 - 98
Article 443	Encumbered and unencumbered assets	EU AE1 EU AE2 EU AE3 EU AE4		pp. 111 - 116
Article 444	The use of the Standardised Approach	EU CRD EU CR5 EU CCR3		pp. 22 - 28 pp. 102 - 103 p. 108
Article 445	Exposure of market risk	EU MR1		p. 117
Article 446	Operational risk management	EU OR1	BNG Bank applies standardised approach for the assessment of own fund requirements for operational risk.	p. 120
Article 447	Key metrics			pp. 75 - 76

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CRR	Description	Additional guidelines or standards	Clarification	Location Pillar 3 report
Article 448	Exposure to interest rate risk on position not held in the tradingbook	EU IRRBB1		pp. 29 - 32, 118 - 119
Article 449	Exposure to securitisation positions	EU SECA EU SEC1 EU SEC4		pp. 132 - 135
Article 449a	Environmental, social and governance risks (ESG risks)	Template 1 Template 5		pp. 136 - 161
Article 450	Remuneration policy	EU REM1 EU REM2 EU REM5		pp. 121 - 124
Article 451	Leverage ratio	EU LR1 EU LR2 EU LR3 EU LRA	BNG Bank's calculation of the exposure measure is based on the SA-CCR approach.	pp. 117 - 122
Article 451a	Liquidity requirements	EU LIQ1 EU LIQB EU LIQ2		pp. 35 - 43
Article 452	Use of IRB approach to credit risk		BNG Bank does not apply IRB approach.	
Article 453	Use of credit risk mitigation technique	EU CR3 EU CR4	This section provides insight in the disclosure of the use of credit risk mitigation techniques and the standardised approach.	pp. 22 - 28, pp. 99 - 101
Article 454	Use of advanced measurement approaches to operational risk		BNG Bank does not apply advanced measurement apprackes to operational risk.	
Article 455	Use of internal market risk models		BNG bank does not apply internal market risk models.	