PILLAR 3

2021

Disclosure report

BNG BANK

Driven by social impact

PILLAR 3 DISCLOSURE REPORT

BNG BANK **2021**

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 a Capital Requirements Directive (CRD) and a Capital Requirements Regulation (CRR).

The Basel framework (and thus CRD/CRR) is based upon 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, strategic risk, etc.). 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);
- Finally, the third pillar aims to introduce market discipline to complement the capital and liquidity requirements from the first and second pillar. Therefore, Basel III (CRD/ CRR) 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 the 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 (ARTICLES 431 AND 432 CRR)

The scope of the Pillar 3 disclosure is based on the policy that BNG Bank has adopted to comply with the relevant regulatory requirements. This policy describes the rationale for a Pillar 3 report, identifies the departments involved and put in place internal controls and procedures for disclosing the required information. The policy is subject to review on an semi-annual basis.

The scope of this report includes BNG Bank's two wholly owned subsidiaries *BNG Gebiedsontwikkeling BV* and *Hypotheekfonds voor Overheidspersoneel BV*. BNG Bank aims to disclose a comprehensive overview on its risk profile by including information that is clear, meaningful, consistent and comparable in a dedicated Pillar 3 report. To avoid 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 subject to European legislation and are included in the regulatory prudential framework. Part Eight of the Capital Requirements Directive (CRR) and the guidelines on disclosure requirements prescribe in detail the tables and templates through which the Pillar 3 information needs to be disclosed[1]. 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 department.

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 has been reviewed by the bank's Internal Audit Department (IAD).

This report is set-up to align with the structure of Part Eight of the European Banking Authority (EBA) guidelines and standards. The report provides a comprehensive qualitative overview on 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] 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.

FREQUENCY AND MEANS OF DISCLOSURE (ARTICLES 433 AND 434 CRR)

As of this year BNG Bank's Pillar 3 disclosure will be published twice a year, as part of the revised Pillar 3 disclosure requirements under CRR2. The first interim Pillar 3 disclosure report of BNG Bank has been published in October 2021, together with the interim financial results. Both publications are available on the website of BNG Bank.

In considering the relevant requirements on the frequency of disclosure BNG Bank has assessed the need to publish information more frequently and concluded that, the revised CRR are also applicable to Other Systemically Important Institutions (O-SII)[2]. BNG Bank is therefore obligated to publish an interim Pillar 3 disclosure next to the regularly annual disclosure to comply with the regulation. BNG Bank is characterised by a stable business model with a limited range of activities and exposures. 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.

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

DECLARATION OF RESPONSIBILITY

We confirm that the 2021 Pillar 3 Report has been prepared in accordance with the internal control processes as they have been agreed upon within BNG Bank. The 2021 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 2021.

The 2021 Pillar 3 Report was approved by the Executive Committee on 25 May 2022.

Executive Committee
Gita Salden (CEO), statutory director
Olivier Labe (CFO), statutory director
Cindy van Atteveldt-Machielsen (CRO), statutory director
Jaco van Goudswaard (COO)
Thomas Eterman (CCO)

RISK MANAGEMENT OBJECTIVES AND POLICIES (ARTICLE 435 CRR)

General information

Institutional risk management approach

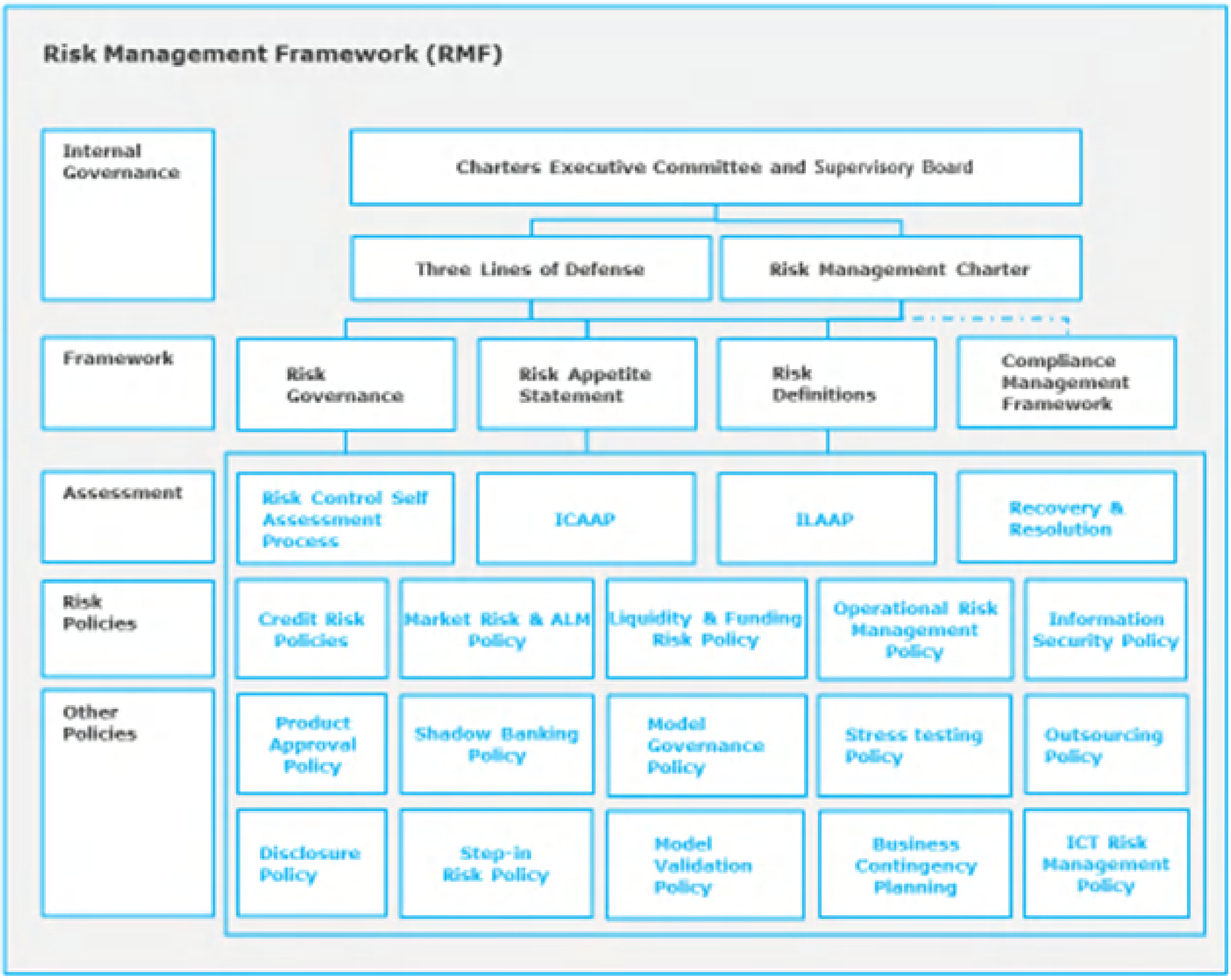
The process of accepting and controlling risks is inherent to the day-to-day operations of any bank. In order to conduct its operations, a bank must accept a certain level of credit, market, liquidity, operational, compliance, security and strategic risk. BNG Bank's risk management strategy is aimed at maintaining its safe risk profile, which is, amongst others, expressed in its high external credit ratings. BNG Bank's strict capitalisation policy, the restriction on services and counterparties as laid down in its Articles of Association and the fact that the bank has no trading book, determine the scope and size of the bank's risk appetite. The sphere of the risk appetite is defined by BNG Bank's strategic aim to maximise our social impact and to operate within high integrity requirements.

Risk acceptance is guided by the following principles:
- BNG Bank aims to provide the best possible services to its stakeholders, now and in the future. The return required by its principal shareholder takes into account the maintenance of a prudent risk profile. This means that the required return does not result in the bank taking risks that jeopardise its ratings and funding position at a level that it would no longer be able to fulfil its long-term mission.
- In addition to a reasonable return for shareholders, competitive prices are a focus. Apart from assuming the inherent risks for 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 pricing strategy of the bank. This principle may not be at the expense of the external ratings and excellent funding position.
- Specific to the public sector, the largest share of the bank's lending (loans and advances) is and will be zero-risk-weighted lending. To facilitate lending at the lowest possible rates, it is essential that the bank retains its high rating and competitive funding position by imposing restrictions on non-zero-risk-weighted lending which puts a limit to credit risks.

These principles are decisive elements in determining the risk appetite of BNG Bank. To ensure that the risk appetite is embedded in the organisation, several sub processes are put in place.

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.

Risk management framework



The Internal Governance Framework (IGF) provides an overview of the internal governance that forms the foundation for all decision-taking activities within BNG Bank. In relation to risk management, the IGF describes how risk management is organised in the bank's 'Three Lines of Defense' (3LoD) model and how decisions on risk topics are structured in its Risk Management Charter. The Risk Management Framework (RMF) is an important component within the IGF. The RMF consists of a number of overarching framework documents and policies on general and specific risk related topics. The figure below, provides an overview of the RMF and the hierarchy between the different parts. The RMF identifies and defines the various types of risks, defines the risk appetite of the bank, describes the bodies involved in risk governance, sets out the roles and responsibilities, and includes the various policy documents that describe the acceptance and management of these risks. The RMF of the bank is characterised by its specific business profile that has a strong interconnectedness with the Dutch Public Sector, a low default credit risk profile as a consequence and a relatively large balance sheet. The bank has adopted a continuous risk management process that includes the following key steps: identify, assess, measure, monitor, report and steer the various types of risk.

Three lines of defence approach

BNG Bank has adopted the 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, Compliance, Security, Management Control.
- Third line, Risk Assurance – Internal Audit Department.

The model ensures that there is adequate segregation of duties between direct accountability for risk decisions (first line), independent monitoring and challenge of risk decisions within the risk management framework (second line), and independent assurance on the effectiveness of risk management, control and governance processes (third line). The 'second line' departments, which are directly positioned under the Chief Risk Officer, further support the ExCo in implementing and executing the bank's risk management policy and is described in the annual report (p. 42, 43)[3].

Risk governance

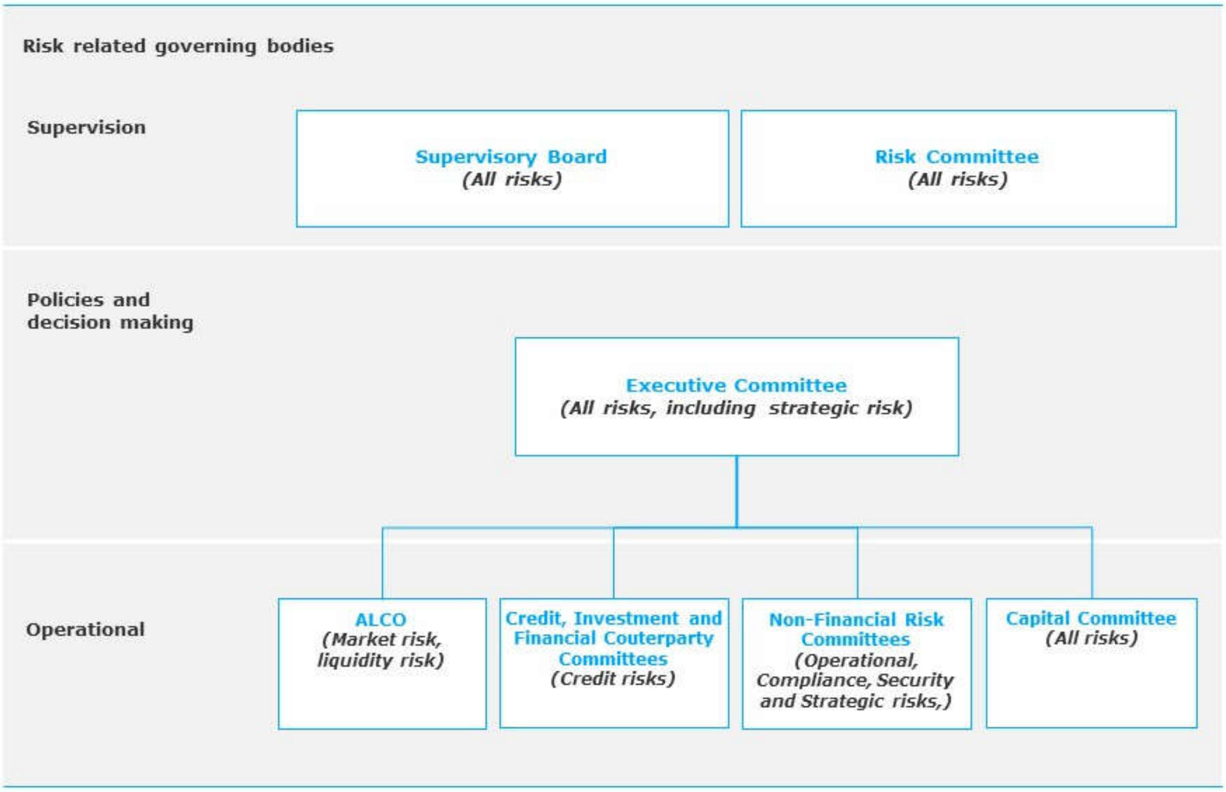
The Executive Committee (ExCo) and the Supervisory Board (SB) of BNG Bank are regularly informed about the risks and risk management. The following table provides an overview of the relevant reports that the ExCo and SB receive and their frequency.

Table of reports and frequencies

3LoD	Report	Executive Committee	Supervisory Board
1st line	Management report business	quarterly	
	Business review	various	
	Financial report	quarterly	quarterly
	In Control statement	annually	
	ICAAP/ ILAAP	annually	annually
2nd line	Risk report	quarterly	quarterly
	Compliance report	quarterly	quarterly
	Information security report	monthly	
	Incident reporting	quarterly	annually
	Risk Control Self-Assessment outcomes	quarterly	
	Risk Appetite Statement	annually	annually
	Recovery plan	annually	annually
	Risk analysis on remuneration policy		annually
3rd line	Internal audit reports	various	quarterly
Other	Audit report external auditor	annually	annually
	Management letter external auditor	annually	annually

3 For annual report 2021

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



BNG Bank has adopted a two-tier governance structure consisting of a SB and an ExCo. An up-to-date overview of the members of the SB and the ExCo is available on the website of BNG Bank[4,5]. Information on the number of directorships, the profiles of the ExCo as well as their duties and responsibilities is also included there[6]. The powers and responsibilities of the SB, supported by the Risk Committee and the ExCo regarding risk management are defined in their charters.

The SB approves the Risk Appetite Statement and monitors whether the actual risk profile of the bank is within the approved risk appetite. The ExCo is responsible for formulating the Risk Appetite Statement and navigating the bank's activities within its risk appetite through its committees, which manage the various risks at operational

4 For the Supervisory Board

5 For the Executive Committee

6 For the Articles of association

level (the operational committees). The annual report 2021 provides a comprehensive overview of the corporate structure as at the end of December 2021 and the corporate governance statement (pages 60-68)[7].

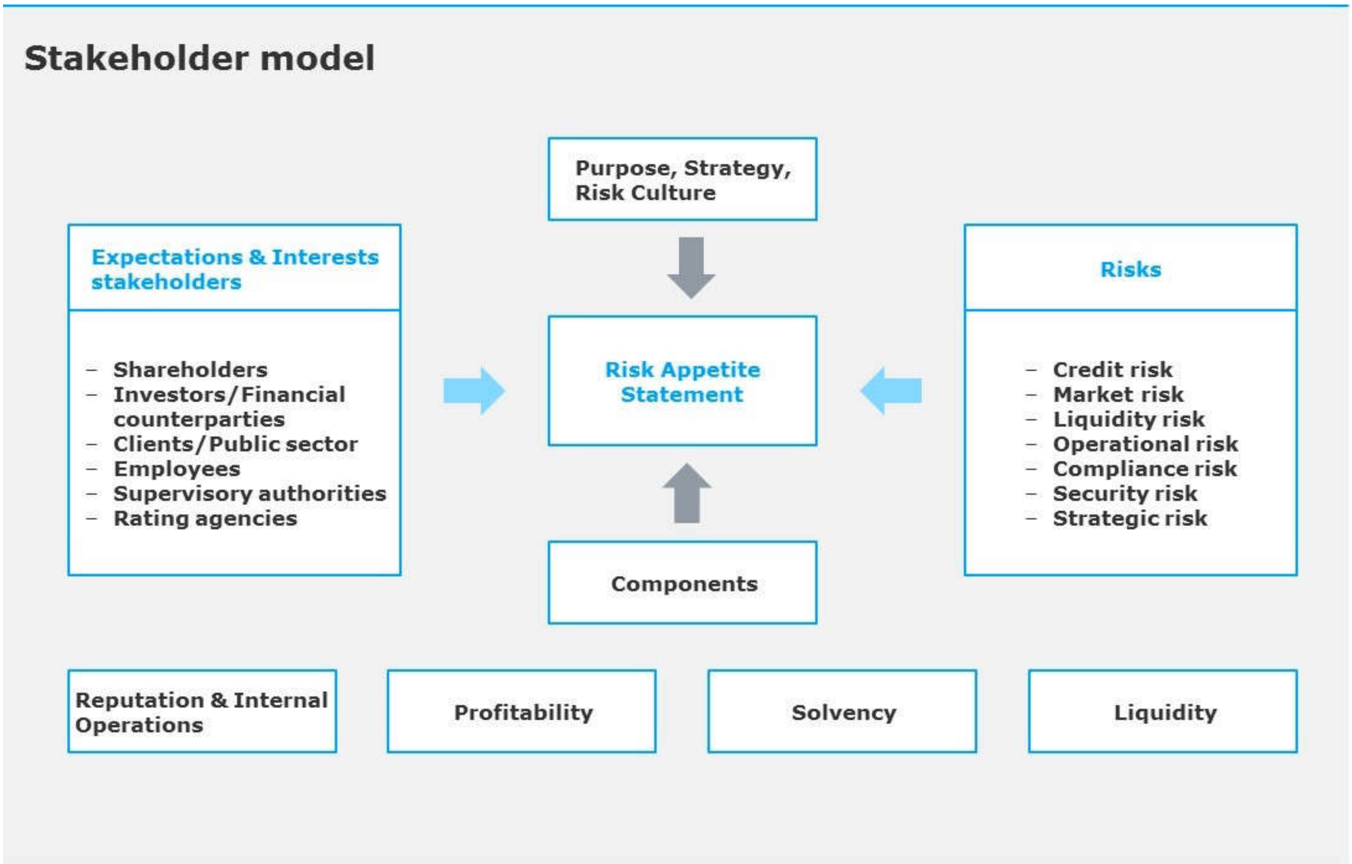
Formal risk-taking decisions on subjects with potential strategic impact as well as escalations by a committee are taken in the ExCo meeting. Policy approval and the risk decisions on key business operational activities are taken by the committees. The committees at operational level are chaired by a member of the ExCo. These committees 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 SB.

Risk appetite

One element of the Risk Management Framework (RMF) 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 Risk Appetite Statement (RAS), the subsequent risk limit setting, and an outline of the roles and responsibilities of those overseeing the implementation and monitoring of the RAS. The RAS is updated annually, based on external and internal developments and cascaded into limits and targets for the various types of risk. These are subject to a quarterly monitoring programme to determine whether the bank respects the limits of its risk appetite. The outcomes are reported to the ExCo and the SB. The report not only provides aggregated information derived from figures used for periodic limit monitoring but also aims to present a holistic view on long- and short-term risks and underlying processes.

7 For annual report 2021



BNG Bank recognizes both financial risks in the form of credit risk, market risk and liquidity risk, as well as non-financial risks in the form of operational risk, compliance risk, security risk and strategic risk. In addition, several business components are defined that represent the financial health of the bank's operations which are being considered in the development of the risk appetite. The components (1) Profitability, (2) Solvency and (3) Liquidity are commonly used for assessing the overall financial health of a bank. Hence, these are considered to be key determinants in the risk profile of a bank. In addition, BNG Bank has included (4) Reputation and Internal Operations in this model. As a triple A rated bank, BNG Bank places great value on an impeccable reputation.

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", our 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 refers to the business operations, the way BNG Bank executes the strategy and the (business) plans derived from it. Besides, it also determines the opinion of our stakeholders and influence the following RAS components.

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 that the amount of capital is sufficient to absorb unexpected losses, in the interest of safeguarding the continuity of the bank's business operations. 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 that is perceived as an implicit state guarantee.

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 stressed circumstances. This requires additional liquidity. 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.

Risk appetite cycle and monitoring

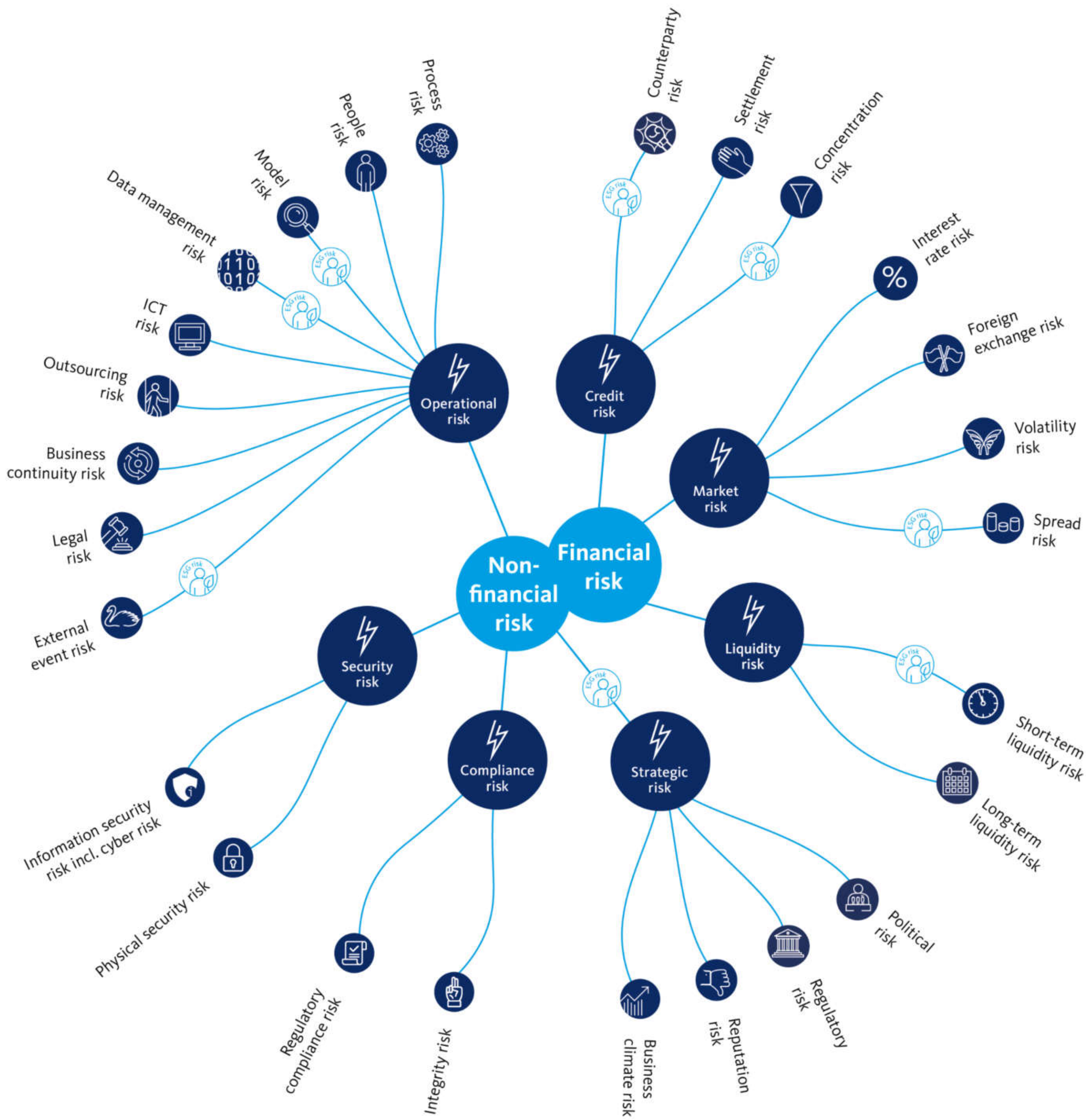
On an annual basis, the Risk Appetite Statement is updated based on external and internal developments. It is subsequently cascaded into limits, targets and ratios for the various types of risks. These are subject to a monitoring programme to determine each quarter whether the bank is within the limits of its risk appetite. The outcomes are reported to the ExCo and SB as part of the quarterly Risk Report. The Risk Report provides aggregated information derived from figures that are used for daily limit monitoring and reporting to the various ExCo committees. As a result, the information conveyed to the ExCo and the SB is in line with the information used in the operational processes. Finally, further examples of tools to monitor compliance with the risk appetite of the bank are the yearly In Control Statements by senior management as well as the reports by internal and external auditors.

In 2021, BNG Bank operated within its financial risk appetite. Although internal sub-limits with regard to (the capitalisation of) market risk were breached in a few cases, these risk positions were soon restored to a level within the limit, or the limit structure was amended after due consideration. In relation to its capital, the bank met the legal supervision requirements, as well as its internal capital objectives during the year. With regard to the non-financial risk profile, BNG Bank operates partly outside its risk appetite. In terms of compliance risk BNG Bank focused in 2021 on the enhancement of its role as gatekeeper for the financial system as well as its own organization for privacy related activities. The operational risk profile has increased due to intensified change initiatives, which serve the bank in the long run, but at the moment lead to a higher workload at parts of the organisation. Consequently, the number of operational incidents increased in 2021, which resulted in a significant case. This case will be further explained in the operational risk paragraph.

In 2021, BNG Bank renamed ‘Sustainability risk’ as ‘ESG risk’. The new name reflects the need to approach this risk more holistically, given that climate change, developments in ‘clean’ technology and public opinion regarding ESG will have an impact across multiple risk categories. BNG Bank already foresees that ESG factors will in the long term have a material impact on the following risk categories: 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). Incorporating supervisory guidelines regarding ESG into the risk management framework is an important subject for 2022 (including implementing metrics).

As is common in risk management 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 types that are relevant to BNG Bank have been included. ESG risk is connected to those traditional risk categories where in the long term 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 has distinguished financial risks and non-financial risks. In this paragraph the following risk categories 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 started to incorporate climate 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:
- 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.

As part of counterparty and concentration risk, ESG risk is considered. For ESG 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 impacts 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.

Risk Appetite

- 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.
- 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.
- Investments that support lending to clients.
- Non-zero-risk-weighted loans and investments are managed at a level that is appropriate for a promotional bank and that do not jeopardise the bank's mission.

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 or the Head of Credit Risk Assessment decides on accepting or declining credit risk in connection to loans and advances 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 advises 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 Public Finance and Treasury directorates, which are the risk owners and which have first line responsibilities for credit risk.

Developments

Covid-19

During 2020, a regulatory standard was published which allowed banks to defer interest payments and redemptions for customers who were largely impacted by the COVID-19 pandemic, the so-called moratoria. These moratoria were given to a limited amount of customers in 2020; 27 applications were granted for a total amount of EUR 12.1 million. This amount related entirely to zero-risk-weighted exposures from small foundations and associations that received loans under a guarantee from a local government. All these moratoria ceased per 1st January of 2021. There were no credit events and no new moratoria provided in 2021. Furthermore, no individual party at BNG Bank is in payment difficulties due to the COVID-19 pandemic.

The Covid-19 pandemic did not have the same impact all the sectors BNG Bank is active in:

Public Sector

The financial position of municipalities, has deteriorated due to the COVID-19 pandemic. In 2021, the government continued to provide compensation packages, taking away the immediate financial impact. However, the financial situation of municipalities remains fragile. On the other hand, there is no reason to doubt that sufficient long term resources will be provided by the government, thus protecting the credit quality of the municipalities.

Healthcare sector

A financial safety net for the Healthcare sector has been established due to the COVID-19 crisis. This safety net was initiated by the sector itself and includes liquidity support and income compensation. The healthcare sector was affected by persistent staff shortage. Non-emergency care had to be scaled down during the COVID-19 pandemic.

Mobility sector

- Public transportation: the most important challenge for this sub-sector is the reduced number of passengers. The numbers are expected to remain lower than before the COVID-19 crisis in the foreseeable future, but this sector is largely supported by the government.
- Airports: the airports were emerging in Q3 2021 from the COVID-19 crisis. Visitor numbers improved in Q3 2021 caused by the relaxation of the COVID-19 measures. However, the new COVID-19 measures in the fourth quarter of 2021 had a negative impact on the airports. Airports also benefited from government support in 2021.
- Harbors: in 2021 the harbors are recovering from the crisis which was caused by COVID-19.

Energy sector

The energy sector has slightly been affected by COVID-19. The price of gas increased quite extensively in 2021 due to various causes. One of these causes is that more gas has been used worldwide due to the rapid recovery of the economy after the first wave of the COVID-19 crisis. However, some parties in the Dutch energy sector rely on a subsidy that will be retracted when the price of energy increases past a certain threshold. Besides, energy producers can increase their energy prices based on the market circumstances.

Brexit novation
BNG Bank moved its positions from UK entities to EU entities where relevant.

Evergrande
BNG Bank evaluated its (indirect) exposure to Evergrande, a highly indebted Chinese real estate developer at risk of default. BNG Bank expects that a default of Evergrande would not have a direct material impact on the bank, as it does not have any direct exposures to Evergrande nor does it expect increased credit risk for its counterparties with exposures to Evergrande. Furthermore, our customers in the Dutch housing sector are not correlated with the Chinese real estate market.

Internal improvements
In 2021, BNG Bank improved its credit risk control processes related to improving insight into clients, early detection of any adverse developments, optimising procedures, and credit risk assessments. Additionally, the Probability of Default (PD) models have been enhanced in line with relevant rules and regulations.

Counterparty risk

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. BNG Bank applies the following credit risk mitigation measures:
- Guarantees received from a central or local authority or by 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 (see the section on statutory market parties).
- 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.
- Bilateral netting and collateral agreements based on a daily collateral exchange with financial counterparties (see also the section on financial counterparties).
- Indirect clearing of derivatives, where possible, through qualified central clearing house, including exchange of initial and variation margin collateral.

In the following paragraphs, we will provide more details the statutory market parties, financial counterparties and investments and how the credit risks are modelled.

Statutory market parties

The bank's Articles of Association result in mainly lending to parties subject to some form of government involvement. As a result, the credit portfolio is largely comprised of zero risk-weighted loans and advances provided to or guaranteed by the Dutch government. Given the regulatory developments, the bank has merged the credit processes for risk-weighted and zero risk-weighted loans.

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, or the score resulting from the assessment, and the size of the loan. The bank's risk appetite also 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 a member of the ExCo, and it includes representation from the Public Finance directorate, the Credit Risk Assessment department and – where applicable – the Treasury department. If the Credit Committee is unable to reach an unanimous decision, the proposal is escalated to the ExCo. 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.

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 Public Finance Teams;
- The Public Finance 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. 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.

BNG Bank actively follows the developments within the market segments in which it operates. This also applies to the operation of 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.

Financial counterparties

The bank only conducts business with financial counterparties that have been rated by an external agency. Financial counterparties are periodically assessed for creditworthiness. If necessary, the limit on the maximum exposure to such a counterparty is re-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 actively 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.

Investments in interest-bearing securities

BNG Bank's Interest-Bearing Securities portfolio is held primarily for liquidity 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 reported to and 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 subjected to a due diligence review process. The assets within these portfolios undergo an impairment analysis twice a year.

Credit risk models

The credit risks are determined based on different credit risk models which relate to either internal or external ratings. The internal ratings are used for statutory market parties. The external ratings are used for financial counterparties and investments.

Internal ratings

BNG bank applies internally developed rating models to asses creditworthiness of clients. 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;
- DBFMO (Design Build Finance Maintain Operate, project financing);
- Area development;
- Networks, energy, mobility and the environment;

Furthermore, BNG Bank has a scorecard model for decentral governments. Given the close relation to the Dutch government, BNG Bank does not rate the decentral governments, but only assesses their (relative) creditworthiness on an individual basis. In cases where PD determination is needed, we set the rating of decentral governments equal to the Dutch government (ultimo 2021: 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 Board.
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. More quantitative details on the credit risk profile and the credit quality are included in the section on credit risk and credit risk mitigation.

	31-12-2021		31-12-2020	
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	**86,932**[1]	**87.91%**	**88,359**	**87.80%**
Non-zero-risk-weighted				
Internal rating:				
- 1 through 11	11,037	11.16%	11,269	11.20%
- 12 through 13	475	0.48%	551	0.55%
- 14 through 17	124	0.13%	174.7	0.17%
- 18 through 19	317	0.32%	283	0.28%
	11,952	**12.09%**	**12,278**	**12.20%**
Total	**98,884**	**100.00%**	**100,637**	**100.00%**

1 Please note that this percentage consists of long term and short term loans & advances and off balance sheet exposures.

External rating

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, we use external ratings, where available, to determine regulatory risk weights for RWA calculations.

Concentration risk

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.

Most of the bank's credit risk for zero-risk-weighted lending is concentrated on 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.

Domestic country risk
A considerable degree of concentration risk on the Netherlands is inherent to BNG Bank's focus on the Dutch public sector. A considerable portion of the total exposure is indirectly related to public-sector property. However, these risks are generally mitigated by government guarantees on lending as well as by the WSW and WfZ guarantee funds. These guarantees result in a concentration risk in relation to public authorities and guarantee funds. The guarantee funds are guaranteed by the central government via backstop constructions. 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.

Foreign country risk
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 – to a limited extent – 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 2021, the bank's long term foreign exposure (expressed in balance sheet value) totalled EUR 9.7 billion exposures (2020: EUR 10.6 billion). This represents 6.5 % of the balance sheet total (2020: 6.6%).

Sector risk
Sector-specific policies and internal targets are used for lending without direct or indirect guarantees from the Dutch State. 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. 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.

Individual statutory market parties
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.

Individual financial counterparties
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 approved parties is high. Daily exchange of collateral mitigates the credit risk with respect to derivatives. A bankruptcy of a counterparty could result in the necessity for novation in which derivatives need to be rearranged with another party.

BNG Bank clears parts of its derivatives centrally via London Clearing House and EUREX 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, we set limits on the maximum amount of initial margin exchanged.

Settlement risk

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. 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.

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 (for example, the inflation index) and ESG risk.

Risk appetite

- BNG Bank hedges the interest rate risks arising from lending (loans and advances) and borrowing. All interest rate positions of BNG Bank in the total banking book are either hedged externally or transferred to the 'Treasury Book' portfolio. Therefore, it can be concluded that IRRBB is solely managed in the 'Treasury book'. The ALCO position is passive, i.e. the equity is invested (from an interest rate risk perspective) in the benchmark. The benchmark comprises a ten-year moving average investment in Dutch State bonds, which is equal to (the interest rate component of) the desired shareholder return. Furthermore:
- BNG Bank closely monitors the IBOR transition towards €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 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 directorate 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 checks on a daily basis to ensure the risk positions are within the limits cascaded from the Risk Appettite and set by the Asset & Liability Committee (ALCO). 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), CRO, the Managing Director of Treasury and Capital Markets, the Head of Risk Management and is, depending on the agenda, supplemented with other participants.

Developments

In the second quarter of 2021, the ExCo decided that there is no longer appetite for ALCO to take an active interest rate position, i.e. the ALCO position should no longer deviate from the benchmark.

Furthermore in 2021, BNG bank has prepared for the transition from GBP Libor to Sonia and completed adjustments to contracts with financial counterparties to accompany the transition from EONIA to €str. In 2022, BNG bank will start with IT infrastructure changes to accompany the Inter Bank Offer Rate (IBOR) strategy completed in 2021. This will require significant efforts in 2022.

Interest rate risk

Framework

The bank's most important 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.

All interest rate positions of BNG Bank in the total banking book are either hedged externally or transferred to the 'Treasury Book' portfolio. Therefore, it can be concluded that IRRBB is solely managed in the 'Treasury book'. Treasury is authorised to operate (by means of executing mainly interest rate swaps) within a limited bandwidth, which allows among others efficient hedging and flexibility for clients. The Treasury book should be interpreted as a short-term interest rate position[8].

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:

[8] The accounting treatment of derivatives and hedged items in the balance sheet and income statement is such that they are aligned as much as possible with the actual economic hedging. details on that accounting treatment are included in the annual report (pp. 115, 116 and 117).

- 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 sees to it 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 to and its sufficiency is monitored on at least a monthly basis for interest rate risk, spread risk and IBOR transition risk and quarterly for CVA risk.

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 2021. 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 2021 compared to end of 2020, in a scenario with an instantaneous parallel shock of plus 100 basis points for the 1-year and 2-year horizon. Usually, the most negative or least positive impact can be seen in the scenario with an instantaneous parallel shock of minus 100 basis points. The main reason for this switch is the participation in TLTRO. This is a large liability repricing in the shortest bucket, leading to a significant positive effect in the downward scenario.

Earnings at risk (in millions of euros)	**2021**	**2020**
Horizon		
1 year	9	21
2 years	67	35

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, subject to limits. During 2021, 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 2021, 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

Liquidity risk

Definitions

Liquidity risk is defined as the risk of losses to earnings and capital due to the possibility that at any moment it will not be able to fulfil its payment obligations without incurring any unacceptable costs or losses.

- Short-term liquidity risk is the risk that the bank will not be able to attract sufficient funds in order to meet its payment obligations.
- Long-term liquidity risk (or refinancing risk) is the risk that the bank will not, as a result of its own credit-worthiness, be able to attract any (or sufficient) funds at funding spreads that won't jeopardise its continuity.

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 cost, 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 directorates 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 proposals for 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 (ALCO). 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. This plan was not activated in 2021.

Developments

In 2021, the COVID-19 pandemic continued to cause volatility in the financial markets. For BNG bank this did not lead to significant impact on access to money markets and capital markets. Furthermore, BNG Bank increased its participation in TLTRO in 2021 by EUR 7.5 billion , from EUR 11 billion to EUR 18.5 billion.
- The pricing of TLTRO is attractive compared to long term (and even short term) funding, especially when the so-called bonus rate is achieved. BNG Bank needs to obtain a certain amount of new lending in specific client groups (other than decentral government) in order to achieve this bonus rate. As other participants are aiming for the same, Public Finance encountered strong competition in certain markets after the start of the TLTRO program in June 2020. The attractive pricing was mainly passed on to the clients (in line with ECB's intention of the TLTRO).
- Participation in TLTRO leads to encumbrance of the depot at DNB, being a part of the liquidity buffer. In order to sustain a comfortable unencumbered liquidity buffer, the amount of collateral deposited at DNB strongly increased during 2021 in such that the depot exceeds target level.

Other developments in the area of liquidity risk are, in no specific order:
- In the first quarter both the calculation methodology for the liquidity gap profile and the corresponding liquidity limits were revised thoroughly. Among other things, a more transparent funding capacity was incorporated. Moreover, the daily report on liquidity risk was migrated to the new data warehouse.
- As a consequence of increased interest rates, the outstanding amount of collateral decreased in 2021 from EUR 20.4 billion to EUR 13.9 billion, leading to a relief in funding for BNG Bank.
- Tooling for liquidity stress testing in the economic perspective has been integrated into the more advanced tooling for stress testing in the normative perspective. This leads to several advantages, such as improved quality of calculations, consistency between both perspectives and enhanced possibilities for further finetuning of scenarios;
- The measurement for funding spread risk (as part of long-term liquidity risk) was enhanced as part of ICAAP 2021. The risk measure now comprises the potential funding spread loss due to a stressed funding spread of all future years and compares this to the buffer of historically locked-in funding spreads. The most important improvements are:
  - A detailed bottom up calculation is used, where every relevant transaction is taken into account. The previous method comprised a more general top-down approach.
  - Data is obtained from the new data warehouse.

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 (LCR) of at least 100%. BNG Bank also holds ample quantity of collateral in the depot at the central bank, which enables it to obtain short-term funding immediately. As mentioned before, the amount of collateral in the depot at DNB increased significantly in 2021. Since most of the bank's assets could serve as collateral at the central bank, this collateral may be even 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 & 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 for the upcoming years, 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 buffer of historically locked-in funding spreads.

Risk measures and limits

For several liquidity and funding risk measures such as the liquidity gap analysis, the refinancing spread risk analysis, the contingency funding plan and liquidity stress scenarios assessing the liquidity buffer after stress of BNG Bank, 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 prepared and 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.

The bank considers its liquidity management to have been adequate in 2021 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 of the end of 2021, the LCR ratio amounted to 178% (2020: 133%) and the NSFR ratio amounted to 129% (2020: 122%).

The below table provides an overview of the LCR during 2021. For disclosure purposes, our LCR is based on 12 data points for each quarter. The LCR remains well above the regulatory minimum requirements.

Quantitative information of LCR (EU LIQ1)

	Scope of consolidation (consolidated)	Total unweighted value				Total weighted value			
	Currency and units (EUR million)	31-12-2021	30-9-2021	30-06-2021	31-03-2021	31-12-2021	30-9-2021	30-06-2021	31-03-2021
	Number of data points used in the calculation of averages	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**
	High-quality liquid assets								
1	Total high-quality liquid assets (HQLA)					28,972	28,883	25,869	24,446
	Cash-outflows								
2	**Retail deposits and deposits from small business customers, of which:**	**-**	**-**	**-**	**-**			**-**	**-**
3	- Stable deposits			-	-			-	-
4	- Less stable deposits			-	-			-	-
5	**Unsecured wholesale funding**	**16,278**	**17,163**	**18,013**	**17,204**	**14,337**	**15,194**	**15,949**	**14,750**
6	- Operational deposits (all counterparties) and deposits in networks of cooperative banks	-	-	-	-	-	-	-	-
7	- Non-operational deposits (all counterparties)	5,814	6,073	6,213	6,745	3,873	4,104	4,149	4,291
8	- Unsecured debt	10,463	11,091	11,800	10,459	10,863	11,091	11,800	10,459
9	**Secured wholesale funding**					**-**	**-**	**-**	**-**
10	**Additional requirements**	**15,627**	**16,153**	**16,216**	**16,277**	**7,632**	**7,682**	**7,688**	**8,442**
11	- Outflows related to derivative exposures and other collateral requirements	6,629	6,581	6,584	6,587	6,604	6,581	6,584	7,314
12	- Outflows related to loss of funding on debt products	-	-	-	-	-	-	-	-
13	- Credit and liquidity facilities	8,998	9,572	9,632	9,690	1,029	1,101	1,105	1,128
14	**Other contractual funding obligations**	**82**	**26**	**23**	**120**	**82**	**26**	**23**	**120**
15	**Other contingent funding obligations**	**1,695**	**1,463**	**1,551**	**1,558**	**111**	**75**	**84**	**79**
16	**Total cash outflows**					**22,162**	**22,977**	**23,744**	**23,391**
	Cash-inflows								
17	Secured lending (eg reverse repos)	51	39	158	158	-	20	46	-
18	Inflows from fully performing exposures	2,813	2,963	3,101	3,417	1,520	1,598	1,670	1,861
19	Other cash inflows	1,476	1,321	920	1,746	1,476	1,321	920	1,746
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**	**4,340**	**4,323**	**4,179**	**5,321**	**2,996**	**2,938**	**2,636**	**3,607**
EU-20a	Fully exempt inflows	-	-	-	-	-	20	46	-
EU-20b	Inflows subject to 90% cap	-	-	-	-	-	-	-	-

	Scope of consolidation (consolidated)	Total unweighted value				Total weighted value			
EU-20c	Inflows subject to 75% cap	4,340	4,323	4,179	5,321	2,996	2,918	2,590	3,607
21	Liquidity buffer					28,972	28,883	28,763	27,577
22	Total net cash outflows					19,166	20,039	21,108	19,738
23	Liquidity coverage ratio (%)					155%	147%	157%	161%

The table provides an overview of the LCR during 2021. 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. As of the end of December 2021 the LCR ratio amounted to 174% (31-12-2020: 158%),the NSFR ratio amounted to 126% (31-12-2020: 122%).

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.

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 liquidy 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 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

Bank distinguishes between short-term and long-term funding (turning point: 1 year). The majority of funding is from international capital markets. The bank maintains a number of 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 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 15 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 more detail. Part of the funding plan is the annual issuance in benchmark size to maintain a 'BNG curve' in the market. These large-scale issues 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)

31-12-2021		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	

Continuation of previous page
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*
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*				*2,401*	*2,041*

Continuation of previous page

31-12-2021		Unweighted value by residual maturity				Weighted value
		No maturity	< 6 months	6 months to < 1 year	≥ 1year	
	contributions to default funds of CCPs					
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 and security risk. ESG might have an impact on among others non-financial risk. Therefore, BNG Bank has started to incorporate climate related risks in the risk management framework. To further enhance the management of its non-financial risks, BNG Bank has established a Non-Financial Risk Committee (NFRC) represented by two members from the ExCo (COO (chair) and CRO) as well as senior stakeholders from the first and second line. In addition, the bank has initiated a project to implement a tool enabling a more effective and efficient management of its operational, compliance and security risks.

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 is the risk of shortcomings of internal processes supporting all activities related to products, services, clients, transactions (change risk, statutory reporting & tax risk);
- People risk is the risk of unintended actions from people, shortcomings in capacity and employee management (key person risk);
- Model risk is 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 is the risk of failure of hardware-, software- or network, supporting the activities in the business processes (ICT availability risk);
- Data management risk is 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 is 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 is the risk associated with the possibility that contractual stipulations prove unenforceable or have been incorrectly documented;
- Business continuity risk is 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 is 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 great 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 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. The reports are discussed in the NFRC. A summary of the report is included in the quarterly Risk Report to the ExCo and SB, based on the risk appetite of the bank.

Line management is the first line of defense and has as risk owner primary responsibility for managing operational risk in day-to-day operations, in line with policies and guidelines. 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 as well as in the Product Approval and Review Process.

Developments

The line management, being the risk owners as first line of defense, are strengthening their own operational risk monitoring by means of explicit monitoring programmes for testing the effectiveness of their key controls.

Data quality continues to be of high importance. Further improvements in the data warehouse were made through 2021. This company-wide data warehouse is to contain all business data, necessary to meet both internal information needs as well as external requirements such as the Principles for Effective Risk Data Aggregation and Risk Reporting (PERDARR/BCBS 239). The corresponding data governance processes were further strengthened by means of introducing a data governance office , finalising a data quality framework and assigning additional resources in order to address the data quality challenges within the bank. The Data Governance Roadmap will be further executed in 2022.

The ICT environment is gradually moving from on-premise with the bank's outsourcing partner Centric to a cloud platform with more service providers. BNG Bank’s policies with regard to ‘Cloud’ set standards and define controls to mitigate the associated risks. A cloud service is only considered for acceptance in case the service provider can provide appropriate assurance on confidentiality, integrity and availability. Vendor management activities were upgraded in 2021 to adequately address this topic.

Centric is a key partner for the bank's outsourced ICT. In 2020 multiple changes within a short period of time in the senior management of Centric were subject of concern and closely monitored. The situation stabilised in 2021,and the operational services are, in general, in line with the agreed service level. This is monitored by means of monthly Service Level Reports and an external audited ISAE3402 report.

As a relatively small bank in terms of number of employees, BNG Bank is vulnerable with respect to staffing. Apart from the daily business, ICT projects and other changes must be implemented. To cope with these operational challenges, the bank has increased its capacity and necessary capabilities by hiring temporary staff. At the same time, the bank is aiming to enhance knowledge and experience of its own employees through training and development.

In 2021 there were relatively many changes in key positions in the bank. Key person risk is closely monitored and managed.

Operational incident: TLTRO

In 2021, there was a significant operational incident. Due to a procedural error, BNG Bank did not comply with a reporting requirement on time to be eligible for the additional 0.5% interest rebate on the Targeted Longer-Term Refinancing Operation (TLTRO). As a result, the bank has not been granted this discount for the first period (24 June 2020 to 23 June 2021) yet. The discount for this period amounts to EUR 57 million. BNG Bank overlooked one data file. The bank acknowledges and regrets this error and has taken measures to prevent this from happening again in the future. BNG Bank does materially meet the criteria for allocation.

ORM set of instruments

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

Key Risk Indicators

The cascading of the risk appetite of the bank for operational risk results in a risk tolerance statement especially focused on the components profitability and reputation and internal 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. A summary is included as part of the quarterly Risk Report to the ExCo and the Supervisory Board.

Risk Control Self Assessments (RCSA’s)

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.

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. In 2021 the annual Incidents Report contains 4 incidents with an estimated impact in excess of EUR 100,000, of which 1 incident is not within the bank’s risk appetite for individual operational losses. The impact of operational incidents on the bank’s annual results in 2021 therefore was significant (see operational incident TLTRO as explained in developments section). The number of operational incidents remained stable compared to 2020.

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.

Coordination annual In Control cycle
Each year, the managing directors and the other direct reports inform the ExCo on whether they are in control of the processes and risks for which they are responsible. Risk Management coordinates this process including a quality review and challenge on the received information.

Process risk

Internal processes are designed by process owners in association with the managers of the involved departments. Risk Management is responsible for the documentation of processes, thereby challenging the first line of defense on adequate mitigation of operational risks. All repetitive processes are documented in process flows with triggers, actors, activities, used systems, documents and results.

ICT change risk
To remain focused on key projects, all intended projects are prioritised and selected for execution by ExCo. Change control, with a separation of the development, test and production environments mitigates the change risk. Where possible, additional automated code review and testing as well as automated deployment are practiced.

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. BNG Bank supports the employees' knowledge, expertise and agility by supporting education and coaching. Employees are facilitated to keep their mental and physical health, also with regard to the challenges of the COVID19- crisis.

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

Model risk

During 2021 BNG Bank made an update in its model governance and model validation policy, in order to strengthen the controls round proper use of models. Furthermore, we have performed several model validations in order to monitor the appropriateness of the internal models.

ICT risk

The bank's information strategy aims to develop and maintain information systems that allow the bank to continue executing its strategy successfully. The information strategy is reviewed on an annual basis, based on the business objectives and external developments.

The Architecture Advice Group (AAG) is a multidisciplinary team which advises the NFRC on information architecture policies and which assesses plans as well as instructions against internal policies. Security and operational risk in general are important issues in the AAG.

The management of ICT risk is based on the application of preventive rather than remedial measures. These measures are aimed at preventing potential or actual incidents, or detecting them at the earliest possible opportunity, and preventing potential damage or restoring the desired situation as quickly as possible.

An important goal in the ICT architecture is to create a common data source, the central data warehouse, for analysis and reporting and reconciliation. The further development and maintenance of a central data warehouse still requires a large amount of ICT capacity and will continue to do so in the next few years.

The agile methodology has been adopted for carrying out projects. A team consisting of analysts, developers and representatives from the business departments are working together in close collaboration to achieve the desired result. The ‘product owner’ has the deciding vote on the priorities of the items that the team delivers, taking into account the interests of all stakeholders. All projects are initiated and managed via a project portfolio. Many changes in systems are prompted by changing laws and regulations.

ICT availability

BNG Bank has outsourced its ICT infrastructure and technical support to Centric. Centric is an important partner in the control of the availability and continuity risk. For each application, clear arrangements are in place with respect to the availability and loss of data. For monitoring, see the section on outsourcing risk. For cloud services, before a service is purchased, an assessment is made whether the service meets the requirements for availability (among other things).

Data management risk

As data quality is the basis for reliable business operations and management information, it is a subject of discussion at board level within the bank. 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 and Information Management department advises on subjects regarding data and facilitates automated data quality monitoring. With the development of the central data warehouse, the possibilities of data reconciliation and data lineage have increased. The implementation of Master Data Management processes, provides a common point of reference for data on financial products as well as contact data.

Outsourcing risk

As part of the vendor management activities all main outsourcing partners were classified against the EBA Guidelines on Outsourcing Arrangements. A number of outsourcing partners are classified as ‘critical or important’.

BNG Bank’s most important outsourcing contract relates to the processing of the payment transactions, as well as a large portion of the bank’s further ICT activities to Centric. Apart from payment services, this outsourcing includes the current account administration, the computing centre and workstation management. BNG Bank manages the activities performed by Centric via Service Level Agreements (SLAs) and the bank’s internal demand organisation. BNG Bank regularly monitors and evaluates the service provider’s services. The ISAE 3402 type II statement annually issued by Centric is part of this procedure. The IAD’s periodical audits of Centric provide additional assurance. The bank also structurally monitors the financial situation of Centric and draws up contingency plans. Other services such as the management of the building and installations, catering, cleaning and landscaping have also been outsourced, with satisfactory results.

Cloud computing is becoming more and more common practice. BNG Bank is treating cloud computing as a way of outsourcing and performs a thorough risk analysis as part of the outsourcing decision. The classification and ultimate destination of the data as well as the characteristics of the outsourcing party and the application are important factors in the decision. Based on the policies regarding information security, outsourcing, cloud computing and architecture, the decision to allow a cloud application is made by the Architecture Advice Group described under ICT Risk above.

Legal risk

For managing legal contract 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. The bank has largely automated the administration of contractual provisions in agreements with clients, with the aim to standardise the conditions and provisions as much as possible. Deviation from these standards is not possible and allowed without the involvement of the JFZ department . The internal model contract library is aligned with the loan- administration and is subject to continuous further development and updating. This guarantees the enforceability of contractual agreements as much as possible, while the standardisation of conditions will result in an operational process that involves as little manual intervention as possible to minimise the risk of human mistakes.. 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 LMA-standards. As at year end 2021, BNG Bank was not involved in any material legal proceedings.

Business continuity risk

In order to guarantee the continuity of ICT support within the bank, a yearly fall-back test is conducted. As in previous years, the 2021 test 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

During 2021, the Covid-19 pandemic was still an ongoing event. BNG bank set up a calamity team in 2020 which continued their duties in 2021. The responsibilities of the calamity team are further described in the security risk paragraph.

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 relationship with regulators.

Risk appetite

With regard to compliance with new (or changed) rules and regulations as well as supervisory requests, the bank aims to ensure a sound conduct, ethical business practises and compliance with all relevant legislation and regulations as well as the criteria of the regulatory bodies. In addition, the bank pursues an outstanding integrity profile and expects its employees, clients, counterparties and third parties relevant to the bank to satisfy our integrity requirements.

Governance

The Compliance department is responsible for organising the process of identification and impact assessment of regulatory developments, supporting the organisation in performing the Systematic Integrity Risk Analysis, developing and advising on compliance policies, advising on integrity and regulatory compliance risks and monitoring and reporting on integrity and regulatory compliance risks. In this responsibility the compliance function aims to ensure that BNG Bank operates within its integrity and regulatory compliance risk appetite.

Developments

In 2021 the Compliance department assessed possibilities for further developing compliance activities throughout the organisation. This resulted in temporarily expanding the department with external staff and starting several projects, focussing on CDD policy development, monitoring and training activities, enhancing the privacy organisation and further developing the regulatory change process. Meanwhile, the Compliance department supported the organisation in performing its Systematic Integrity Risk Analysis (SIRA), adapting an improved methodology and resulting in a positive assessed SIRA-report 2020 by DNB.

Incidents which pose a serious leakage of personal data must be reported to the Dutch Data Protection Authority (Autoriteit Persoonsgegevens or AP). In 2021, there were no such incidents to report to the AP.

Compliance risk

Integrity risk

Meeting high integrity standards and complying with integrity related legislation are of fundamental importance to BNG Bank. This involves client integrity, offering products and services in clients' interests, organisational integrity and integrity of staff.

The risk of internal and external fraud is evaluated periodically, while mitigating controls are in place in processes as well as in automated systems. New staff are assessed on their integrity, irrespective of whether it concerns permanent staff or temporarily hired staff. The importance of integrity is highlighted among staff on a regular basis. All employees have individually taken the banker's oath. The bank expects its clients and other business partners to adhere to ethical standards and not to jeopardise the bank's reputation. The bank has policies and procedures in place which are used for assessing new and existing clients, contracts and transactions. The bank has whistle-blower arrangements in place that enable staff to report irregularities without fear for their position. No integrity related irregularities with material impact were reported in 2021.

The BNG Bank Code of Conduct is published on the website and states the bank's core values: reliable, sustainable and professional. The Code of Conduct serves as a guideline for all actions undertaken by BNG Bank and its employees. The bank carries out a product approval and review process (PARP) to ensure that its products serve the interests of its client groups and its investors and that they do not involve any unacceptable risks for the clients, the investors or the bank itself. The bank places value on acting with high quality and careful services towards clients over an exclusive focus on financial profit or other self-interests.

By performing the annual SIRA process for BNG Bank and its subsidiaries, BNG Bank assesses its integrity risk on a regular basis, defining mitigations action plans when operation within the integrity risk tolerance is at risk.

Regulatory compliance risk

For BNG Bank as significant institution, applicable laws and regulations are ongoing complex by nature and increasing by number. For BNG Bank it is evident willing to comply with all these requirements. Furthermore, the requirement of a demonstrable compliance has grown of importance. Therefore an effective and efficient framework is needed to manage compliance risks. By executing the Compliance Management Framework (CMF), BNG Bank organises the process of impact assessment, preparation and timely implementation of upcoming legislations. The CMF consists of policies, methodology and appointment of responsibilities and aims to safeguard timely detection and implementation of new laws and regulations. In addition, the CMF generates early alerts with information on regulatory changes relevant for assessing potential impact on, for example, strategy, commercial activities and asset and liability management. Adequate execution of the CMF ensures that the regulatory compliance risk is in control. BNG Bank monitors risk based compliance with laws and regulations, in order to minimise the risk of damaging core values or strategy or reputational or financial damage. In 2021, the compliance department started to further develop the CMF, focussing on enhanced oversight and control of detection, impact assessment and implementation of new legislations.

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) is 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 is the risk of unauthorised access 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 department 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 department is involved in projects from a security perspective. The Security department is positioned in the CRO column, with a direct reporting line to the CRO in order to safeguard its second line function. The purpose, position and authorities of the Security function are documented in the Security Charter.

Developments

In 2021, the COVID-19 pandemic continued to have an impact on the world economy and Dutch society and thus on BNG Bank. The bank continued its Crisis Management Team (*Calamiteiten Beheer Team* (CBT)). The CBT met on a periodically to steer the bank through the COVID-19 pandemic. Also in 2021 the bank separated the teams which were operating from the main office in The Hague and the alternate office located in Voorburg, to ensure business continuity. No material security incidents or business disruptions occurred which could jeopardise the bank to conduct its core business.

Information security risk

The Security department monitors, facilitates, supports and challenges the business in order to safeguard the reliability (confidentiality, Integrity and availability) of information IT-infrastructure, physical infrastructure and the critical business processes against (cyber)threats.

The Security department is responsible for developing and maintaining the information security policy and the execution of the security awareness program. Furthermore the Security department is also responsible for the monitoring of and the reporting on security risks. In this responsibility the Security function aims to ensure that BNG Bank operates within its security risk appetite.

Awareness of employees to security threats is an important control measure. Most bank employees received information security training in 2021 in the form of interactive information sessions and e-learning. Additionally, all bank employees were subjected to a phishing test in the third and fourth quarter of 2021. There were no major information security incidents in 2021.

To control the security risk, vendors and especially Centric provides assurance related to information security and physical security. All information systems are tested for vulnerabilities and are periodically ethical hack tested.

Physical security risk

The Security department monitors, facilitates, supports and challenges also the physical security in order to safeguard the physical buildings and locations against threats.

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 is the risk that the institution's competitive and market position will be influenced by the political climate and stakeholder influence.
- Regulatory risk is the risk that developments in regulatory requirements will materially impact the business model and complexity of operations.
- Reputation risk is 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 is 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.

Risk appetite

For strategic risk, it is more 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" and in which five Social Development Goals (SDG's) are adopted.

BNG Banks will focus even more on building client partnerships to become a partner that actively contributes to the resolution of social challenges our clients have to cope with. This strategic challenge/risk is assumed since the bank believes it will be able to fulfil this commitment in the medium to long term. The required, futureproof qualitative and quantitative capacity in terms of systems, processes and people are part of the change management projects till 2023.

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.

Developments

Strategic risks are driven by the external environment of the bank, which is evolving continuously.

Key trends that BNG Bank considers to have an impact on its business model are:
- Digitalisation, automation and disintermediation: Although pricing and availability of services are key competitive advantages of BNG Bank, a lack of digital service offerings is not acceptable as it can become a client dissatisfier. Therefore, BNG Bank is extending its digital services gradually over time, giving priority to the unburdening of clients with regard to administrative processes.
- Increasing regulatory pressure and extensive supervision shows a trend from 'comply or explain' to 'comply and explain': Even though BNG Bank is fully committed to high integrity standards and the role it plays as a gatekeeper in the financial system, for an organisation with a sizeable balance sheet but a modest scale of business operations, the implementation of regulations weighs heavily on the available resources. The combination of regulatory costs, banking taxes and the low interest rate environment put pressure on the profitability.
- ESG/Climate Risks: BNG Bank has started to incorporate climate related risks in the risk management framework, especially in the assessment of the credit portfolio. As a public sector bank, BNG Bank expects that the Dutch Energy Transition will not only be a threat to the value of certain assets financed but will also open the way to new business opportunities.

As of 2021 the bank targets five 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

To obtain the flexibility to execute the strategy, the digital ambitions and improvement of internal processes that facilitate the strategy, the bank expanded the ExCo with a Chief Operating Officer and a Chief Commercial Officer.

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. The strategic objective "Strengthen Client Relations" is not only reflected in the product offering, which can to a certain degree be tailored to the client's requests, but especially in a certain reticence if it is not sufficiently clear that a particular product is in the clients' interest. This applies in particular to smaller organisations of which the bank has reason to believe that they lack the in-house expertise to manage the risks of the product in question. This is factored into the bank's product approval and review process (PARP), which uses product templates to address explicitly 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.

Political risk

For BNG Bank, business climate and political risk are closely linked, because public authorities are both shareholders and clients. As a result, 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. 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. 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.

Business climate

The market segments in which BNG Bank operates are characterised by relatively low margins. Although non-financial institutions may benefit from having regulatory advantages or in some cases may benefit from not being regulated at all, so far institutions that are striving to maximise their profits have not entered these market segments on a large scale. In addition, it is a challenge to keep operational costs of servicing a loan portfolio acceptable without a certain scale. Efficiency and scale are key to a profitable business model in this low-margin sector. However, due to ongoing low interest rates including negative rates on government bonds, competition has increased as institutional parties such as pension funds and insurers are entering the public-sector market on a more regular basis than before. In 2021, ECB's TLTRO (targeted longer-term refinancing operations) increased the competition between banks as a threshold of assets was required to profit from a discount rate.

The low interest rate environment and the rising costs are putting pressure on the earnings of the bank. Since BNG Bank's shareholders are first and foremost interested in low credit pricing, the return on equity is of lesser importance. This is reflected in the required return for the bank as defined by its main shareholder.

ESG risk

The financial impact of the energy transition as part of the change towards a sustainable society that is being planned by the government and its social partners is yet unclear. In case of government support for the energy transition by means of guarantee programmes or otherwise, new opportunities could arise for the bank.

Notwithstanding the above, with its "Road to Social Impact" roadmap, BNG Bank proactively aims to maximise the social impact of its activities in and for the Dutch public sector by targeting the earlier mentioned five SDG's.

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. BNG Bank has started to implement the supervisory expectations that ECB and EBA published in 2021, into the Risk Management Framework and capital assessments.

SCOPE OF APPLICATION (ARTICLE 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)

31-12-2021	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	31	-	-	-	3	211
Deferred tax liabilities	77	-	-	-	-	31
Other liabilities	216	-	-	-	-	77
Total Liabilities	**143,994**	**-**	**17,919**	**-**	**53,930**	**89,049**

31-12-2020	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	2,312	2,312	-	-	-	-
Amounts due from banks	120	120	-	-	41	-
Cash collateral posted	20,361	3	20,358	-	-	-
Financial assets at FVTPL	1,452	1,452	-	-	765	-
Derivatives (assets)	8,540	-	8,540	-	2,444	-
Financial assets at FVOCI	9,738	9,738	-	-	23	-
Interest-bearing securities at AC	7,880	2,664	-	5,217	1,040	-
Loans and advances	88,942	88,942	-	-	96	-
Value adjustments on loans involved in portfolio hedge accounting	20,816	20,816	-	-	-	-
Participating interests	31	31	-	-	-	-
Property and equipment	17	17	-	-	-	-
Other assets	149	149	-	-	-	-
Current tax assets	1	1	-	-	-	-
Total assets	**160,359**	**126,244**	**28,898**	**5,217**	**4,410**	**-**
Liabilities						
Amounts due to banks	12,221	-	-	-	715	11,506
Cash collateral received	858	-	858	-	-	-
Financial liabilities at FVTPL	656	-	-	-	619	38
Derivatives (liabilities)	26,965	-	26,965	-	2,761	-
Debt securities issued	108,615	-	-	-	44,186	64,429
Funds entrusted	5,599	-	-	-	1,574	4,025
Subordinated debts	35	-	-	-	-	35
Current tax liabilities	-	-	-	-	-	-
Deferred tax liabilities	98	-	-	-	-	98
Other liabilities	215	-	-	-	66	149
Total Liabilities	**155,262**	**-**	**27,823**	**-**	**49,921**	**80,279**

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

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**	**-**

31-12-2020	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)	**164,770**	126,244	28,898	5,217	4,410
Liabilities carrying value amount under regulatory scope of consolidation (as per template LI1)	**77,744**	-	27,823	-	49,921
Total net amount under regulatory scope of consolidation	**87,026**	**126,244**	**1,075**	**5,217**	**-45,511**
Off-balance sheet amounts before CCF after provisions	**10,883**	10,739	-	144	-
Differences due to application of the overall net FX position	**45,511**	-	-	-	45,511
Differences due to application of Mark-to-Market method and contractual netting for CCR	**3,402**	-	3,402	-	-
Differences between financial statements and exposure value due to valuation and netting	**-13**	409	-	-423	-
Exposure amounts considered for regulatory purposes	**146,809**	**137,392**	**4,477**	**4,938**	**-**

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 2021 and 2020 (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.

OWN FUNDS (ARTICLE 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 has been 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 4,329 million at end of 2021 and a full breakdown is included in the annual report (pp. 225-227).

Hybrid capital

The bank’s hybrid capital amounts to EUR 733 million. In 2021 no additional hybrid capital was issued. 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 show 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	
	31-12-2021	31-12-2020
Assets		
Cash and balances with the central bank	9,264	2,312
Amounts due from banks	163	120
Cash collateral posted	12,993	20,361
Financial assets at FVTPL	1,383	1,452
Derivatives	5,685	8,540
Financial assets at FVOCI	8,572	9,738
Interest-bearing securities at AC	7,632	7,880
Loans and advances	89,738	88,942
Value adjustments on loans involved in portfolio hedge accounting	13,555	20,816
Participating interests	28	31
Property and equipment	15	17
Other assets	21	149
Current tax assets	-	1
Assets held for sale	8	-
Total assets	**149,057**	**160,359**
Liabilities		
Amounts due to banks	19,525	12,221
Cash collateral received	984	858
Financial liabilities at FVTPL	310	656
Derivatives	16,935	26,965
Debt securities issued	101,355	108,615
Funds entrusted	4,525	5,599
Subordinated debts	36	35
Current tax assets	32	-
Deferred tax liabilities	77	98
Other liabilities	216	215
Total Liabilities	**143,995**	**155,262**
Equity		
Share capital	139	139
Share premium reserve	6	6
Retained earnings	3,736	3,712
Revaluation reserve	83	86
Cash flow hedge reserve	1	11
Own credit adjustment	3	5
Cost of hedging reserve	125	184
Net profit	236	221
Equity attributable to shareholders	**4,329**	**4,364**

Continuation of previous page	Carrying values as reported in published financial statements and for regulatory consolidation	
Hybrid capital	733	733
Total equity	**5,062**	**5,097**
Total liabilities and equity	**149,057**	**160,359**

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 expected credit loss allowance of Financial assets at fair value through OCI.

Deductible items

BNG Bank does not have any positions with a 1250% solvency weighting in both 2021 and 2020.

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.	BNG Bank N.V.
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)		XS1311037433	XS1453520378
2a	Public or private placement	private	private	private
3	Governing law(s) of the instrument	Laws of the Netherlands	Laws of the Netherlands	Laws of the Netherlands
3a	Contractual recognition of write down and conversion powers of resolution authorities	n/a	yes	yes
Regulatory treatment				
4	Current treatment taking into account, where applicable, transitional CRR rules	Common Equity Tier 1	Additional Tier 1	Additional Tier 1
5	Post-transitional CRR rules	Common Equity Tier 1	Additional Tier 1	Additional Tier 1
6	Eligible at solo / (sub-)consolidated / 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	Perpetual Capital Security
8	Amount recognised in regulatory capital (Currency in million, as of most recent reporting date).	EUR 145	EUR 424	EUR 309
9	Nominal amount of instrument	EUR 139	EUR 424	EUR 309
EU 9a	Issue price	n/a	100% for 1st tranche at 16/11/2015 (a 2nd tranche was issued on 15/12/2015 on the same terms with a price of 100.61%)	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	Subject to write down
10	Accounting classification	Shareholders'equity	Equity	Equity
11	Original date of issuance	23 December 1914	16 November 2015	28 July 2016
12	Perpetual or dated	Perpetual	Perpetual	Perpetual
13	Original maturity date	no maturity	no maturity	no maturity
14	Issuer call subject to prior supervisory approval	No	Yes	Yes
15	Optional call date,	n/a	16 May 2021 and every interest payment date thereafter,	16 May 2022 and every interest payment date thereafter,

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BNG Bank N.V.

	contingent call dates, and redemption amount		Tax and/or regulatory event call, Redemption at prevailing principal amount	Tax and/or regulatory event call, Redemption at prevailing principal amount
16	Subsequent call dates, if applicable	n/a	Interest payment date (16 May)	Interest payment date (16 May)
Coupons / dividends				
17	Fixed or floating dividend/coupon	Floating	Fixed	Fixed
18	Coupon rate and any related index	n/a	3.622%, resettable on 16 May 2021 and every 5 years afterwards equal to prevailing 5-year Mid-Swap Rate plus initial margin	3.277%, resettable on 16 May 2022 and every 5 years afterwards equal to prevailing 5-year Mid-Swap Rate plus initial margin
19	Existence of a dividend stopper	n/a	n/a	n/a
EU 20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Mandatory	Mandatory	Mandatory
EU 20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Fully discretionary	Fully discretionary	Fully discretionary
21	Existence of step up or other incentive to redeem	n/a	No	No
22	Noncumulative or cumulative	Noncumulative	Noncumulative	Noncumulative
23	Convertible or non-convertible	Nonconvertible	Nonconvertible	Nonconvertible
24	If convertible, conversion trigger(s)	n/a	n/a	n/a
25	If convertible, fully or partially	n/a	n/a	n/a
26	If convertible, conversion rate	n/a	n/a	n/a
27	If convertible, mandatory or optional conversion	n/a	n/a	n/a
28	If convertible, specify instrument type convertible into	n/a	n/a	n/a
29	If convertible, specify issuer of instrument it converts into	n/a	n/a	n/a
30	Write-down features	No	Yes	Yes
31	If write-down, write-down trigger(s)	n/a	CET1 ratio < 5.125%	CET1 ratio < 5.125%
32	If write-down, fully or partially	n/a	Partially	Partially
33	If write-down, permanent or temporary	n/a	Temporary	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	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	n/a

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BNG Bank N.V.

EU 34b	Ranking of the instrument in normal insolvency proceedings	1	2	2
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Additional Tier 1 instruments	Tier 2 instruments	Tier 2 instruments
36	Non-compliant transitioned features	No	No	No
37	If yes, specify non-compliant features	n/a	n/a	n/a
37a	Link to the full term and condition of the instrument (signposting)	Private placement	Private placement	Private placement

Composition of regulatory own funds (EU CC1)

	Common Equity Tier 1 (CET1) capital: instruments and reserves	31-12-2021
1	Capital instruments and the related share premium accounts	**146**
	of which: Instrument type 1	*146*
	of which: Instrument type 2	-
	of which: Instrument type 3	-
2	Retained earnings	3,734
3	Accumulated other comprehensive income (and other reserves)	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**	**4,093**
	Common Equity Tier 1 (CET1) capital: regulatory adjustments	
7	Additional value adjustments (negative amount)	-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	-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	-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)	-

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Common Equity Tier 1 (CET1) capital: instruments and reserves		31-12-2021
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)	-
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)*	-
28	**Total regulatory adjustments to Common Equity Tier 1 (CET1)**	**-13**
29	**Common Equity Tier 1 (CET1) capital**	**4,080**
Additional Tier 1 (AT1) capital: instruments		
30	Capital instruments and the related share premium accounts	**733**
31	*of which: classified as equity under applicable accounting standards*	*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**	**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**	*733*

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Common Equity Tier 1 (CET1) capital: instruments and reserves		31-12-2021
45	**Tier 1 capital (T1 = CET1 + AT1)**	**4,813**
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)**	**4,813**
60	**Total risk exposure amount**	**12,760**
Capital ratios and buffers		
61	Common Equity Tier 1 (as a percentage of total risk exposure amount)	31.97%
62	Tier 1 (as a percentage of total risk exposure amount)	37.72%
63	Total capital (as a percentage of total risk exposure amount)	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)	9.27%
65	*of which: capital conservation buffer requirement*	2.50%
66	*of which: countercyclical buffer requirement*	0.00%
67	*of which: systemic risk buffer requirement*	1.00%
EU-67a	*of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer*	5.73%
68	**Common Equity Tier 1 available to meet buffer (as a percentage of risk exposure amount)**	23.20%

Continuation of previous page

Common Equity Tier 1 (CET1) capital: instruments and reserves		31-12-2021
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	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)	-

CAPITAL REQUIREMENTS (ARTICLES 438 AND 440 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 Public Finance, 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 2021 to meet a minimum CET1 ratio of 10.25% and an overall Capital Requirement level of 13.75%. BNG Bank amply meets the requirements.

31-12-2021	Minimum required externally	Present
Solvency		
CRD IV/CRR		
Tier 1 capital	1,754	4,813
Total capital ratio	13.75%	37.7%
- Pillar 1	8%	
- Pillar 2 requirement	2.25%	
- Combined Buffer Requirement	3.50%	
Common Equity Tier 1 capital	1,308	4,093
Common Equity Tier 1 ratio	10.25%	32.0%
- Pillar 1	4.50%	
- Pillar 2 requirement	2.25%	
- Combined Buffer Requirement	3.50%	
Risk-weighted assets	N/A	12,760

31-12-2020	Minimum required externally	Present
Solvency		
CRD IV/CRR		
Tier 1 capital	1,667	4,783
Total capital ratio	13.75%	39.4%
- Pillar 1	8.00%	
- Pillar 2 requirement	2.25%	
- Combined Buffer Requirement	3.50%	
Common Equity Tier 1 capital	1,243	4,050
Common Equity Tier 1 ratio	10.25%	33.4%
- Pillar 1	4.50%	
- Pillar 2 requirement	2.25%	
- Combined Buffer Requirement	3.50%	
Risk-weighted assets	N/A	12,127

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%[9]. 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 February 27, 2019 the SRB concluded that simplified obligations apply to BNG Bank. The SRB has reconfirmed the resolution strategy in 2020. This means that the preferred resolution strategy is normal insolvency law. In line with the resolution strategy, the SRB set 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. As such, the changes will impact the capital position of BNG Bank. The most important driver for the impact is whether the proposal to exclude

9 A Globally Systemic Institution (G-SII) is required to maintain an additional buffer equal to 50% of the G-SII buffer rate

several counterparties under CRR Article 382 will be maintained. The treatment of sovereign exposures is not part of Basel IV. Developments in this area will be monitored closely.

Key metrics template (EU KM1)

	31-12-2021	31-12-2020
Available own funds (amounts)		
Common Equity Tier 1 (CET1) capital	4,080	4,050
Tier 1 capital	4,813	4,783
Total capital	4,813	4,783
Risk-weighted exposure amounts		
Total risk-weighted exposure amount	12,760	12,127
Capital ratios (as a percentage of risk-weighted exposure amount)		
Common Equity Tier 1 ratio (%)	31.97%	33.40%
Tier 1 ratio (%)	37.72%	39.44%
Total capital ratio (%)	37.72%	39.44%
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 (%)	2.25%	2.25%
- of which: to be made up of CET1 capital (percentage points)	1.27%	1.27%
- of which: to be made up of Tier 1 capital (percentage points)	1.69%	1.69%
Total SREP own funds requirements (%)	10.25%	10.25%
Combined buffer requirement (as a percentage of risk-weighted exposure amount)		
Capital conservation buffer (%)	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%
Institution specific countercyclical capital buffer (%)	0.00%	0.00%
Systemic risk buffer (%)	0.00%	0.00%
Global Systemically Important Institution buffer (%)	0.00%	0.00%
Other Systemically Important Institution buffer	1.00%	1.00%
Combined buffer requirement (%)	3.50%	3.50%
Overall capital requirements (%)	13.75%	13.75%
CET1 available after meeting the total SREP own funds requirements (%)	23.20%	n/a
Leverage ratio		
Total exposure measure	45,277	137,526
Leverage ratio	10.63%	3.48%
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 (%)	0.00%	n/a
- of which: to be made up of CET1 capital (percentage points)	0.00%	n/a
Total SREP leverage ratio requirements (%)	3.79%	n/a

Continuation of previous page	31-12-2021	31-12-2020
Leverage ratio buffer and overall leverage ratio requirement (as a percentage of total exposure measure)		
Leverage ratio buffer requirement (%)	0.00%	n/a
Overall leverage ratio requirements (%)	3.79%	n/a
Liquidity Coverage Ratio		
Total high-quality liquid assets (HQLA) (Weighted value - average)	18,559	13,346
Cash outflows - Total weighted value	12,022	12,442
Cash inflows - Total weighted value	1,309	2,435
Total net cash outflows (adjusted value)	10,713	10,008
Liquidity coverage ratio (%)	155.28%	147.22%
Net Stable Funding Ratio		
Total available stable funding	113,748	110,947
Total required stable funding	90,503	91,342
NSFR ratio (%)	125.68%	121.46%

Overview of RWA (EU OV1)

	31-12-2021	31-12-2020	31-12-2021
	Risk weighted exposure amounts (RWEAs)		Total own funds requirements
Credit risk (excluding CCR)	8,263	8,221	661
- Of which the standardised approach	8,263	8,221	661
- Of which the foundation IRB (FIRB) approach	-	-	-
- Of which: slotting approach	-	-	-
- Of which: equities under the simple riskweighted approach	-	-	-
- Of which the advanced IRB (AIRB) approach	-	-	-
Counterparty credit risk - CCR	2,863	2,155	229
- Of which the standardised approach	1,464	1,165	117
- Of which internal model method (IMM)	-	-	-
- Of which exposures to a CCP	9	37	1
- Of which credit valuation adjustment - CVA	1,378	953	110
- Of which other CCR	12	-	1
Settlement risk	-	-	-
Securitisation exposures in the non-trading book (after the cap)	791	846	63
- Of which SEC-IRBA approach	-	-	-
- Of which SEC-ERBA (including IAA)	791	846	63
- Of which SEC-SA approach	-	-	-
- Of which 1250%/ deduction	-	-	-
Position, foreign exchange and commodities risks (Market risk)	-	-	-
- Of which the standardised approach	-	-	-
- Of which IMA	-	-	-
Large exposures	-	-	-
Operational risk	843	905	67
- Of which basic indicator approach	-	-	-
- Of which standardised approach	843	905	67
- Of which advanced measurement approach	-	-	-
Amounts below the thresholds for deduction (subject to 250% risk weight) (For information)	**-**	**-**	**-**
Total	**12,760**	**12,127**	**1,021**

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

31-12-2021	General credit exposures	Relevant credit exposures - market risk	Securitisation exposure	Total exposure value	Own funds requirements				Risk-weighted exposure amounts	Own funds requirements 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**	**2**	2.39%	0.00%
Germany	616	-	-	**616**	12	-	-	**12**	**1**	1.56%	0.00%
Spain	0	-	251	**251**	-	-	8	**8**	**1**	1.07%	0.00%
France	215	-	187	**402**	7	-	3	**10**	**1**	1.29%	0.00%
Great Britain	2,610	-	-	**2,610**	93	-	-	**93**	**12**	12.18%	0.00%
Ireland	30	-	37	**67**	1	-	2	**3**	**0**	0.31%	0.00%
Italy	-	-	73	**73**	-	-	1	**1**	**0**	0.17%	0.00%
Luxembourg	-	-	19	**19**	-	-	0	**-**	**0**	0.02%	0.50%
Netherlands	22,016	-	4,530	**26,546**	565	-	49	**614**	**77**	80.46%	0.00%
Portugal	50	-	4	**54**	4	-	-	**4**	**1**	0.55%	0.00%
Total	**25,765**	**-**	**5,123**	**30,888**	**700**	**-**	**63**	**763**	**95**	**100.00%**	

31-12-2020	General credit exposures	Relevant credit exposures - market risk	Securitisation exposure	Total exposure value	Own funds requirements				Risk-weighted exposure amounts	Own funds requirements 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	247		25	272	20	0		**20**	**3,400**	2.64%	0.00%
Germany	25		-	25	0	-		**0**	**313**	0.03%	0.00%
Spain	-		305	305	-	12		**12**	**3,813**	1.59%	0.00%
France	255		42	297	6	2		**8**	**3,713**	1.05%	0.00%
Great Britain	1345		21	1366	56	0		**56**	**17,075**	7.50%	0.00%
Ireland	2		42	44	0	2		**2**	**550**	0.28%	0.00%

Continuation of previous page 31-12-2020	**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			
Italy	-		13	13	-	0		**0**	**163**	0.06%	0.00%
Luxembourg	-		20	20	-	0		**0**	**250**	0.02%	0.25%
Netherlands	29,407		4,316	33,723	588	51		**639**	**421,538**	85.48%	0.00%
Portugal	123		5	128	10	0		**10**	**1,600**	1.35%	0.00%
Total	**31,404**		**4,789**		**680**	**67**		**747**	**452,413**	**100.00%**	

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

Amount of institution-specific countercyclical capital buffer	31-12-2021	31-12-2020
Total risk exposure amount	12,760	12,127
Institution specific countercyclical buffer rate	0.000%	0.000%
Institution specific countercyclical buffer requirement	0	0

CREDIT RISK AND CREDIT RISK MITIGATION (ARTICLES 442 AND 453 CCR)

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,

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 once again complies with all contractual terms (no default); and
- 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
- The debtor has no payment arrears exceeding 90 days.

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)

31-12-2021	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	-
Other financial corporations	5,295	5,227	68	-	-	-	-2	-	-2	-	-	-	345	-
Non-financial corporations	1,745	1,020	-	-	-	-	0	0	0	-	-	-	293	-

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	
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**

31-12-2020	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
Loans and advances	**109,233**	**107,616**	**1,617**	**396**	**-**	**396**	**-35**	**-9**	**-25**	**-175**	**-**	**-175**	**49,790**	**38**
Central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General governments	33,871	33,826	45	-	-	-	-4	-2	-3	-	-	-	591	-
Credit institutions	19,525	19,525	-	-	-	-	-0	-0	-	-	-	-	88	-
Other financial corporations	1,855	1,759	96	-	-	-	-1	-0	-0	-	-	-	447	-
Non-financial corporations	50,582	49,759	823	365	-	365	-22	-6	-16	-175	-	-175	46,074	7
of which SMEs	12,693	12,590	103	137	-	137	-2	*-0*	-2	-22	-	-22	12,593	7
Households	3,400	2,747	654	30	-	30	-8	-1	-6	-	-	-	2,590	30
Debt Securities	**17,625**	**17,391**	**233**	**-**	**-**	**-**	**-6**	**-1**	**-5**	**-**	**-**	**-**	**1,772**	**-**
Central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General governments	9,220	9,159	61	-	-	-	-1	-0	-1	-	-	-	538	-
Credit institutions	2,009	2,009	-	-	-	-	-0	-0	-	-	-	-	351	-
Other financial corporations	5,217	5,118	99	-	-	-	-5	-0	-5	-	-	-	883	-
Non-financial corporations	1,179	1,106	73	-	-	-	-0	-0	-0	-	-	-	-	-
Off-balance-sheet exposures	**10,886**	**10,753**	**132**	**1**	**-**	**1**	**-4**	**-1**	**-2**	**-**	**-**	**-**	**-**	**-**
Central banks	-	-	-	-	-	-	0	-	0	-	-	-	-	-
General governments	3,848	3,848	0	-	-	-	-0	-	-	-	-	-	-	-
Credit institutions	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other financial corporations	2,081	2,073	8	-	-	-	-0	-0	-0	-	-	-	-	-

Continuation of previous page **31-12-2020**	**Gross carrying amount/nominal amount**						**Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions**						**Collateral and financial guarantees received**	
Non-financial corporations	4,521	4,456	65	1	-	1	-2	-1	-1	-	-	-	-	-
Households	436	376	59	-	-	-	-2	-	-2	-	-	-	-	-
Total	**137,743**	**135,760**	**1,982**	**397**	**-**	**397**	**-46**	**-12**	**-33**	**-175**	**-**	**-175**	**51,562**	**38**

Maturity of exposures (EU CR1-A)

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 are exclusive of off-balance exposure in contrast to the other tables. The total credit exposure is therefore lower than in the other tables.

Credit quality of forborne exposures (EU CQ1)

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**

31-12-2020	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	**222**	**170**	**170**	**170**	**-8**	**-33**	**30**	**-**
of which:								
- Central banks	-	-	-	-	-	-	-	-
- General governments	-	-	-	-	-	-	-	-
- Credit institutions	-	-	-	-	-	-	-	-
- Other financial corporations	17	-	-	-	0	-	-	-
- Non-financial corporations	130	170	170	170	-6	-33	30	
- Households	74	-	-	-	-2	-	-	-
Debt Securities		**-**	**-**	**-**	**-**	**-**	**-**	**-**
Loan commitments given	**13**	**-**	**-**	**-**	**0**	**-**	**-**	**-**
Total	**235**	**170**	**170**	**170**	**-8**	**-33**	**30**	**0**

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

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	-			-								-

Continuation of previous page 31-12-2021	Gross carrying amount / nominal amount											
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)

31-12-2021	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)

31-12-2021	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)

	31-12-2021		31-12-2020	
	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)

31-12-2021	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	-

31-12-2020	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	89,400	49,875	79	49,796	-
Debt Securities	13,646	1,702	-	1,702	-
Total	**103,046**	**51,577**	**79**	**51,498**	**0**
Of which non-performing exposures					
- of which defaulted	222	-	-	-	-

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.

31-12-2021	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%**

31-12-2020	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	7,694	-	54,740	473	-	-
Regional governments or local authorities	32,990	3,371	36,938	772	60	0%
Public sector entities	3,136	451	2,906	28	378	13%
Multilateral Development Banks	144	-	144	-	-	-
International Organisations	1,417	-	1,417	-	-	-
Institutions	702	-	93	-	19	20%
Corporates	57,825	6,915	7,825	310	7,284	90%
Secured by mortgages on immovable property	117	-	34	-	34	100%
Exposures in default	220	2	183	-	183	100%
Items associated with particularly high risk	132	-	34	-	51	150%
Covered bonds	1,385	-	1,385	-	139	0.1
Claims with a short-term credit assessment	-	-	-	-	-	-
Collective investments undertakings (CIU)	-	-	-	-	-	-
Equity	31	-	31	-	31	100%
Securitisation positions	4,794	144	4,728	144	846	17%
Other items	20,860	-	20,860	-	44	0%
Total	**131,447**	**10,883**	**131,318**	**1,726**	**9,067**	**7%**

Standardised approach (EU CR5)

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**

31-12-2020	Risk weight: 0%	2%	10%	20%	35%	50%	100%	150%	Others	Total	Of which: unrated
Central governments or central banks	55,213	-	-	-	-	-	-	-	-	55,213	55,213
Regional governments or local authorities	37,526	-	-	155	-	-	29	-	-	37,710	37,710
Public sector entities	1,017	-	-	1,916	-	-	-	-	-	2,933	2,933
Multilateral Development Banks	144	-	-	-	-	-	-	-	-	144	144
International Organisations	1,417	-	-	-	-	-	-	-	-	1,417	1,417
Institutions	-	-	-	93	-	-	-	-	-	164	93
Corporates	-	-	-	411	0	1,065	6,647	12	-	8,135	8,130
Secured by mortgages on immovable property	-	-	-	-	-	-	34	-	-	34	34
Exposures in default	-	-	-	-	-	-	183	-	-	183	183
Items associated with particularly high risk	-	-	-	-	-	-	-	34	-	34	34
Covered bonds	-	-	1,385	-	-	-	-	-	-	1,385	1,385
Claims with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-
Collective investments undertakings (CIU)	-	-	-	-	-	-	-	-	-	-	-
Equity	-	-	-	-	-	-	31	-	-	31	31
Securitisation positions	87	281	2,603	1,203	190	407	83	-	19	4,871	4,871
Other items	20,814	3	-	-	-	-	44	-	-	20,860	20,860
Total credit risk exposure	**116,218**	**283**	**3,989**	**3,779**	**190**	**1,471**	**7,049**	**46**	**19**	**133,115**	**133,039**

COUNTERPARTY CREDIT RISK (ARTICLE 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 principal amounts totalled EUR 229 billion at year-end 2021 (2020: EUR 222 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.

31-12-2021

	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)

31-12-2021	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)

31-12-2021	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	521	-	-	-	-	-	-	-	-	-	-	**521**
Public sector entities	-	-	-	-	25	-	-	-	-	-	-	**25**
Institutions	-	53	-	-	662	242	-	-	193	-	-	**1,150**
Corporates	-	406	-	-	63	167	-	-	929	-	-	**1,565**
Total exposure value	**521**	**459**	**-**	**-**	**750**	**409**	**-**	**-**	**1,122**	**-**	**-**	**3,261**

31-12-2020	Risk weight											
	0%	2%	4%	10%	20%	50%	70%	75%	100%	150%	Others	Total exposure value
Central governments or central banks	43	-	-	-	-	-	-	-	-	-	-	43
Regional governments or local authorities	340	-	-	-	-	-	-	-	-	-	-	340
Public Sector Entities	-	-	-	-	35	7	-	-	-	-	-	42
Institutions	-	1,198	-	-	850	525	-	-	-	-	-	2,573
Corporates	-	-	-	-	4	-	-	-	711	-	-	715
Total	**383**	**1,198**	**-**	**-**	**889**	**532**	**-**	**-**	**711**	**-**	**-**	**3,713**

Composition of collateral for CCR exposures (EU CCR5)

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 2021, the collateral posted amounted to EUR 14.6 billion (2021: EUR 22.7 billion). As in 2020, deterioration of BNG Bank's rating by three notches would not change this amount in 2021. The strength of the bank's liquidity position is sufficient to meet, and to absorb fluctuations in, higher collateral obligations.

Exposures to CCPs (EU CCR8)

31-12-2021	Exposure value	RWEA
Exposures to QCCPS (total)	**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	-	-
Unfunded default fund contributions	-	-

31-12-2020	EAD post CRM	RWAs
Total exposures to QCCPS	**1,229**	**24**
Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	1,198	24
(i) OTC derivatives	*1,196*	*24*
(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	31	*0*
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.

UNENCUMBERED ASSETS (ARTICLE 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.

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	-		

2020[1]	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	**38,206**	**4,362**			**136,233**	**13,203**		
Equity instruments	-	-	-	-	-	-	-	-
Debt securities	4,533	4,183	4,544	4,183	14,535	10,446	10,863	10,546
- of which: covered bonds	221	221	221	221	1,235	1,235	1,235	1,235
- of which: asset-backed securities	246	166	245	165	4,639	2,051	4,103	2,053
- of which: issued by general governments	3,546	3,546	3,546	3,546	5,776	5,468	4,132	5,557
- of which: issued by financial corporations	541	430	539	429	7,237	4,226	6,268	4,222
- of which: issued by non-financial corporations	435	-	456	-	1,451	223	397	229
Other assets	35,106	-			115,475	-		

1 As a result of an internal consistency check the comparative figures have been adjusted. The impact of this on the figures is limited.

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.

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**		

2020	Fair value of encumbered collateral received or own debt securities issued	of which: notionally elligible EHQLA and HQLA	Unencumbered Fair value of collateral received or own debt securities issued available for encumbrance	of which: EHQLA and HQLA
Collateral received by the reporting institution	**-**	**-**	**3,649**	**2,552**
Loans on demand	-	-	-	-
Equity instruments	-	-	-	-
Debt securities	-	-	2,552	2,552
- *of which: covered bonds*	-	-	-	-
- *of which: securitisations*	-	-	-	-
- *of which: issued by general governments*	-	-	*35*	*35*
- *of which: issued by financial corporations*	-	-	*1,334*	*1,334*
- *of which: issued by non-financial corporations*	-	-	-	-
Loans and advances other than loans on demand	-	-	1,097	-
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	**38,206**	**4,362**		

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.

	2021		2020	
	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	36,346	46,083	14,201	24,916

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.

MARKET RISK (ARTICLES 445 AND 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 2021 and 2020 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)

	31-12-2021	31-12-2020
	RWEAs	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. The Internal IRRBB approach 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. 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 (by means of executing mainly interest rate swaps) 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	
	30-6-2021	**31-12-2020**	**30-6-2021**	**31-12-2020**
Parallel up	-421	-434	60	123
Parallel down	180	58	119	-56
Steepener	-76	-68		
Flattener	12	-28		
Short rates up	-119	-141		
Short rates down	107	57		

Please note results for up and down scenario are not symmetric due to the following reasons. For 'Changes of the economic value of equity' the main reasons are convexity (second order effects) and the floor in the scenarios. For 'Changes of the net interest income' the main reasons are floored floating assets and the participation in TLTRO.

DISCLOSURE OF OPERATIONAL RISK (ARTICLE 446)

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

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 (ARTICLE 450 CRR)

The remuneration policy is compatible with the legal and policy frameworks for institutions established in the Netherlands. In 2021, the following laws and regulations were instrumental in determining the remuneration policy:
- 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 Dutch Corporate Governance Code;
- 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)[10].

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

2021	Management body remuneration			Business areas						Total
(in thousands)	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	

[10] Annual report (p 36, 61, 72-74, 80, 194-196)

Notes:
- The headcount of 6 under "MB Management function" includes a transition period of the previous CRO
- Variable remuneration consist of severance payments
- The SB was not considered identified staff in 2021
- The number of identified staff under "Business areas" is conform requirement presented in number of FTE

LEVERAGE RATIO (ARTICLE 451 CRR)

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

		31-12-2021
		Applicable amounts
1	Total assets as per published financial statements	149,057
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	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	-3,232
9	Adjustments for securities financing transactions "SFTs"	0
10	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	4,330
11	(Adjustment for prudent valuation adjustments and specific and general provisions which have reduced Tier 1 capital)	-
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	-95,920
13	**Total leverage ratio exposure**	**45,277**

Leverage ratio common disclosure (EU LR2)

Table LRCom: Leverage ratio common disclosure

		31-12-2021
		CRR Leverage ratio exposures
On-balance sheet exposures (excluding derivatives and SFTs)		
1	On-balance sheet items (excluding derivatives, SFTs, but including collateral)	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)	-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)	-13
7	**Total on-balance sheet exposures (excluding derivatives, SFTs)**	**121,100**
Derivative exposures		
8	Replacement cost associated with SA-CCR derivatives transactions (ie net of eligible cash variation margin)	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	1,821
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**	**2,935**
Securities financing transaction exposures		
14	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	654
15	(Netted amounts of cash payables and cash receivables of gross SFT assets)	-592
16	Counterparty credit risk exposure for SFT assets	-
EU-16a	Derogation for SFTs: Counterparty credit risk exposure in accordance with Articles 429e(5) and 222 CRR	-
17	Agent transaction exposures	-

		31-12-2021
EU-17a	(Exempted CCP leg of client-cleared SFT exposure)	-
18	**Total securities financing transaction exposures**	**62**
Other off-balance sheet exposures		
19	Off-balance sheet exposures at gross notional amount	10,860
20	(Adjustments for conversion to credit equivalent amounts)	6,530
21	(General provisions associated with off-balance sheet exposures deducted in determining Tier 1 capital)	-
22	**Off-balance sheet exposures**	**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)	-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)	-
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)**	**-83,149**
Capital and total exposures		
23	Tier 1 capital	4,813
24	Leverage ratio total exposure measure	45,277
Leverage ratio		
25	Leverage ratio	10.63%
EU-25	Leverage ratio (without the adjustment due to excluded exposures of public development banks - Public sector investments) (%)	10.63%

		31-12-2021
25a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves)	9.83%
26	Regulatory minimum leverage ratio requirement (%)	3.79%
EU-26	Additional leverage ratio requirements (%)	0.00%
EU-27	Required leverage buffer (%)	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
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	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	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)	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)	54,605
31	Leverage ratio (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)	10.61%
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)	8.81%

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

Table LRCom: Leverage ratio common disclosure

		31-12-2021
		CRR Leverage ratio exposures
On-balance sheet exposures (excluding derivatives and SFTs)		
EU-1	**Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:**	**37,965**
EU-2	Trading book exposures	-
EU-3	Banking book exposures, of which:	37,965
EU-4	Covered bonds	1,643
EU-5	Exposures treated as sovereigns	8,052
EU-6	Exposures to regional governments, MDB, international organisations and PSE **not** treated as sovereigns	37
EU-7	Institutions	607
EU-8	Secured by mortgages of immovable properties	102
EU-9	Retail exposures	-
EU-10	Corporate	8,605
EU-11	Exposures in default	326
EU-12	Other exposures (eg equity, securitisations, and other non-credit obligation assets)	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 increased to 10.63% (2020: 3.48%) caused by the possibility of excluding the bank's promotional loans under the new capital requirement. Without adjustment for promotional loans the leverage ratio would have decreased by 6.88% to 3.75%. Central bank reserves have still been excluded from the leverage ratio exposure measure, as the temporary allowance to exclude these exposures has been extended to 31 March 2022. Without excluding central bank reserves the leverage ratio would have increased with 8.82%.

EXPOSURE TO SECURITISATION POSITIONS (ARTICLE 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 2021 the balance sheet value amounted to EUR 5.0 billion (2020: EUR 4.8 billion) in securitisation positions. The off-balance sheet securitisation commitments at year-end 2021 amounted to EUR 0.1 billion (2020: EUR 0.2 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 2021 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)

31-12-2021	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)

31-12-2021	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								

OVERVIEW OF PILLAR 3 REFERENCES

Following the mandate included in Article 434a of CRR2, the EBA has implemented a comprehensive, more 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. This final draft ITS will replace all previous disclosure templates and tables included in the regulatory products and guidelines, with the exception of guidelines on disclosure requirements of IFRS 9 transitional arrangement, which will continue to apply.

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 CR2, 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, CR9, CR9.1, EU CR10, EU CCR4	BNG Bank does not apply IRB approach. As such, these templates are not applicable.
EU CCR6	The Bank does not have credit derivative exposure.
EU CCR7, EU MR4	BNG Bank is not classified as G-SIIs. These templates are therefore not applicable.
EU SEC2	BNG Bank does not have a trading book.
EU SEC3, EU SEC5	The Bank has not acted as an originator or sponsor in transactions with securitisation exposures. BNG Bank only acts as an investor in securitisation transactions.
EU MR2-A, EU MR2-B, EU MR3	The Bank has not adopted the Internal Model Approach (IMA). The templates are not applicable.
COVID-19 disclosure templates	The relevant templates are not included as all requested figures for the reporting period are nil.

CRR	Description	Additional guidelines or standards	Clarification, if needed	Location Pillar III 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. The information is mostly qualitative for which no specific format is required. Note that	pp. 11 - 53
		EU OVB	quantitative targets on	pp. 14 and 15

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CRR	Description	Additional guidelines or standards	Clarification, if needed	Location Pillar III report
			individual risk are not disclosed due to their confidential nature.	
		EU LIQ1 EU LIQB EU LIQ2	Information regarding the governance arrangements with respect to the members of the Management 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 2021.	pp. 32 - 39
Article 436	Scope of application	EU LI1 EU LI2 EU LIA EU LI3		pp. 54 - 59
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. 61 - 69
Article 438	Capital requirements	EU OVC EU KM1 EU OV1	This section provides a comprehensive overview on the risk-weigted exposure amount and key	pp. 70 - 76

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CRR	Description	Additional guidelines or standards	Clarification, if needed	Location Pillar III report
			metrics regarding the main prudential and regulatory information and ratios covered by the CRR. The information is mostly quantitative as a specific format is required.	
Article 439	Exposure to counterparty credit risk	EU CCR1 EU CCR2 EU CCR3 EU CCR5 EU CCR8		pp. 98 - 103
Article 440	Countercyclical capital buffer	EU CCyB1 EU CCyB2		pp. 77 - 79
Article 441	Indicator of global systemic importance		BNG Bank is not considered as an institution of global systemic importance. Hence, this article is not applicable for the BNG Bank.	
Article 442	Credit risk adjustments	EU CRB EU CR1 EU CR1-A EU CQ1 EU CQ3 EU CQ4 EU CQ5 EU CQ7	The templates regarding credit quality have been revised following the new ITS. 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. Templates CQ2, CQ6 and CQ8 are not applicable as the Bank's NLP ratio is below the 5% threshold.	pp. 80 - 92
Article 443	Unecumbered assets	EU AE1 EU AE2 EU AE3 EU AE4		pp. 104 - 109

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CRR	Description	Additional guidelines or standards	Clarification, if needed	Location Pillar III report
Article 444	Use of ECAI's	EU CRD EU CR4 EU CR5 EU CCR3		pp. 20 - 27 pp. 94 - 95 p. 96 - 97 p. 101
Article 445	Exposure of market risk	EU MR1	Template MR2-A, MR2-B and MR3 are not applicable to BNG Bank as the bank has no internal model. Template MR4 is not applicable to BNG Bank as the BNG Bank is not classified as G-SII.	p. 110
Article 446	Operational risk	EU OR1	As included in table EU OV1 in the section on capital requirements, BNG Bank applies the standardised approach for the assessment of own fund requirements for operational risk.	p. 113
Article 448	Exposure to interest rate risk on position not included in the tradingbook	EU IRRBB1		pp. 28 - 31, 111 - 112
Article 447	Exposure in equities not included in the trading book		BNG Bank does not have a trading book.	
Article 449	Exposure to securitisation positions	EU SECA EU SEC1 EU SEC4	Template SEC2 is not applicable to BNG Bank as the bank has no trading book. Template SEC3 and SEC5 are not applicable to BNG Bank as the bank only acts as investor.	pp. 122 - 124
Article 450	Remuneration policy	EU REM5	The information required in EU REM 1, EU REM2 and EU REM 3 is included in the Annual Report 2021.	pp. 114 - 115

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CRR	Description	Additional guidelines or standards	Clarification, if needed	Location Pillar III report
			The bank does not have high earners with remuneration of EUR 1m or above (EU REM 4).	
Article 451	Leverage ratio	EU LR1 EU LR2 EU LR3 EU LRA	BNG Bank's calculation of the exposure measure is now based on the SA-CCR approach, as the requirements for calculating the exposure measures have been changed under CRR2.	pp. 116 - 121
Article 452	Use of IRB approach to credit risk		BNG Bank does not apply the 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. 20 - 27, 94 - 95
Article 454	Use of advanced measurement approaches (AMA) to operational risk		BNG Bank does not apply the AMA approach to operational risk.	
Article 455	Use of internal market risk models		BNG bank does not apply internal market risk models.	