CAPITAL ADEQUACY AND RISK MANAGEMENT REPORT 2020

PILLAR 3

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INTRODUCTION

GOAL AND OVERVIEW

NIBC's Capital Adequacy and Risk Management (Pillar 3) Report contains information that enables an assessment of the risk profile and capital adequacy of NIBC Holding N.V. This publication fulfils the requirements of the Basel III framework, as stipulated in the *Capital Requirements Regulation and Directive* IV **(CRR/CRD IV)**. The CRR/CRD IV is legally enforced by Dutch law by the Financial Supervision Act **(Wft, Wet Financieel Toezicht)**.

The Basel Framework contains three pillars:

- Pillar 1 defines the regulatory minimum capital requirements by providing rules and regulations for the measurement of credit risk, market risk and operational risk. These capital requirements need to be covered by regulatory own funds. NIBC received approval from the *Dutch central bank* **(DNB)** to use the *Advanced Internal Ratings-Based* **(AIRB)** approach for calculating solvency requirements regarding credit risk for its most important exposure classes, namely corporate and retail, and the *Internal Model Approach* **(IMA)** regarding market risk in the Trading book. Furthermore, NIBC uses the ratings-based approach for the securitisation exposure class and the simplified risk-weight approach for the equity exposure class. Solvency requirements for the remaining portfolios and for operational risk are calculated using the Standardised Approach **(SA)**;
- Pillar 2 covers the Supervisory Review Process. This consists of the *Internal Capital Adequacy Assessment Process* **(ICAAP)**, the bank's own assessment of its capital adequacy in relation to all its risks, and the *Supervisory Review and Evaluation Process* **(SREP),** the response of the Supervisor to the institution's ICAAP. Since 2011, DNB also analyses the *Internal Liquidity Adequacy Assessment Process* (**ILAAP**); and
- Pillar 3 focuses on disclosure requirements, covering all relevant pieces of information for a market participant to assess the risk profile and capital adequacy of a credit institution. The risk disclosures are connected to Pillar 1 of the CRR/CRD IV framework, as information is provided regarding the underlying exposures, risk weighted assets and regulatory capital.

NIBC's Capital Adequacy and Risk Management Report is prepared to meet the requirements of Pillar 3, as well as the increased need for transparency in the financial market. The Capital Adequacy and Risk Management Report follows the structure below:

- Risk Management Strategy & Process
- Credit Risk
- Interest Rate Risk in the Banking book
- Market Risk
- Operational Risk
- Liquidity Risk
- Securitisation Exposures
- Internal Capital Adequacy Assessment Process
- Capital Base Components
- Capital Adequacy
- Remuneration Policy

The scope of application in this report refers to NIBC Holding, henceforth referred to as NIBC. The main entity of NIBC Holding is NIBC Bank. Where necessary, a distinction between NIBC Holding and NIBC Bank is made explicit. The starting point of the CRR/CRD IV prudential scope of application is the consolidation scope of NIBC, according to the *International Financial Reporting Standards* **(IFRS)**. In line with the requirements of the CRR/CRD IV, a prudential filter is applied for non-financial subsidiaries. These entities are excluded from the consolidation scope and are, instead,

treated as investments in associates. Appendix 1 provides further details regarding the consolidation scope.

The credit exposures in this report are not directly comparable to the numbers in NIBC's 2020 Annual Report. The numbers in the Annual Report refer to book values and classifications in line with IFRS requirements. The numbers in this report refer to *exposure at default* **(EAD),** which is a risk measure of the potential amount outstanding in the event of default. EAD is a different measure than drawn and undrawn amounts, and the method employed for its calculation differs per exposure class and among credit institutions. A more detailed explanation on EAD can be found in the *Credit Risk* chapter.

The COVID-19 outbreak undoubtedly had an impact on NIBC and the markets in which we operate. This report accounts for 2020 where one can see that NIBC's good starting position from end-2019 allowed NIBC to absorb the impact of the outbreak where we continue to have solid capital and liquidity buffers putting us in a solid position as the pandemic continues. NIBC's CET1 Ratio and liquidity buffers are solid where the exposure to cyclical corporate sectors (Shipping, Energy, Leveraged Finance) has been reduced in 2020. Liquidity and unused credit lines are continually monitored where portfolio management and review of clients has increased and remains at elevated levels admist the current economic backdrop.

NIBC's continues to work on the implementation of *Capital Requirements Regulation 2 and Directive* V **(CRR II/CRD V)**.

With respect to the CRR "quick fix" adjustments in response to the COVID-19 pandemic, NIBC has decided not to make use of transition periods related to CRR Article 473a (transitional arrangements for prudential impact of IFRS 9) and Article 468 (temporary treatment of unrealized gains and losses measured at fair value through other comprehensive income).

NIBC's Risk Management and Capital Adequacy (Pillar 3) report is published annually on NIBC's website. The report may also be published more frequently if special market circumstances require so. Information regarding risk management and key data on capital adequacy is presented in NIBC's Annual Report as well.

RISK MANAGEMENT STRATEGY & PROCESS

Risk management is at the core of our business and sustainable growth strategy. NIBC's approach to risk management results in fast decision making through an experienced, client-focused origination teams with detailed knowledge of its client portfolio, allowing for risk exposure to be managed through carefully structured facilities and client-centered restructuring on the corporate side. In the retail offering, risk is managed through simple and transparent products and an experienced arrears management team aimed at preventing foreclosures. We mainly pursue credit and investment risk while reducing our interest rate, currency, liquidity and operational risks to a level that is acceptable and ensuring solid capital and liquidity positions. The risks we take are measured and monitored against our risk appetite, ensuring that NIBC is capable of executing its business activities in line with its strategy.

NIBC actively supports mid-sized corporates, retail customers and new ventures at their most decisive moments. The origination philosophy is centred around the client relationship, understanding the client's cash flow and the availability of collateral. In our corporate client offering we apply an integrated approach to managing credit risk by focusing on risk-adjusted returns. We assess whether a new opportunity fits our risk appetite, and evaluate commercial and compliance matters prior to engaging with any particular client. In this process we consider credit risk and financial market risk as part of the decision process and conduct risk assessments prior to making the final lending or investment decision. The ultimate decision is dependent on our comfort with the specific client. The *Restructuring & Distressed Assets* (**RDA**) department is highly experienced, and typically engaged at an early stage of client financial distress to maximise the probability of a successful work-out and to limit potential losses. In our retail client offering we apply a conservative approach to new products and use programme lending for regular residential mortgage loans. In addition, tools are used to model credit risk, such as internally developed methodologies under the *advanced internal rating-based* (**AIRB**) approach.

NIBC has the advantage of its medium scale and the close proximity and collaboration there is between colleagues and with its client base. This provides a setting in which a quick and efficient multidisciplinary approach can be taken in areas of risk management. We therefore have the capacity to keep moving forward as a business while we continue to comply with evolving regulatory requirements.

RISK APPETITE

NIBC's risk appetite framework is based on six pillars, which are rolled out throughout the organisation and incorporated in our policies, procedures , limits and action plans. These pillars are:

1. **Franchise**: be a reliable and client-focused bank.
2. **Solvency**: be a creditworthy partner for our clients and other stakeholders.
3. **Profitability**: aligned with business model and risk profile.
4. **Liquidity & Funding**: to have sufficient and appropriate liquidity and stable and diverse funding base at all times.
5. **Asset quality**: it seeks to align its asset quality with its business objectives
6. **Non-Financial**: to maintain a solid licence to operate.

NIBC measures its performance across these pillars by means of the quantitative and qualitative elements of its risk appetite framework. This framework helps NIBC to implement and execute its strategy for sustainable growth.

NIBC's risk appetite framework has been established and rolled out across the organisation. NIBC has adopted certain key risk and performance indicators and other early warning signals that are used by NIBC's business units to monitor and control developments in key risk areas.

RISK STRATEGY

NIBC has a clearly defined business model around corporate client offering and retail client offering. Next to the retail customers of retail client offering, corporate client offering focuses on mid-sized corporate clients mainly in the Netherlands and Germany, and is a meaningful player in a select number of asset classes. Indispensable to corporate and retail client offerings and the entire business of NIBC are the Treasury, Risk Management and Corporate Center departments. Due to its focus and in-depth understanding of the business and its clients, NIBC has good understanding of the risks in this select number of markets.

The risk strategy of NIBC is aligned with this business model, resulting in the following markets and portfolios, where the risks are concentrated:

- Credit risk in the corporate loan portfolio is segmented in eight Asset Classes (Commercial Real Estate; Infrastructure; Shipping; Energy; Mid-Market Corporates; Fintech & Structured Finance and Mobility; Finanical Sponsors & Leveraged Finance) and in the residential mortgage loan portfolio (consisting of mainly Dutch and a small portfolio of German residential mortgage loans as well as the Buy-to-Let portfolio). Furthermore, credit risk exists also in the investment loan portfolio. Investment loans may reflect subordination or contain equity characteristics such as attached warrants or conversion features. Examples of these exposures include mezzanine loans, convertible loans and shareholder loans. Finally, credit risk exists in our derivative, lease receivables, cash management and debt investments portfolios;
- Investment risk in equity investments; and
- Market risk in the Treasury portfolios mainly consisting of interest rate risk in the Money Markets & Trading book, Mismatch book and Banking book and the debt investments portfolio. The latter consists of the securitisations investment portfolio and the portfolio of debt investments in institutions and corporate entities.

NIBC risk managment policy is aimed at seeking an acceptable level of credit and investment risk, while minimising other risks such as liquidity risk and operational risk. Risk appetite helps to achieve NIBC's targets in a sustainable and controlled manner. One additional element being a key for enabling the business activities is to ensure the bank's capital adequacy.

The business model described above is also reflected in the Economic Capital framework, which is further described in the section *Internal Capital Adequacy Assessment Process* (**ICAAP**)*.* NIBC uses Economic Capital as a risk measure throughout the organisation. For each business activity, Economic Capital is allocated and reported quarterly to the *Asset & Liability Committee* (**ALCO**).

RISK GOVERNANCE AND RISK CULTURE

NIBC relies on a "three lines of defence" risk management governance model, which provides a structure to assign risk management activities and responsibilities at various levels throughout its organisation. Day-to-day responsibility for risk management is assigned to the front office and/or operational departments and constitutes the first line of defence. The risk control functions (consisting of Risk Management, Legal, Compliance & Regulatory Affairs and CSR) form the second line of defence and are responsible for initiating risk policy and supervision of risk control within

NIBC. NIBC internal audit forms the third line and is responsible for, among other things, performing independent audits on the risk appetite framework.

To support effective decision-making, the Managing Board has delegated decision-making authority regarding key risk management focus areas to the following committees, each of which includes at least two Executive Committee members:

- **Engagement committee (EC):** Responsible for decision-making with regard to client engagement and conflicts of interest including an assessment of the potential integrity risks when engaging with a client.
- **Transaction committee (TC):** The transaction committee has decision-making power with regards to credit transactions, assessment of credit proposals and the monitoring of credit related risks. The TC approves and monitors transaction proposals which cause NIBC to assume credit risk. Further, the TC decides on impairments and write-offs and reviews all larger exposures at least annually.
- **Investment committee (IC):** The IC is the delegated authority to decide on equity, mezzanine, subordinated, and other equity related financial products. The IC assesses new investment proposals and periodically determines the valuation of our equity portfolio.
- **Strategic investment committee (SIC):**The SIC has decision-making power on equity, mezzanine debt, subordinated debt and senior debt granted to new strategic participations and/or strategic investments.
- **Risk management committee (RMC):** The RMC decides on policies, measurement methods, monitoring, and controlling of all risk types. The role of the RMC is to safeguard our risk appetite by monitoring all risks we are exposed to, thereby looking backwards as well as forwards.
- **Asset & liability committee (ALCO):** The ALCO monitors and controls capital ratios, liquidity, earnings, interest rate risk and market risk. As ALCO is responsible for liquidity, as they also decide on funding plans and large funding transactions.

The Supervisory Board supervises, monitors and advises the Managing Board on the risks inherent in NIBC's business activities, including the structure and operation of the internal risk management and control systems and compliance with legislation, regulations and NIBC's code of conduct. The Supervisory Board has set up two committees for this purpose: the Risk Policy and Compliance

Committee (the "Risk Policy & Compliance Committee") and the Audit Committee ("Audit Committee"). The Risk Policy & Compliance Committee advises the Supervisory Board on its responsibilities relating to NIBC's risk appetite, risk profile, risk management policies and broader compliance topics. It presents proposals and recommendations, at the request of the Managing Board or Supervisory Board, or otherwise in accordance with the mandates, on credit, market, investment, liquidity, operational and compliance/regulatory risks, and any other material risks NIBC is exposed to. The Audit Committee advises the Supervisory Board on financial reporting, and internal and external audits.

One of the elements of NIBC's risk framework is the application of thorough anti-money laundering, client due diligence and know-your-client procedures and policies. NIBC places particular emphasis on active client monitoring on an ongoing basis. Individual client officers are primarily responsible for the execution of client due diligence onboarding in accordance with NIBC's procedures; however, the day-to-day activities relating to onboarding have been outsourced to the Client Onboarding department, which is a separate department within the corporate client offering segment. The Compliance Department (as defined below), is responsible for policies, monitoring of regulations and treatment of high risk cases.

RISK MANAGEMENT ORGANISATION

NIBC's risk management committees are supported by a robust risk management organisation, which focuses on the daily monitoring and management of the risks NIBC is exposed to and includes the following departments and teams:

- Credit Risk Management ("**CRM**") is responsible for assessing, managing and advising on credit risk related to corporate counterparties (for the corporate client offering) and high net worth individuals and this includes the investment loan portfolio as well as investment risk managment for private equity positions. CRM develops and implements policies and procedures regarding credit risk, advises on credit proposals, reviews, waivers and amendments. Furthermore, CRM assigns NIBC's internal counterparty credit ratings ("**CCR**") and loss given default ("**LGD**") ratings.

- Retail Risk Management ("**RRM**") is responsible for maintaining an overview of the total risk of the retail client offering and its portfolios, to review strategic projects, and monitor the development and impact from changes in NIBC's risk appetite.

- Restructuring and Distressed Assets Management ("**RDA**") actively manages and restructures loans of financially distressed clients transferred from the various NIBC business units.

- The Market Risk Management department ("**MRM**") is responsible for monitoring the market risk of NIBC's Treasury activities, both inside and outside the trading book. MRM also monitors NIBC's currency positions.

- The Risk Analytics and Model Validation department ("**RA&MV**") is mainly responsible for economic capital modelling and reporting, model validation and quantitative research projects.

- Financial Markets Credit Risk ("**FMCR**") is responsible for monitoring, assessing and advising on the credit and counterparty risk of NIBC's Treasury activities, including monitoring and advice on counterparty credit limits and issuer limits. In addition, FMCR develops, implements and maintains policies and methodologies regarding credit risk related to financial markets products. Furthermore, FMCR is responsible for implementing and managing country risk limits across NIBC.

- Portfolio Analysis department ("**PA**") monitors risk at a portfolio level and is also responsible for a number of regulatory polices. PA is responsible for the reporting of credit portfolio information to various users within and outside NIBC, including for the development and reporting of NIBC's risk appetite framework, and for the development and maintenance of (sub-) portfolio, sector & product limits. It also includes credit risk management of the structured transactions involving collateral pools.

- Modelling & Data Analytics ("**MDA**") is central to NIBC's Basel III process with respect to corporate credit where it develops policies and methods for measuring risk, notably the credit rating system used to evaluate probability of default and loss given default in NIBC's corporate credit portfolio. MDA also conducts certain quantitative risk modelling including that needed for IFRS 9 and bank-wide stress testing.

- Operational Risk Management ("**ORM**") is responsible for monitoring and managing operational risk stemming from NIBC's business and operational practices including IT risk. ORM co-ordinates the new product approval and review process and the group-wide significant change approval process of new activities ensuring pre-implementation of risk assessments by relevant functions throughout NIBC. NIBC corporate social responsibility activities are also managed by ORM. NIBC's code of conduct, business principles, compliance framework and sustainability framework guide NIBC's business activities and client transactions. Sustainability is integrated in NIBC's business strategy where we aim to create environmental and social value at decisive moments for our clients and stakeholders. The Sustainability Offiicer is responsible for catalysing sustainability and corporate social responsibility within the organisation.

- The Compliance & Regulatory Affairs Department is responsible for assisting and challenging the business in updating the overall compliance risk analysis for NIBC and all international offices on an annual basis. The Compliance team's role is to translate and implement relevant external regulations into sound and clear internal policies and procedures, document as well as update relevant compliance policies, inform and train staff members in order to broaden their compliance awareness, maintain proper information barriers and restricted lists and act as the co-ordinator for correspondence with the AFM and, via its local compliance officers, for the relevant international supervisory bodies. Compliance also advises on specific cases, when asked but also pro-actively. Client due diligence is an important topic as banks fulfil an important role in the prevention of intentional and unintentional wrongdoing. *Know-your-customer* and *Anti-Money Laundering* regulations are updated to meet today's challenges, and banks have to keep pace by adjusting their processes and procedures in order to effectively address the risks and remain compliant with these regulations. NIBC actively reviews and adjusts the client onboarding processes to keep these in line with continuously evolving requirements. The Regulatory Affairs team assists NIBC in minimizing regulatory risk by proactively assisting various parts of the bank by acting as regulatory advisor as well as carrying out a signaling and monitoring function in relation to new and existing laws and regulations. Regulatory Affairs coordinates the Regulatory Expert Networks for conduct and prudential regulation aimed at keeping track of new regulatory laws and regulations and the implementation thereof within NIBC. The team furthermore manages the Policy Framework of NIBC.

- Legal Department ("**LD**") ensures that the legal risks which NIBC accepts remains within the parameters of NIBC's risk appetite framework. LD proactively assists various parts of the bank and advises on both external and internal transactions, as well as carrying out a control function. In addition, LD assists with various other matters, ranging from administrative matters to corporate affairs and strategic projects.

CREDIT RISK

NIBC defines credit risk as the current or potential threat to the company's earnings and capital as a result of counterparty's failure to make financial payments on time or to otherwise comply with its financial obligations to NIBC.

Many activities at NIBC are related to credit risk: credit risk is present in the corporate loan portfolio, the investment loan portfolio, the residential mortgage loan portfolio, the lease receivables portfolio, the debt investments portfolio (in corporate entities, institutions and securitisations), cash management and derivatives. It is the largest source of risk to which NIBC is exposed, representing approximately 87% of total *Risk Weighted Assets* **(RWA)** and of the company's capital requirements. Specifically for the debt investments portfolio, NIBC defines the credit risk as issuer risk, which is the credit risk of losing the principal amount on products such as bonds. We also highlight the corporate exposures classified under AIRB. As disclosed in a press release on 26 June 2019, NIBC has been notified by DNB on the final outcome of an internal model investigation **(IMI)** as part of ongoing supervision by DNB. The IMI, which was performed on the basis of the ECB Targeted Review of Internal Models (TRIM) framework, resulted in 30% additional RWAs for our corporate loan portfolios for which internal models are used. This is included in both the 2019 and 2020 RWA figures. The Pillar 3 disclosure requirements prescribe that a credit institution classifies its assets into a number of standard exposure classes. For a credit institution using the AIRB approach, these exposures are defined in the CRR/CRD IV. Table 1 presents the relationship between the classification in this report and the portfolios in NIBC Annual Report:

Table 1Comparison between Pillar 3 exposure classes and portfolios in NIBC's Annual report

Pillar 3 exposure classes	Portfolios in Annual report
Sovereign	Debt investments in sovereign entities and cash at central banks
Institutions	Debt investments in institutions, deposits and derivative transactions with institutions
Corporate	Corporate loan portfolio, including guarantees, derivatives and debt investments in corporate entities, lease receivables (BEEQUIP) and Investment Loan portfolio
Retail	Dutch and German residential mortgage loan portfolios, German lease receivables, securitised RMBS portfolio
Equities	Equity investments and uncalled capital commitments
Securitisations	Securitisation portfolio, derivatives and retained notes of own securitisations
Other	Non-credit related exposures

Apart from the above mentioned differences in classification, differences can also be found between the numbers presented in this report and the numbers in the risk management paragraph and risk notes in NIBC's Annual Report. The main reasons that these numbers are not directly comparable are the following:

- For exposures treated under the AIRB approach, Pillar 3 numbers refer to *Exposure At Default* (**EAD**), a risk measure of the potential outstanding amount in the event of default. Counterparties typically tend to utilise their credit lines more intensively when approaching default, which implies that the amount outstanding at default is expected to be higher than the current outstanding amount. For undrawn parts of credit facilities, a credit conversion factor is applied to the numbers in the Pillar 3 report, which cannot be recognised on the balance sheet. This credit conversion factor is incorporated in the calculation of EAD;
- For derivative transactions, Pillar 3 figures refer to the marked-to-market value and add-on, including the effect of netting and collateral. The add-on reflects a potential future change in the

marked-to-market value during the remaining lifetime of the derivative contract for derivatives without a CSA and considering margin period of risk for collateralized derivatives; and
- The treatment of some securitised exposures differs due to differences in de-recognition requirements in IFRS and CRR/CRD IV.

With respect to COVID-19 disclosures, please see Appendix 3 for an overview of "newly originated exposure under public guarantee schemes".

CREDIT RISK EXPOSURES

This section presents NIBC's credit risk exposures based on the definitions and approaches that are used in the calculation of capital requirements. NIBC received approval by the DNB to use the AIRB approach for calculating the capital requirements of the corporate and retail mortgage loan exposure classes. Furthermore, NIBC uses the ratings-based approach for the securitisation exposure class and the simplified risk-weight approach for the equity exposure class.

The AIRB approach is the most sophisticated approach within CRR/CRD IV for the calculation of capital requirements and it is based on NIBC's internal estimation of various risk parameters. The section *Calculation of Risk Weighted Assets* in this chapter provides more information on the methods NIBC uses for the estimation of these parameters.

The Standardised Approach applies to all other NIBC exposure classes containing credit risk.

Table 2 shows a breakdown of exposure, EAD, RWA and capital requirement per exposure class and calculation approach at 31 December 2020 and 31 December 2019.

Table 2 Breakdown of exposure, EAD, RWA and capital requirement for credit risk

	31 December 2020				31 December 2019			
in EUR millions	Exposure	EAD	RWA	Capital requiremen	Exposure	EAD	RWA	Capital requirement
AIRB APPROACH								
- of which corporate	7,347	6,949	3,740	299	9,263	8,706	4,514	361
- of which retail	9,043	9,043	599	48	9,089	9,089	684	55
- of which securitisations	734	733	188	15	717	717	78	6
- of which equities	252	252	931	74	300	300	1,112	89
SUBTOTAL	**17,375**	**16,976**	**5,458**	**437**	**19,370**	**18,813**	**6,388**	**511**
STANDARDISED APPROACH								
- of which sovereign	2,042	2,041	-	-	2,121	2,121	-	-
- of which corporate	790	726	686	55	649	626	611	49
- of which retail	1,463	1,165	456	36	1,075	878	334	27
- of which institutions	1,000	911	183	15	919	859	183	15
- of which securitisations	127	116	89	7	176	161	93	7
- of which other	96	96	96	8	98	98	98	8
SUBTOTAL	**5,518**	**5,056**	**1,511**	**121**	**5,039**	**4,743**	**1,318**	**105**
TOTAL	**22,893**	**22,032**	**6,968**	**557**	**24,408**	**23,556**	**7,706**	**617**

Small differences are possible in the table due to rounding.

The total credit risk RWA of NIBC decreased by approximately 10% between 2020 and 2019 largely as a result of reductions in the coprorate portfolio where the differences can then explained as follows:

- RWA for *Corporates* decreased as a result of our repsonse to the COVID-19 outbreak where we have chosen to manage our liquidity position carefully, ensuring ample liquidity buffers to be ready to support clleints ahead of focusing on new origination.This is in addition to active portfolio reduction in a few planned areas (Energy, Leveraged Finance). The Beequip leasing portfolio increased, partially offsetting this reduction.
- The RWA consumption of the Equity exposure class decreased by 16% due to portfolio reduction and negative revaluations where new business was very selective in light of COVID-19.
- RWA usage for *Securitisations* increased due to an increase in the treasury liquidity portfolio as well as the treatment of a number of corporate loans in the Fintech & Structured Finance portfolio being classified as securitisations.

Breakdown of credit risk exposures

Table 3 shows a breakdown of EAD between exposure classes and exposure types under both the AIRB and the Standardised approach at 31 December 2020.

Table 3 Breakdown of credit EAD types by exposure class, 31 December 2020

in EUR millions Exposure class	On-balance	Off-balance	Derivative	Total
AIRB APPROACH				
- of which corporate	5,748	836	365	6,949
- of which retail	8,989	53	-	9,043
- of which securitisations	720	13	-	733
- of which equities	227	25	-	252
SUBTOTAL	**15,684**	**928**	**365**	**16,976**
STANDARDISED APPROACH				
- of which sovereign	2,041	-	-	2,041
- of which corporate	706	17	3	726
- of which retail	1,002	163	-	1,165
- of which institutions	783	-	128	911
- of which securitisations	105	10	-	116
- of which other	96	-	-	96
SUBTOTAL	**4,734**	**191**	**131**	**5,056**
TOTAL	**20,418**	**1,118**	**496**	**22,032**

Small differences are possible in the table due to rounding.

Table 4 shows an average breakdown of 2020, based on beginning and end of the year 2020.

Table 4 Breakdown of credit EAD types by exposure class, average 2020

in EUR millions Exposure class	On-balance	Off-balance	Derivative	Total
AIRB APPROACH				
- of which corporate	6,437	1,011	379	7,828
- of which retail	9,000	66	-	9,066
- of which securitisations	711	6	8	725
- of which equities	249	27	-	276
SUBTOTAL	**16,396**	**1,111**	**387**	**17,895**
STANDARDISED APPROACH				
- of which sovereign	2,081	-	-	2,081
- of which corporate	660	15	2	676
- of which retail	904	117	-	1,022
- of which institutions	773	-	112	885
- of which securitisations	126	13	-	139
- of which other	97	-	-	97
SUBTOTAL	**4,641**	**144**	**114**	**4,899**
TOTAL	**21,037**	**1,255**	**502**	**22,794**

Small differences are possible in the table due to rounding.

Table 5 shows the breakdown of EAD between regions based on domicile of the counterparty (not country of risk). The geographical distribution of NIBC's assets corresponds to the company's strategy to focus on North Western Europe, with the Netherlands, the United Kingdom and Germany accounting for 89% of the total EAD. This percentage increases to 97% when the rest of Europe is included. With respect to corporate exposures, the Asia/Pacific region mainly contains NIBC's exposures to the sectors Shipping and Energy. Exposures to the Energy sector are also located in North America, as well as in the region Other.

Table 5: Breakdown of EAD per Region, 31 December 2020

in EUR millions Exposure class	The Netherlands	Germany	United Kingdom	Rest of Europe	Asia / Pacific	North America	Other	Total
AIRB APPROACH								
- of which corporate	2,965	987	1,385	994	400	113	104	6,949
- of which retail	9,043	-	-	-	-	-	-	9,043
- of which securitisations	429	42	17	245	0	-	0	733
- of which equities	145	14	28	10	-	19	35	252
SUBTOTAL	**12,582**	**1,043**	**1,430**	**1,250**	**401**	**131**	**139**	**16,976**
STANDARDISED APPROACH								
- of which sovereign	1,931	52	17	21	-	20	-	2,041
- of which corporate	710	13	3	0	-	0	0	726
- of which retail	1,153	13	-	-	-	-	-	1,165
- of which institutions	495	8	89	259	0	60	-	911
- of which securitisations	-	-	25	90	-	-	-	116
- of which other	96	-	-	-	-	-	-	96
SUBTOTAL	**4,386**	**86**	**134**	**370**	**0**	**80**	**0**	**5,056**
TOTAL	**16,968**	**1,129**	**1,565**	**1,619**	**401**	**211**	**139**	**22,032**
TOTAL (in %)	**77%**	**5%**	**7%**	**7%**	**2%**	**1%**	**1%**	**100%**

Small differences are possible in the table due to rounding.

Table 6 shows the breakdown of EAD between industry sectors where NACE sectors are used with the exception of Retail Client Offering (included in Retail Markets), Government/Central Bank, Financial Markets and Lease Receivables. Note that this table is split into two parts for visibility purposes and should be read as a continuation from upper table to a lower table.

Table 6 Breakdown of EAD per NACE industry sector, 31 December 2020

in EUR millions

Exposure class	Retail Markets	Financial Services	Government / Central Bank	Infrastructure	Commercial Real Estate	Shipping	Lease Receivables
AIRB APPROACH							
- of which corporate	-	1,161	-	1,275	1,024	863	-
- of which retail	9,043	-	-	-	-	-	-
- of which securitisations	-	733	-	-	-	-	-
- of which equities	-	142	-	14	35	-	-
SUBTOTAL	**9,043**	**2,036**	**-**	**1,289**	**1,059**	**863**	**-**
STANDARDISED APPROACH							
- of which sovereign	-	-	2,041	-	-	-	-
- of which corporate	-	4	-	-	90	0	520
- of which retail	1,065	-	-	-	-	-	100
- of which institutions	-	911	-	-	-	-	-
- of which securitisations	-	116	-	-	-	-	-
- of which other	-	-	-	-	-	-	-
SUBTOTAL	**1,065**	**1,031**	**2,041**	**-**	**90**	**0**	**620**
TOTAL	**10,108**	**3,067**	**2,041**	**1,289**	**1,148**	**863**	**620**
TOTAL (in %)	**46%**	**14%**	**9%**	**6%**	**5%**	**4%**	**3%**

Small differences are possible in the table due to rounding.

in EUR millions Exposure class	TMT	Manufacturing	Oil & Gas	Wholesale/ Retail/ Leisure	Services	Agriculture & Food	Other	Total
AIRB APPROACH								
- of which corporate	581	474	423	424	348	375	-	6,949
- of which retail	-	-	-	-	-	-	-	9,043
- of which securitisations	-	-	-	-	-	-	-	733
- of which equities	6	7	14	4	30	-	0	252
SUBTOTAL	**587**	**481**	**437**	**429**	**378**	**375**	**0**	**16,976**
STANDARDISED APPROACH								
- of which sovereign	-	-	-	-	-	-	-	2,041
- of which corporate	-	1	0	2	0	-	109	726
- of which retail	-	-	-	0	-	-	-	1,165
- of which institutions	-	-	-	-	-	-	-	911
- of which securitisations	-	-	-	-	-	-	-	116
- of which other	-	-	-	-	-	-	96	96
SUBTOTAL	**-**	**1**	**0**	**2**	**0**	**-**	**206**	**5,056**
TOTAL	**587**	**482**	**437**	**431**	**378**	**375**	**206**	**22,032**
TOTAL (in %)	**3%**	**2%**	**2%**	**2%**	**2%**	**2%**	**1%**	**100%**

Small differences are possible in the table due to rounding.

Table 7 shows the breakdown of RWA between industry sectors. Note that similar to previous table, this table is split into two parts for visibility purposes and should be read as a continuation from upper table to a lower table. It can be noticed that Financial Services sector has the highest RWA.

Table 7 Breakdown of RWA per NACE industry sector, 31 December 2020

in EUR millions

Exposure class	Financial Services	Retail Markets	Commercial Real Estate	Lease Receivables	Manufacturing	Infrastructure	Oil & Gas
AIRB APPROACH							
- of which corporate	428	-	528	-	500	465	448
- of which retail	-	599	-	-	-	-	-
- of which securitisations	188	-	-	-	-	-	-
- of which equities	524	-	129	-	26	50	51
SUBTOTAL	**1,140**	**599**	**657**	**-**	**525**	**516**	**499**
STANDARDISED APPROACH							
- of which sovereign	-	-	-	-	-	-	-
- of which corporate	3	-	90	482	1	-	0
- of which retail	-	389	-	66	-	-	-
- of which institutions	183	-	-	-	-	-	-
- of which securitisations	89	-	-	-	-	-	-
- of which other	-	-	-	-	-	-	-
SUBTOTAL	**275**	**389**	**90**	**548**	**1**	**-**	**0**
TOTAL	**1,415**	**988**	**747**	**548**	**526**	**516**	**499**
TOTAL (in %)	**20%**	**14%**	**11%**	**8%**	**8%**	**7%**	**7%**

Small differences are possible in the table due to rounding

in EUR millions Exposure class	Services	Wholesale/ Retail/ Leisure	Shipping	TMT	Other	Agriculture & Food	Government / Central Bank	Total
AIRB APPROACH								
- of which corporate	261	332	333	252	-	194	-	3,740
- of which retail	-	-	-	-	-	-	-	599
- of which securitisations	-	-	-	-	-	-	-	188
- of which equities	113	16	-	22	0	-	-	931
SUBTOTAL	**373**	**348**	**333**	**274**	**0**	**194**	**-**	**5,458**
STANDARDISED APPROACH								
- of which sovereign	-	-	-	-	-	-	-	-
- of which corporate	0	2	0	-	109	-	-	686
- of which retail	-	0	-	-	-	-	-	456
- of which institutions	-	-	-	-	-	-	-	183
- of which securitisations	-	-	-	-	-	-	-	89
- of which other	-	-	-	-	96	-	-	96
SUBTOTAL	**0**	**2**	**0**	**-**	**206**	**-**	**-**	**1,511**
TOTAL	**373**	**351**	**333**	**274**	**206**	**194**	**-**	**6,968**
TOTAL (in %)	**5%**	**5%**	**5%**	**4%**	**3%**	**3%**	**0%**	**100%**

Small differences are possible in the table due to rounding.

Retail Client Offering

The industry sector with the highest EAD is the Retail Client Offering, classified under Retail Markets which consists of NIBC's Residential Mortgage loan portfolios in the Netherlands including Buy-To-Let (which can be seen in the table under Standardised Approach) and a very small portfolio in Germany (EUR 13million). The total EAD of the portfolio increased mainly due to the further increase of the NIBC Direct mortgage loan book and Buy-to-Let portfolio. For more information about these exposures we refer to the various Retail sections in this report for the Residential Mortgage loan portfolio and to the chapter on Securitisations for the RMBS. Retail Markets includes a few smaller exposures outside the retail client offering.

Financial Services

The largest NACE industry sector is Financial Services. Institutions and corporates are the largest exposure classes. Institutions relate to the Treasury function. Financial Services corporate exposure contain mainly receivables financing transactions for corporate clients as part of the Fintech & Structured Finance offering, exposure to (private equity) funds and financing of leasing companies. This exposure class includes Securitisation exposure (i) in the Treasury liquidy portfolio (largely AAA-rated ABS/RMBS and (ii) certain receivables financings for corporate clients under the standardised approach. In terms of geographical distribution 51% of the EAD in the Financial Services sector is located in the Netherlands, 7% in the United Kingdom, 6% in Germany, 32% in the rest of Europe.

Infrastructure & Renewables

The EAD relates mostly to corporate loan and derivative exposures. In terms of geographical distribution, 77% of the portfolio's EAD is located in the United Kingdom, 11% in Germany, 10% in the Netherlands and 2% in the rest of Europe. The portfolio spans across various industry sub-sectors with healthcare (32%), education (29%), other infrastructure (16%), renewable energy (11%), water supply, waste, sewerage (7%) and roads & railways (4%) being the most important ones.

Commercial Real Estate

The EAD contains NIBC's commercial real estate corporate loans and several equity positions. Commercial Real Estate (corporate and equities) remains a well-diversified portfolio across various commercial real estate classes. The properties being our collateral are located in the Netherlands (98%), Germany (1%) and rest of Europe (1%). Residential commercial property financing accounts for 11% of the portfolio, which significantly reduces the concentration risk in the underlying collateral pool given the large number of tenants. Other prominant segments relate to develoment companies (28%) and offices (22%).

Shipping

The Shipping portfolio is skewed towards mid-sized vessels for ship owners and maritime investors in the deep sea segment, mostly dry bulk and wet bulk. Tankers prespresented 42% of the Shipping portfolio, specialised vessels 29%, bulk carriers 22% and container boxes/vessels 6%. Based on region of domicile the portfolio is active in Europe (30%), Netherlands (16%), North America (5%), United Kingdom (2%) and Asia/Pacific (38%).

TMT

Most of the clients are located in the Netherlands (28%), United Kingdom (28%), Germany (24%) and the rest of Europe (20%). The portfolio is largely in telecommunications (65%) and IT services (30%).

Manufacturing

Most of the clients are located in the Netherlands (45%) followed by Germany (42%) and the rest of Europe (10%).

Although the demand for industrial products tends to be cyclical, the sector focused on more stable industry sectors and subsectors, in which it has client and market expertise. The portfolio is split across various industry sectors: industrial products (73%) , chemicals (14%), consumer products (10%), manufacturing of automotive and vehicles (2%) and pharmaceuticals/biotech (1%).

Offshore Energy

The sector mostly contains corporate exposures and the portfolio continues to decrease in line with NIBC's strategy. The total EAD in this portfolio is mainly split over six subsectors of which drilling, offshore support (32%), engineering & construction (23%), drilling (16%) and production (15%) are the most prominent subsectors. In terms of geographical focus, the sector is balanced across Europe (26%), The Netherlands (18%), Asia/Pacific (17%), North America (16%), United Kingdom (15%) and and the assets are active all over the world in key oil and gas areas.

All Offshore Energy services lending exposure relates to secured transactions. Security consists among others of the underlying assets as well as, in nearly all cases, a corporate guarantee. Drilling exposure relates to corporate transactions secured by the drilling assets, which are in turn contracted to oil companies, typically on medium term contracts. The offshore support sector incorporate transactions for clients that have assets supporting the drilling and production companies. These

assets range from platform supply vessels, anchor handlers to subsea construction vessels. Assets in the offshore support segment are normally contracted on short to medium term contracts, but secured by corporate guarantees. Transactions in the production segment concern floating production, storage and offloading assets. These assets are tailor made for a specific oil field and are generally contracted on a long-term basis to oil companies. Floating production, storage and offloading assets are critical for enabling production on their specific oil fields and thereby less impacted by short term oil price fluctuations.

Government/Central Banks

The sector Government/Central Banks is made up exclusively of NIBC's sovereign exposures. Most of sovereign exposures are related to cash placed with DNB, and the German Bundesbank. This represents our cash management position. In 2020, NIBC has no sovereign debt exposure to Greece, Italy, Spain and Portugal.

Other sectors

The remaining sectors in NIBC's portfolio together account for approximately 9% of the total EAD. With the exception of a few exposures in the equities and securitisations exposure classes, the vast majority are corporate exposures. More specifically, the sector Services consists of non-financial service providers such as transport, storage, healthcare and education. The majority of the counterparties in these sectors are medium-sized to large-sized companies in the Netherlands, Germany and the United Kingdom.

Equipment leasing grew further following the portfolio growth of BEEQUIP which focuses on financing/leasing transactions for new and used equipment, mainly for small and medium enterprises in the sectors infrastructure, earth-moving, construction and logistics sectors. At the end of December 2020, the BEEQUIP had a size of EUR 600 million.

The overall credit quality remained relatively stable compared to 2019 and the performing portfolio ranged in the 5 (BB) to 6- (B-) categories in terms of weighted average CCR, whereas the weighted average LGD was between 12.5% to 25% (B-1 to B-3 categories).

Table 8 Breakdown of credit risk EAD per maturity, 31 December 2020
in EUR millions

Exposure class	≤ 1 year	> 1 year ≤ 2 years	> 2 years ≤ 5 years	> 5 years	Total
AIRB APPROACH					
- of which corporate	1,388	1,232	2,960	1,368	6,949
- of which retail	0	1	50	8,991	9,043
- of which securitisations	-	-	52	681	733
- of which equities	252	-	-	-	252
SUBTOTAL	**1,640**	**1,233**	**3,062**	**11,041**	**16,976**
STANDARDISED APPROACH					
- of which sovereign	2,041	-	-	-	2,041
- of which corporate	17	29	567	113	726
- of which retail	-	9	0	1,156	1,165
- of which institutions	911	-	-	-	911
- of which securitisations	25	59	32	-	116
- of which other	96	-	-	-	96
SUBTOTAL	**3,091**	**97**	**598**	**1,270**	**5,056**
TOTAL	**4,731**	**1,330**	**3,661**	**12,311**	**22,032**

Small differences are possible in the table due to rounding.

CALCULATION OF RISK WEIGHTED ASSETS

AIRB approach

Ratings and rating process in the AIRB approach

The AIRB approach for the corporate and retail exposure classes has been implemented by NIBC after the approval by DNB. The ratings framework consists of the calculation of three main parameters: *probability of default* **(PD)**, *loss given default* **(LGD)** and *exposure at default* (**EAD)**.

The PD, LGD and EAD that are calculated through NIBC's internal models are used for the calculation of *expected loss* **(EL)** and Pillar-1 *regulatory capital* **(RC)**. Internal ratings enable an objective comparison of the credit risk of different types of assets, making them an essential tool for the commercial and risk management departments to determine whether a transaction fits NIBC's strategy and portfolio, as well as to determine the appropriate pricing. E*conomic capital* **(EC)**, *risk-adjusted return on capital* **(RAROC)** and stress testing are areas within Pillar 2, which make use of the above-mentioned parameters, although the methodologies for both EC and stress testing differ from those employed in Pillar 1. NIBC has developed a variety of stress test scenarios, both on a bank wide and portfolio and sub-portfolio level, to evaluate the impact of the scenarios on its RWA levels and Tier-1 ratio. For more information on the differences between NIBC's calculations under Pillar 1 and Pillar 2, we refer to the *ICAAP* chapter.

NIBC enforces strict separation of responsibilities with respect to its internal rating methodologies and rating process, model development, model validation and internal audit. The roles and responsibilities of each involved unit are explicitly set out in internal policies and manuals, also in conformity with the stipulations of CRR/CRD IV with respect to model governance.

In addition to these three internally calculated parameters, a fourth parameter which influences the calculation of the Pillar-1 RC is the maturity.

This section explains how the PD, LGD and EAD are applied within the AIRB corporate and retail framework of NIBC.

Corporate

NIBC applies its internally-developed credit rating methodology since 2007. This methodology consists of two elements: a counterparty credit rating that reflects the probability of default of the borrower and an anticipated loss element that expresses the potential loss on the facility in the event of default of the borrower. All counterparties are reviewed at least once a year.

From a risk perspective, corporate exposures fall within four financing types (corporate lending, asset finance, leveraged finance and project finance) and for each of these financing types the relevant credit drivers and parameters are captured in the rating models.

Counterparty credit ratings and probability of default

The *counterparty credit rating* **(CCR)** reflects the counterparty's capacity to meet its financial obligations in full and in time. CCRs do not incorporate any recovery prospects, as these are captured by the internal LGD estimates.

NIBC's uses a through-the-cycle CCR rating scale, which consists of 10 grades (1-10). Most of these grades are further divided in notches, by the addition of a plus or minus sign to show the relative standing within the rating grade. NIBC uses a total of 22 notches, each of which is mapped to the rating scale of the main international rating agencies. Each notch carries a PD percentage, which quantifies the likelihood that the counterparty will go into default in the next one year. The CCRs 9 and 10 are assigned to counterparties that have already defaulted and therefore carry a PD of 100%. Furthermore, CCRs are assigned a rating outlook. This assesses the potential direction of the CCR over the medium term. In determining a rating outlook, consideration is given to any changes in the economic and/or fundamental business conditions.

The general methodology for determining a CCR is based on several qualitative and quantitative rating indicators, such as the analysis of the business and financial profile of the counterparty, a cash flow analysis, a sovereign risk analysis and a peer-group analysis.

The performance of the CCR methodology is back-tested annually in order to ensure that consistency is kept throughout the portfolio and to measure the discriminatory power and the ranking ability of the CCRs. Furthermore, NIBC periodically benchmarks its CCRs with external parties.

Loss given default

Whereas CCRs are assigned on a counterparty level, LGD ratings are facility-specific. The LGD ratings reflect the loss that can be expected on a facility in a downturn scenario, given a counterparty defaults. NIBC's internal LGD scale consists of 7 grades (A-F) and 10 notches, each of which represents a different degree of recovery prospects and loss expectations.

NIBC's LGD philosophy is similar to the approach for CCRs. The LGD methodology is also based on a combination of qualitative and quantitative rating indicators that include, among others, the assessment of the available collateral and/or guarantees, the seniority of the loan, the applicable

jurisdiction, and the quality of the counterparty's assets. Once the various LGD drivers have been assessed, the final LGD rating is produced.

As is the case for CCRs, the maintenance of NIBC's LGD models involves benchmarking and back-testing. NIBC is a founding member of the *Global Credit Data* (**GCD**), the largest international loan loss data pooling entity. This enables NIBC to exchange anonymous loss data with other large international banks for the purposes of enhancing LGD modelling capabilities, sharing of best practices, LGD calibration and benchmarking.

Exposure at default and credit conversion factor

A third element of the AIRB approach is the calculation of the EAD. It is defined as the amount that is expected to be outstanding at the moment a counterparty defaults. Counterparties typically tend to utilise their credit lines more intensively when approaching default, which implies that the amount outstanding at default is expected to be higher than the current outstanding amount.

In order to quantify the additional expected utilisation, NIBC applies a *credit conversion factor* **(CCF)** on the undrawn portion of every credit facility. The main driver for the value of the CCF is the type of the credit facility (e.g. term loan, working capital facility, guarantee). NIBC produces its own internal estimates of CCF, based on the utilisation of defaulted credit facilities at the time of default and one year prior to default, which are a combination of internal defaulted facilities and defaulted facilities from the GCD data pool. These internal estimates are then benchmarked anonymously to external estimates from other GCD member banks.

Overview of AIRB corporate exposures

Table 9 provides an overview of corporate AIRB EAD types, broken down by NIBC rating grade (equivalent ratings of external rating agencies are provided in parentheses). The table also provides the average PD and LGD, weighted against EAD. As assets with a rating of 9/10 have already defaulted, the notion of LGD as used for non-defaulted assets is no longer applicable. Losses are therefore estimated through a separate impairment model, in order to determine the impairment amounts.

The fact that these exposures are in default does not necessary mean that all the counterparties carry an impairment amount. Reasons for not always taking an impairment amount for a defaulted counterparty may be e.g. over-collateralisation or NIBC's expectation of the company future cash-flow generation. The section on defaulted, non-performing, impaired and forborne exposures contains more information.

Since 2010, NIBC has been using an internally developed methodology for calculating RWAs for the defaulted counterparties. Whereas RWA and Regulatory Capital (RC) for the non-defaulted corporate exposures are calculated based on the CRR/CRD IV AIRB formula, the RWA and RC for the defaulted corporate exposures are a function of the impairment amount, if present, and the proportion of the impairment amount to the defaulted EAD. This methodology results in additional RWA and RC for the corporate exposure class, in line with NIBC's wish for more prudent capital calculations on its defaulted exposures in times of an economic downturn.

In 2020, the weighted average PD of the total corporate exposure class (excluding defaulted assets) was 2.1%. The average weighted CCR in the corporate exposure class (excluding defaulted assets) was 6+ on NIBC's rating scale (B+ in the rating scales of rating agencies) at 31 December 2020. The weighted-average LGD was 15.1% . The CCRs and LGDs remained relatively stable in a changing

economic environment and reveal NIBC's focus on active portfolio management and selective high quality new origination.

Table 9a Breakdown of corporate AIRB EAD by weighted average PD, weighted average LGD and EAD type, 31 December 2020

in EUR millions	IN %		in EUR millions			
Rating Scale	WA PD	WA LGD	On-Balance	Off-balance	Derivative	Total
1/2 (AAA/AA)	0.04%	7.50%	4	-	-	4
3 (A)	0.10%	21.42%	55	1	1	58
4 (BBB)	0.35%	11.95%	967	160	247	1,374
5 (BB)	0.98%	13.69%	2,120	443	81	2,644
6 (B)	2.77%	17.42%	2,036	211	16	2,263
7 (CCC)	11.30%	24.20%	226	21	2	250
8 (CC/C)	34.08%	12.50%	34	-	17	51
9/10 (D)	100.00%	38.50%	305	1	-	305
TOTAL	**6.40%**	**16.08%**	**5,748**	**836**	**365**	**6,949**

Table 9b Corporate weighted average PD and weighted average LGD per NACE Industry sector excl Defaults, 31 December 2020

in %	IN %	
NACE Industry sector	WA PD	WA LGD
Financial Services	1.57%	12.11%
Commercial Real Estate	1.49%	13.00%
Infrastructure	1.69%	12.13%
Shipping	2.38%	9.14%
Oil & Gas	5.76%	21.09%
Manufacturing	3.53%	26.58%
Agriculture & Food	1.71%	17.66%
TMT	1.12%	14.44%
Wholesale/Retail/Leisure	1.91%	24.35%
Services	2.62%	20.95%
Other	0.00%	0.00%
TOTAL	**2.09%**	**15.05%**

Retail

The AIRB approach applies to NIBC's Dutch Residential Mortgage loan portfolio excluding Buy-To-Let for which the Standardised Approach applies. The calculation of PD, LGD and EAD is performed by an internally developed AIRB model, which has been in use since 2007. The PD estimates are dependent on a variety of factors, of which the key factors are the delinquency status, debt-to-income and loan-to-value ratios. Minor factors that play a role in the PD estimates are several other mortgage loan characteristics and borrower characteristics. The PD scale is based on a continuous scale ranging from 0 - 100%.

The LGD estimates are based on a downturn scenario comparable to the downturn in the Dutch mortgage loan market in the 1980s. In this case, the indexed collateral value is stressed in order to simulate the proceeds of a (forced) sale of the collateral. The stress is dependent on the location of the collateral and its value. Together with assumptions about costs and time to foreclosure, an LGD is derived. The LGD estimate also takes into account whether a mortgage loan has a Dutch government guarantee **(NHG guarantee)** for which the LGD estimate is lower in comparison to a mortgage loan without the NHG guarantee. The LGD estimate is also based on a continuous scale.

The EAD is set equal to the net exposure (outstanding balance minus built-up savings value) for all mortgage loans, except for non-amortising (in this case, interest-only loans). For the non-amortising loans, 3 months of accrued interest is added to the EAD.

The validation of these estimates is performed on historical data and is carried out on a yearly basis. For the PD and LGD, the estimates are back tested against realised defaults and realised losses. In this way, it is ensured that the model still functions correctly in a changing economic environment.

Arrears, defaults and losses remained stable and in line with the past few years. In addition, actual credit losses in the Dutch and German portfolios have remained low in the past years.

Table 10 provides an overview of retail AIRB EAD types, broken down by PD buckets. The table also provides the average PD and LGD, weighted against the EAD. Note that the numbers in this table refer to NIBC's Dutch Residential Mortgage loan portfolio and the underlying portfolio of RMBS securitisations and excluding Buy-To-Let as this is on the Standardised Approach. At 31 December 2020, the WA PD and LGD were 0.6% and 12.2% respectively.

Table 10 Breakdown of retail AIRB EAD by weighted average PD, weighted average LGD and EAD type, 31 December 2019

in EUR millions	IN %		in EUR millions		
Rating Scale	**WA PD**	**WA LGD**	**On-Balance**	**Off-balance**	**Total**
<=0.1%	0%	7%	2,154	5	2,159
0.1% - 0.2%	0%	10%	3,048	11	3,059
0.2% - 0.3%	0%	15%	1,887	10	1,897
0.3% - 0.4%	0%	17%	989	8	998
0.4% - 0.5%	0%	17%	399	6	405
0.5% - 1%	1%	22%	375	8	383
1% - 2%	1%	29%	29	3	32
2% - 5%	4%	8%	23	0	23
5% - 99%	24%	14%	64	0	65
100%	100%	14%	22	0	22
TOTAL			**8,989**	**54**	**9,043**

Equities

NIBC uses the simple risk weight approach for equity investments. Under this approach, the RWA is calculated by multiplying the exposure amount by 370%. The total EAD for equity investments amounts to EUR 252 million.

Securitisations

NIBC uses the IRB approach for securitisation exposures, both for purchased securitisations as well as for retained notes of own securitisations. Under the IRB approach, the RWA is calculated by multiplying the exposure amount by the appropriate risk weight. The risk weight depends upon the external rating, the granularity and seniority of the pool and on whether the transaction is a resecuritisation. Alternatively, for retained notes of own securitisations, NIBC uses the IRB capital charge had the underlying exposures not been securitised (KIRB approach).

This approach is applicable when the capital requirement under the KIRB approach is lower than the capital requirement under the IRB approach for the securitisation exposure class. More detailed risk information about NIBC's securitisation exposures can be found in the *Securitisations* section.

Table 11 Risk weights of securitisation EAD, 31 December 2020

in EUR millions **Risk Weight**	< 10%	10% - 20%	25% - 50%	50% - 150%	150% - 250%	250% - 425%	425% - 500%	500% - 650%	650% - 1250%	1250% or deducted	Total
Retained	-	47	-	13		2		-		2	64
Purchased	-	622	44	94		5		4		1	771
TOTAL	**-**	**669**	**44**	**107**		**8**		**4**		**3**	**835**

Small differences are possible in the table due to rounding

Standardised Approach

For the calculation of RWA under the Standardised approach, drawn exposure is multiplied by a prescribed risk weight, depending on the exposure type and the external rating (if applicable). The undrawn exposures are multiplied by both a risk weight and a credit conversion factor. The risk weights are prescribed in the CRR/CRD IV:

- NIBC's sovereign exposures are exposures with a zero risk weight and vast majority is related to cash placed with DNB and the Dutch State Treasury Agency. NIBC has no sovereign debt exposure to Greece, Italy, Spain and Portugal;
- The risk weight for institutions is either 20% (with a rating equal to or higher than AA-) or 50% (with a rating between A+ and BBB-) for senior unsecured and dependent on the tenor of the maturity;
- The risk weight for covered bonds (institutions) is either 10% (with a rating equal to or higher than AA-) or 20% (with a rating between A+ and BBB-);
- The risk weight for institutions regarding centrally-cleared derivatives exposures is 2%;
- The corporate exposure class carries a risk weight of 100%. It mainly contains BEEQUIP portfolio, and non-rateable/unrated exposures to corporate counterparties;
- For buy-to-let, the part of the exposure which is secured for up to 80% by residential property receives a 35% risk weight and the other part receives a 75% risk weight. For defaulted retail exposures 100% and 150% risk weights are applicable;
- The retail exposure consists of the German residential mortgage loan portfolio, German lease receivables portfolio and a small portion of the BEEQUIP portfolio. For German residential mortgage loans, part of the exposure which is up to 80% secured by residential property receives a 35% risk weight and the other part receives a 75% risk weight. For defaulted retail exposures 100% and 150% risk weights are applicable;

- The securitisation exposure represents a number of receivables financing transations for corporate clients that are technically classifed as securitisations under the evolving regulatory framework.

Overview of Standardised portfolios

Tables 12 and 13 provide a breakdown of EAD and RWA by exposure class together with the applicable risk weight.

Table 12 Standardised EAD per risk weight, 31 December 2020

in EUR millions

Rating Scale	< 10%	10% - 20%	20% - 50%	50% - 150%	150% - 250%	250% - 500%	500% - 650%	650% or deducted	Total
Sovereign	2,041	-	-	-	-	-	-	-	2,041
Corporate	-	-	-	724	2	-	-	-	726
Retail	-	-	1,027	139	0	-	-	-	1,165
Institutions	57	101	682	71	-	-	-	-	911
Securitisations	-	-	32	84	-	-	-	-	116
Other	-	-	-	96	-	-	-	-	96
TOTAL	**2,098**	**101**	**1,741**	**1,114**	**2**	**-**	**-**	**-**	**5,056**

Small differences are possible in the table due to rounding

Table 13 Standardised RWA per risk weight, 31 December 2020

in EUR millions

Rating Scale	< 10%	10% - 20%	20% - 50%	50% - 150%	150% - 250%	250% - 500%	500% - 650%	650% or deducted	Total
Sovereign	-	-	-	-	-	-	-	-	-
Corporate	-	-	-	683	3	-	-	-	686
Retail	-	-	359	96	0	-	-	-	456
Institutions	1	10	136	35	-	-	-	-	183
Securitisations	-	-	9	80	-	-	-	-	89
Other	-	-	-	96	-	-	-	-	96
TOTAL	**1**	**10**	**505**	**992**	**3**	**-**	**-**	**-**	**1,511**

Small differences are possible in the table due to rounding

CREDIT RISK MITIGATION

Institutions

The exposures to financial institutions are either related to *over-the-counter* **(OTC)** derivative transactions, debt investments (in tradable securities) or cash management activities (money-market and repo transactions). Details about credit risk management for OTC derivative transactions can be found in the *Counterparty Credit Risk* section. NIBC only enters into repo transactions if they are secured by highly-rated bonds. Some debt investments of financial institutions are secured by collateral (covered bonds).

Corporate

An important element in NIBC's credit approval process is the assessment of collateral. Almost all exposures in the corporate exposure class have some form of collateralisation, where we note that many of the investment loans also benefit from collateral as well as having a government guarantee covering a portion of the exposure. Investment loans may contain equity characteristics such as attached warrants or conversion features; examples of this exposure include mezzanine loans, convertible loans and shareholder loans, which are in many instances unsecured instruments.

In general, NIBC requests collateral to protect its interests. NIBC ascribes value to the collateral it accepts provided that the collateral is sufficiently liquid, that documentation is effective and that enforcing NIBC's legal rights to the collateral will be successful. The type and quantity of the collateral depends on the type of transaction, the counterparty and the risks involved. The most significant types of collateral securing the corporate exposure class are assets, such as real estate, vessels, rigs, equipment and pools of (lease) receivables.

NIBC initially values collateral based on fair market value when structuring a transaction and typically also seeks confirmation from independent third-party experts that its interests are legally enforceable. Furthermore, NIBC evaluates internally the collateral and its value (semi-) annually during the lifetime of the exposure. Exposures in the shipping and Offshore Energy sectors are secured by assets such as vessels and drilling equipment. The commercial real estate portfolio is primarily collateralised by mortgages on financed properties. Collateral value is estimated using third-party appraisers, whenever possible, or valuation techniques based on common market practice. Other corporate exposures are, to a large extent, collateralised by assets such as inventory, debtors, and third-party credit protection (e.g. guarantees). The value of these types of collateral can be more difficult to determine, therefore such collateral is assessed on individual basis.

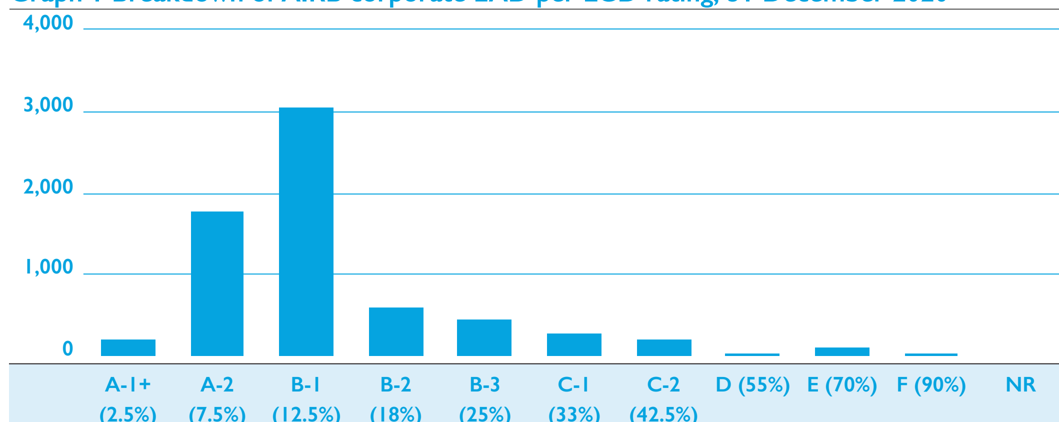
Graph 1 shows the distribution of corporate EAD per internal LGD rating. Note that the corporate exposures of the graph refer to non-defaulted exposures, given that the LGD is a measure of anticipated loss from the facilities of a non-defaulted counterparty. When a counterparty has defaulted, the impairment amount is a more meaningful measure of the loss. More information on impairment amounts can be found in the next section.

The letters on the horizontal axis of the table refer to NIBC's LGD grades and notches, whereas the numbers inside the parentheses refer to the loss percentage assigned to each LGD rating. **NR** stands for *not rateable*. NR is assigned to entities to which NIBC's corporate rating tools were not applicable or available at the time of rating (or reporting date). Exposures in the NR category fall under the Standardised Approach.

The LGD methodology is based on a combination of qualitative and quantitative rating indicators that include, among others, the assessment of the realisable collateral value, guarantees, the seniority of the exposure, the applicable jurisdiction, and the quality of the counterparty's assets. Once the various LGD drivers have been assessed, the final LGD rating is produced. The assessment of the available collateral is the basis for NIBC's LGD analysis. In determining the realisable collateral value, which is based upon recent appraisals, NIBC applies a number of haircuts on the collateral's fair market value. These haircuts are mainly driven by the type of collateral, the liquidity, the business cycle of the industry, the costs for forced collateral sales and other work-out expenses.

NIBC's weighted average LGD for the non-defaulted corporate exposure class at 31 December 2020 was 15.1.% and increased in comparison to 2019 (14.2%).

Graph 1 Breakdown of AIRB corporate EAD per LGD rating, 31 December 2020



Retail

Dutch residential mortgage loan portfolio

Credit losses are mitigated in a number of different ways:

- The underlying property is pledged as collateral;
- Under Dutch law, NIBC has full recourse to the borrower;
- 18% of the Dutch Own Book portfolio (and 30% of the Dutch Securitised portfolio) is covered by the NHG programme; and
- Approximately 3% of the Dutch portfolio has been securitised (based on a credit risk view).

For the portfolio not covered by the NHG programme, the underlying property is the primary collateral for any mortgage loan granted, though savings and investment deposits may also serve as additional collateral. A measurement for potential losses, taking into account indexation of house prices and seasoning, is achieved by calculating the *loan-to-indexed-market-value* **(LtIMV)**. The indexation is made by using the index of the Dutch Land Registry Office (Kadaster), which is based on market observables. For the total portfolio 1% has an LtIMV above 100%. For the remainder of the portfolio, there is either coverage by the NHG programme or the indexed collateral value is sufficient to cover the entire loan balance outstanding.

German residential mortgage portfolio

As is the case in the Netherlands, the underlying property is the primary collateral for any mortgage loan granted. In contrast to the Dutch market, most of the mortgage loans contain an annuity repayment, leading to a lower outstanding loan balance during the lifetime of the loan.

DEFAULTED, NON-PERFORMING, IMPAIRED AND FORBORNE EXPOSURE

Corporate

Portfolio managers within the commercial teams and risk managers at the CRM, FMCR and PA departments monitor the quality of (corporate) counterparties on a regular basis. On a quarterly basis, all corporate exposures are assessed for impairment and all existing impairments are reviewed.

NIBC calculates an impairment amount by taking certain factors into account, particularly the available collateral securing the loan and, if present, the corporate derivative exposure. The amount of loss is measured as the difference between the asset's carrying amount and the present value of

estimated future cash flows (excluding future losses that have not been incurred). If collateral is present, then the present value of the future cash flows includes the foreclosure value of collateral.

Table 9 in the section *Calculation of Risk Weighted Assets* presents a breakdown of the corporate exposure class in NIBC's internal rating scale. Counterparties with a default rating (9/10) represent a total EAD of EUR 305 million (31 December 2019: EUR 400 million); however, this does not mean that all these counterparties carry an impairment amount. Reasons for not always taking an impairment amount for a defaulted counterparty may be e.g. over-collateralisation or NIBC's expectation of future cash-flow generation.

When a default occurs (in line with the CRR/CRD IV definition[1]), the entire EAD of the borrower is classified as defaulted. On the contrary, if an impairment amount is taken against a facility, only the EAD of that particular facility is classified as impaired.

Tables 14 and 15 show a breakdown of the defaulted, non-performing, impaired and forborne exposure of the corporate exposure class per region and industry sector. Graph 2 provides the numerical overview of the relationship between these measures for the corporate loan portfolio, while tables 14 and 15 give a comprehensive overview. For comparability reasons, graphs and tables for 2019 are also included. All impairmed exposure in the Tables 14, 15 and Graph 2 includes IFRS 9 Stage 3 assets (Expected Credit Loss).

The column labelled *Defaulted EAD Corporate* shows the total EAD of counterparties carrying an internal default rating 9 or 10 (EUR 305 million (excluding derivatives), 31 December 2020).

Non-performing EAD Corporate shows the EAD of clients considered to be non-performing. A client is non-performing if that client is in default, or if a performing forborne facility under probation is extended additional forbearance measures or payments on a forborne facility become more than 30 days past due (EUR 305 million, 31 December 2020). Note that according to definitions non-performing portfolio contains the defaulted portfolio and also exposures that are for a second time foreborne.

Impaired EAD Corporate shows the EAD of those facilities carrying an impairment amount (EUR 305 million, 31 December 2020). The difference between the impaired EAD on facility level and the impairment amount can be explained by the presence of collateral or NIBC's expectation of future cash-flow generation. Note that the EAD amount under the column labelled *Impaired EAD Corporate* includes the impairment amount.

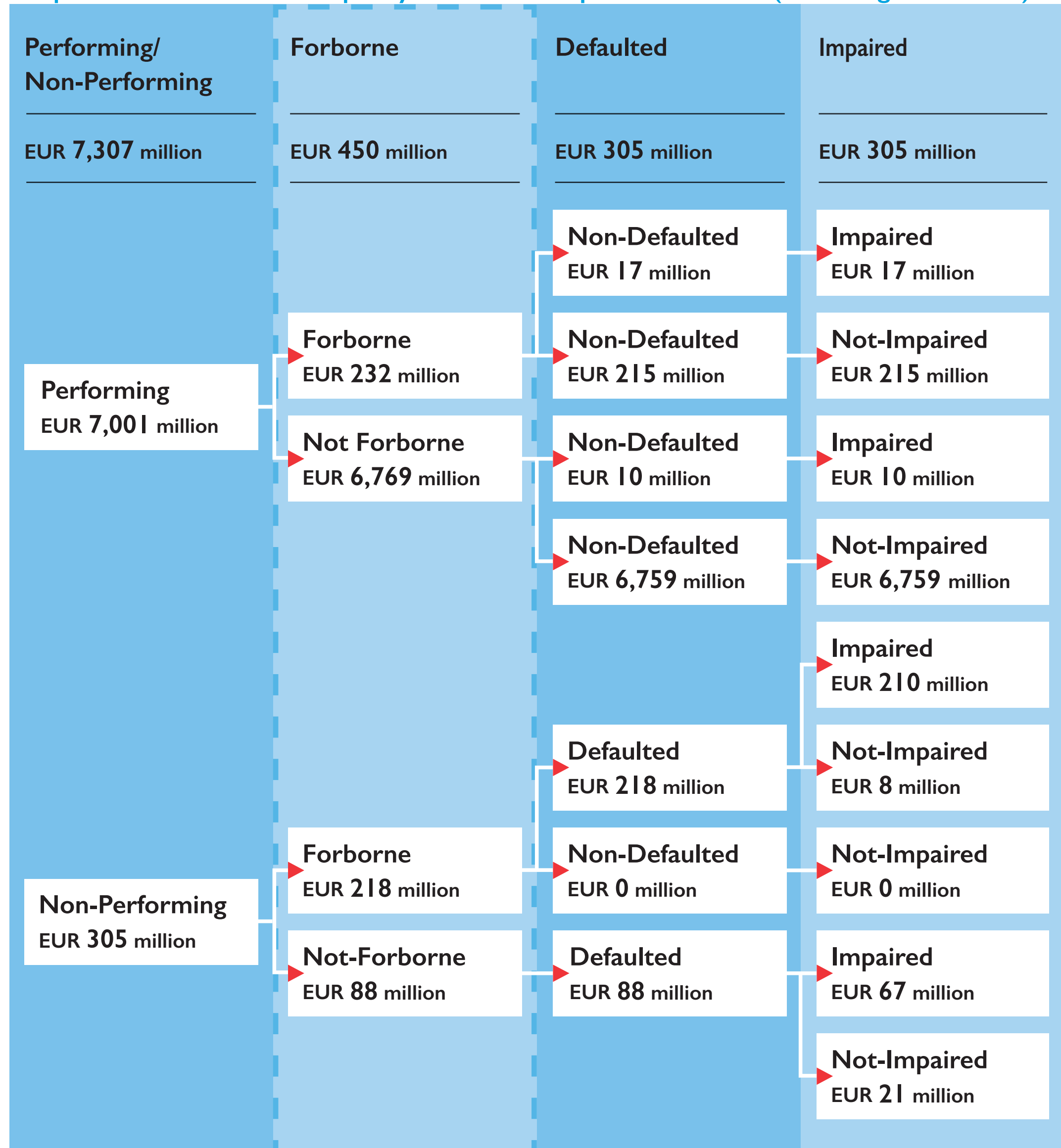
Forborne EAD Corporate shows the total EAD of counterparties facing financial difficulties and to whom a concession is granted by NIBC (EUR 450 million, 31 December 2020). Our business model, with a focus on sub-investment grade clients and well secured facilities, can lead to situations that temporary financial concessions are needed which does result in a higher total forborne exposure. Our forborne exposure has a large overlap with our defaulted exposure. This shows that even during difficult periods we stay committed to our clients.

The changing economic environment had its impact on the corporate exposure class in 2020 while we note that the majority of the metrics have improved. Some of the new impairment amounts were

1 According to the CRR/CRD IV definition, a default is determined on borrower level. A default is indicated by using a 9 or 10 rating in NIBC's internal rating scale. A default is considered to have occurred with respect to a particular obligor if either of the two following events have taken place: i) the bank considers that the obligor is unlikely to pay its credit obligations to the banking group in full, without recourse by the bank to actions such as realising security (if held). ii) the obligor is past due more than 90 days on any material credit obligation to the banking group.

due to challenges in certain markets in which we are active, especially Offshore Energy and Leveraged Finance.

Graph 2 Overview of credit quality measures Corporate Portfolio (excluding derivatives)



1) Performing non-defaulted and credit-impaired exposures represent POCI assets that have transitioned back to performing. Accounting standards
require life time impairment for POCI assets.
2) Non-performing defaulted and not credit-impaired exposures relate to FV loans and a claim on a bankruptcy estate.

Table 14a Breakdown of defaulted, non-performing, impaired and forborne exposure in corporate exposure class per region, 31 December 2020

in EUR millions

Region	Total EAD Corporate	Defaulted EAD Corporate	Non-performing EAD Corporate	Impaired EAD Corporate	Forborne EAD Corporate	Impairment
The Netherlands	3,675	159	159	167	211	66
Germany	1,000	49	49	41	64	17
United Kingdom	1,388	27	27	27	18	12
Rest of Europe	994	36	36	36	101	17
Asia / Pacific	400	-	-	-	11	-
North America	113	0	0	0	26	0
Other	104	34	34	34	19	2
TOTAL	**7,675**	**305**	**305**	**305**	**450**	**115**
TOTAL % in TOTAL EAD		**4.0%**	**4.0%**	**4.0%**	**5.9%**	

Small differences are possible in the table due to rounding.

Table 14b Breakdown of defaulted, non-performing, impaired and forborne exposure in corporate exposure class per region, 31 December 2019

in EUR millions

Region	Total EAD Corporate	Defaulted EAD Corporate	Non-performing EAD Corporate	Impaired EAD Corporate	Forborne EAD Corporate	Impairment
The Netherlands	4,544	168	168	160	270	59
Germany	1,039	82	82	47	82	29
United Kingdom	1,577	5	5	5	5	1
Rest of Europe	1,220	92	92	92	95	25
Asia / Pacific	529	-	26	-	-	-
North America	209	18	18	18	52	1
Other	215	35	35	31	55	14
TOTAL	**9,333**	**400**	**426**	**353**	**559**	**128**
TOTAL % in TOTAL EAD		**4.3%**	**4.6%**	**3.8%**	**6.0%**	

Small differences are possible in the table due to rounding

Table 15a Breakdown of defaulted, non-performing, impaired and forborne exposure in corporate exposure class per industry sector, 31 December 2020

in EUR millions

Region	Total EAD Corporate	Defaulted EAD Corporate	Non-performing EAD Corporate	Impaired EAD Corporate	Forborne EAD Corporate	Impairment
Financial Services	1,165	44	44	44	42	30
Commercial Real Estate	1,114	71	71	71	66	19
Infrastructure	1,275	21	21	-	4	-
Shipping	863	52	52	52	54	13
Oil & Gas	423	46	46	55	101	10
Manufacturing	475	31	31	29	79	15
Lease Receivables	520	-	-	-	-	-
Agriculture & Food	375	11	11	6	22	4
TMT	581	-	-	-	-	-
Wholesale/Retail/Leisure	426	31	31	42	51	24
Services	348	0	0	6	30	0
Other	109	-	-	-	-	-
TOTAL	**7,675**	**305**	**305**	**305**	**450**	**115**
TOTAL % in TOTAL EAD		**4.0%**	**4.0%**	**4.0%**	**5.9%**	

Small differences are possible in the table due to rounding.

Table 15b Breakdown of defaulted, non-performing, impaired and forborne exposure in corporate exposure class per industry sector, 31 December 2019

in EUR millions

Region	Total EAD Corporate	Defaulted EAD Corporate	Non-performing EAD Corporate	Impaired EAD Corporate	Forborne EAD Corporate	Impairment
Financial Services	1,486	2	2	2	-	2
Commercial Real Estate	1,523	65	65	65	119	18
Infrastructure	1,431	40	40	5	40	1
Shipping	1,008	71	71	70	88	26
Oil & Gas	703	122	149	118	160	33
Manufacturing	633	44	44	42	60	29
Lease Receivables	439	-	-	-	-	-
Agriculture & Food	526	5	5	0	34	0
TMT	510	-	-	-	-	-
Wholesale/Retail/Leisure	456	36	36	36	36	18
Services	395	15	15	15	22	2
Other	221	-	-	-	-	-
TOTAL	**9,333**	**400**	**426**	**353**	**559**	**128**
TOTAL % in TOTAL EAD		**4.3%**	**4.6%**	**3.8%**	**6.0%**	

Small differences are possible in the table due to rounding

Table 16 presents the corporate EADs with an amount in arrear. The amounts between 1 and 5 days may be adminstrative in nature. However, late payments that are not yet received are not automatically assumed to be uncollectible. NIBC applies a threshold for determining whether a corporate loan carries a non-material arrear. If the total of the sum of all individual arrears on facility level is lower than 1% of the loan amount outstanding and EUR 500, and the oldest due date of individual counterparty is less than 90 days, then the arrear is considered insignificant. If arrears fall within the threshold, the EAD is placed on the 'no payment in arrear' line. The application of this threshold does not influence the total arrears amount.

Table 16 EAD with an amount in arrear corporate exposure class, 31 December 2020

in EUR millions	Corporate EAD	Amount in arrear
1 - 5 days	23	13
6 - 30 days	22	1
31 - 60 days	-	0
61 - 90 days	1	1
SUBTOTAL LESS THAN 90 DAYS	**46**	**15**
Over 90 days	119	108
No payment arrear	7,510	
TOTAL	**7,675**	**123**

Small differences are possible in the table due to rounding

Retail

Both the Dutch and German residential mortgage loan portfolios are classified as amortised costs. Under IFRS9 impairment amounts or Expected Credit Losses (ECL) are calculated on each individual mortgage loan. Last year showed a further decrease in losses, due to improving market circumstances. The performance of NIBC's securitised mortgage loan portfolio is also good compared to other Dutch RMBS issuers as evidenced by arrears levels and realised loss levels.

NIBC has an in-house arrears management department, actively managing arrears, foreclosures, client retention and residual debts of the Dutch Residential Mortgage loan portfolio. Table 17 shows an overview of the retail EAD with an amount in arrear at 31 December 2020. The table also shows those EADs with technical past-due amounts. These amounts contain those borrowers with an amount in arrear below EUR 250. At 31 December 2020, the total amount in arrear was EUR 1.0 million (0.01% of the portfolio EAD).

Table 17 EAD with an amount in arrear, retail exposure class, 31 December 2020

in EUR millions	Retail EAD	Amount in arrear
1 - 5 days	6	0
6 - 30 days	70	0
31 - 60 days	25	0
61 - 90 days	15	0
SUBTOTAL LESS THAN 90 DAYS	**116**	**1**
Over 90 days	19	0
No payment arrear	10,074	-
TOTAL	**10,208**	**1**

Small differences are possible in the table due to rounding.

Forbearance Dutch Residential Mortgage Loans

NIBC has developed a forbearance policy for mortgage loan clients experiencing financial difficulties and who consequently are unable to meet the original terms and conditions of the contract. The forbearance policy is defined, formalized and implemented in the standard working routines and processes and is similar to the policy applied for the corporate loan portfolio.

NIBC has been providing a forbearance program to its borrowers who are experiencing financial difficulties since May 2013. The Client Retention team of Special Servicing department has the responsibility of assessing the nature and the expected duration of a client's financial distress, and will determine necessity of providing forbearance measures to that client and the conditions that should apply. The team considers forbearance solutions for clients who do not fully meet their financial obligations to NIBC. Forbearance solutions are also submitted to the Arrears Management Committee for further approval. At 31 December 2020, EUR 118 million is forborne of which EUR 100 million is performing and EUR 18 million non-performing. At 31 December 2019, EUR 29 million was forborne of which EUR 22 million was performing and EUR 7 million non-performing.

Securitisations

NIBC classified all its securitisation exposures at amortised cost, with the exception of synthetics and equity tranches. Synthetics are classified at fair value through profit or loss, while equity tranches are

classified as available for sale (fair value through equity). Impairments for the securitisation exposures only refer to the period after 30 June 2008 and only for the portion that is on accounting classification at amortised cost. The impairment amount takes the carrying value as reference. This carrying value is the market value as at 30 June 2008, adjusted for 'pull-to-par' effects. For the 'first loss' notes, the impairment amount is equal to the difference between the carrying value prior to the impairment and the current market value. For the other tranches, the impairment amount is equal to the difference between the carrying value and the expected cash flows, discounted by the original effective yield, if positive.

Table 20 shows a breakdown of (stand-alone) impairments on securitisations per collateral type. The column labelled *Impaired EAD Securitisation* presents the remaining EAD after the impairment has been taken.

Table 20 Breakdown of impairments (ECL for Stage 3 assets) on securitisation exposure class per collateral type, 31 December 2020

	Total EAD Securitisation after impairment	Impaired EAD Securitisation after impairment	Impairment
Non-Public Investments in securitisations	138	-	-
ABS	1	1	-
CDO/CLO	36	1	-
CMBS	3	-	-
RMBS	59	-	-
TOTAL WESTERN EUROPEAN SECURITISATIONS	**237**	**2**	**-**
NL - RMBS AAA Liquidity portfolio	391	-	-
EU - ABS AAA Liquidity portfolio	208	-	-
TOTAL SECURITISATION EXPOSURE	**836**	**2**	**-**

Sovereign and Institutions

In 2020, NIBC did not take any IFRS 9 Stage 3 impairments on these exposure classes.

EXPECTED LOSS AND REALISED LOSS

NIBC regularly reviews the methodology and assumptions used for estimating both the amount and timing of future cash flows, to reduce any differences between loss estimates (Expected Loss, **EL**) and actual loss (Realised Loss, **RL**) experience.

The EL is a statistical measure that is based on the calculated PD, LGD and EAD, and it represents the average loss that NIBC expects to incur. Table 21 shows the expected losses of the non-defaulted portfolio in basis points in 2020 and 2019 for NIBC's corporate and retail exposure classes. Knowing that expected loss gives a one year forward looking expectation on losses, the EL values corresponding to January 2020 and January 2019 are presented in the table.

Table 21 Expected Loss (EL) in basis points of EAD for corporate and retail exposure classes

1 January 2020	1 January 2019
EL (in bps)	**EL (in bps)**
17	18

The RL is the actual loss that NIBC has experienced over the course of a given year. For the corporate exposure class, realised loss refers to the impairment movements and write-offs that took place in each year. For the retail exposure class, realised losses refer to the actual losses that were incurred in each year. Table 22 shows the realised losses in basis points from December 2020 and December 2019 for NIBC's corporate and retail exposure classes.

Table 22 Realised Loss (RL) in basis points of EAD for corporate and retail exposure classes

31 December 2020	31 December 2019
RL (in bps)	**RL (in bps)**
75	34

It can be noticed that 2020 ended with an increased RL compared to 2019 largerly as a result of the overall market dynamcis (COVID-19). Note that in general, EL and RL figures should be seen in the context over a longer period of time through the cycle.

In 2020, new impairments were mainly taken in Offshore Energy, Fintech & Structured Finance and Leveraged Finance, while other parts of the corporate exposures required fewer impairments. Write-offs of previously impaired exposures were taken for certain exposures in diverse industry sectors and has an impact on the realised loss.

With respect to retail exposures, a decrease in defaults and losses was observed in the last year due to the further improving housing market and economic recovery. In 2020, the amount of losses arising from these defaults further decreased compared to 2019. However, impaiments on Retail exposures have been increased due to Covid payment holidays. The performance of NIBC's securitised mortgage loan portfolio is also good compared to other Dutch RMBS issuers in the market as evidenced by arrears levels and realised loss levels. The relatively low loss levels together with the relatively high seasoning of the portfolio gives us comfort about the credit risk in our mortgage loan portfolio.

Note that expected losses are related to the non-defaulted portfolio (beginning of the year) with a one year forward looking expectation, while realised losses contain movements in impairments for entire portfolio (both non-defaulted and defaulted) at one point in time (end of the year). Hence, these two metrics are not directly comparable to each other.

COUNTERPARTY CREDIT RISK

NIBC defines counterparty credit risk as the credit risk resulting from OTC derivative transactions, where there is none or limited initial investment, such as *interest rate swaps* **(IRS)**, *credit default swaps* **(CDS)** and *foreign exchange* **(FX)** transactions.

NIBC is exposed to counterparty credit risk from derivative transactions both with corporate clients as well as with institutions. For both types of counterparties, counterparty credit risk is measured similarly, being the sum of the positive replacement value and the add-on. The add-on reflects the potential future change in the marked-to-market value during the remaining lifetime of the derivative contract. All derivative transactions are legally covered by *International Swaps and Derivatives Association* **(ISDA)** agreements. Derivative transactions with corporate clients are concluded as part of the relationship with the client. Capital and credit limits for corporate clients are allocated on a one-obligor basis. The credit risk resulting from counterparty credit risk is monitored in combination with other exposures (e.g. loans) to these clients, and in the majority of cases, the security of the loan is also applicable to the derivative exposure.

For nearly all of its financial counterparties, NIBC has mitigated the counterparty credit risk by using a *Credit Support Annex* **(CSA)**. Under this annex, the credit exposures after netting are mitigated by the posting of (cash) collateral. Limits for financial counterparties cover money-market, repo and derivative exposures and are based upon a combination of external ratings, market developments like CDS spreads, and expert judgement. NIBC is active in clearing eligible OTC derivatives in order to mitigate counterparty credit risk and to comply with EMIR-regulation.

In line with market practice, IFRS *credit value adjustments* (**CVA**) and *debt value adjustments* (**DVA**) are incorporated into the derivative valuations to reflect the risk of default of the counterparty as well as the own default risk of NIBC. The adjustments are applied to all OTC derivative contracts, except for those that benefit from a strong collateral agreement where cash collateral is regularly exchanged, mitigating the credit risk.

As of 2014, the European-wide CRR/CRD IV introduces a capital charge for CVA risk for all derivatives excluding those with sovereigns, pension funds and non-financial counterparties. The exemption of derivatives with non-financial counterparties implies limited impact of the introduction of the CVA capital charge on the NIBC's Tier 1 capital ratio.

Table 23 shows the breakdown of EAD, RWA and capital requirement for derivatives at 31 December 2020.

Table 23 Breakdown of EAD, RWA and capital requirement for derivatives, 31 December 2020

in EUR millions	EAD	RWA	Capital requirement
AIRB APPROACH			
- of which corporate	365	168	13
- of which securitisations	13	13	1
STANDARDISED APPROACH			
- of which corporate	3	2	-
- of which institutions	128	17	1
TOTAL DERIVATIVES	**508**	**200**	**16**

Small differences are possible in the table due to rounding

As discussed above, the EAD for derivatives is based on the sum of the positive replacement value (marked-to-market value) and the applicable add-on. Under the AIRB approach, the PD is derived from the CCR of the counterparty and the LGD is set equal to the facility weighted-average LGD. NIBC is using external ratings to assess the creditworthiness of an institution.

Table 24 Gross and net fair value exposure from derivative contracts

in EUR millions	31 December 2020
Gross exposure	494
Netting benefits	(16)
Reduction from collateral	(116)
Net current exposure	**361**

NIBC has a limited number of CDS transactions to protect its exposure in the portfolio. Tables 25 and 26 show the breakdown of all CDS contracts:

Table 25 Breakdown of CDS contracts by exposure class (nominal amounts) in EUR millions

CDS contract exposure class	Sold protection	Bought protection
Sovereign	-	-
Institutions	-	-
Corporate	-	-
Securitisations	-	4
TOTAL	**-**	**4**

Table 26 Breakdown of CDS contracts by name type (nominal amounts)

in EUR millions

CDS contract exposure class	Sold protection	Bought protection
Single name	-	4
Multiple name	-	-
TOTAL	**-**	**4**

INTEREST RATE RISK IN THE BANKING BOOK

NIBC defines interest rate risk in the banking book (IRRBB) as the risk of losses from interest rate sensitive positions in non-trading activities due to movements in interest rates. Interest rate risk is measured both from an economic value perspective and an earnings perspective. The first perspective considers the impact on the market value, while the latter considers the impact on net interest income.

NIBC's banking book consists of:
- Corporate treasury;
- Commercial treasury;
- Corporate banking;
- Retail banking.

The European Benchmark Regulation (BMR) came into effect on 1 January 2018 and has an impact on among others the interest rate benchmarks. In 2020, changes to discount curves for centrally cleared derivatives took place: EONIA was replaced by the European Short Term Rate (€STR) and USD Fed Funds was replaced by the Secured Overnight Financing Rate (SOFR). The transition towards these new rates required adjustments. NIBC's risk management models, interest rate risk hedging and hedge accounting have been adjusted to take into account the changes.

In 2021, existing derivatives agreements, loan- and funding documentation will be adjusted to reflect the transition from Interbank Offered Rates (IBOR) to Risk Free Rates (RFR). Also, new transactions are expected referencing the RFR's, such as SONIA (Sterling Overnight Index Average) and SOFR. The timing of the transition is based on the recommended timelines from the Working Group on Sterling Risk-Free Reference Rates and the Alternative Reference Rates Committee.

NIBC has set up an IBOR transition program to implement the required changes.

RISK APPETITE

The risk appetite for IRRBB from an economic value perspective is measured by the modified duration of equity and equal to 5 (with a tolerance of 7.5), while the risk appetite from an earnings perspective is measured by the impact on 1Y earnings and equal to EUR 18 million (assuming a shift in interest rates of 100 bps).

RISK MONITORING AND MEASUREMENT

From an economic value perspective the impact of an instantaneous shift in interest rates on a static portfolio is considered. Interest BPV and interest VaR measures are calculated on a daily basis and reviewed by the Market Risk department:
- Interest BPV measures the sensitivity of the market value to an instantaneous change of one basis point in each time bucket of the interest rate curve. The BPV as displayed in the tables represents the sensitivity of the market value to a one-basis-point, parallel upward shift of the underlying curve;
- The interest VaR measures the threshold value, which daily marked-to-market losses with a confidence level of 99% will not exceed, based on four years of historical data for daily changes in interest rates. These daily changes are superimposed on the current market rates. The VaR is calculated by means of full valuation to take non-linearity into account.

In measuring BPV and VaR for the Banking book the (credit) spreads have been excluded from cashflows and discounting, in line with EBA guidelines. This change in calculation was gradually implemented during 2019 and finalised in February 2020.

From the earnings perspective changes in interest rates occur both instantaneously and gradually over time. Earnings at Risk (EaR) is calculated by means of the following measure:
- 12 months earnings impact due to a 200 bps gradual upwards or downwards interest rate shock per currency

EaR as displayed in the tables represents the 200 bps gradual upwards measure. The interest rate risk analysis is complemented by a set of scenarios, including scenarios intended as stress testing and vulnerability identification, both based on historical events and on possible future events.

Limits are set on the above measures, both those from the economic value perspective and from an earnings perspective. The limits and limit utilisation are reported to the ALCO once every month. Any major breach of IRRBB limits is reported to the CRO immediately.

Interest rate risk in the Mismatch book

Interest rate risk in the Banking book from an economic value perspective is mainly present in the Mismatch book. NIBC accepts a certain economic value risk exposure in the Mismatch book. We call this our strategic mismatch exposure.

The Mismatch book exclusively contains swaps in EUR and GBP as these are, next to USD, the major currencies in which also lending activities take place. The Mismatch book contained no USD position in 2020. At year-end of 2020 the total notional position is EUR 400 million, with 72% of the mismatch position held in EUR and 28% in GBP. Duration based the relative positions would be 80% in EUR and 20% in GBP.

The Mortgage loan book consists of:
- The White Label portfolio which has a size of EUR 3.2 billion at year-end 2020 with EUR 13 million in Germany;
- The NIBC Direct portfolio, which has a size of EUR 6.8 billion.

The mortgage loan portfolios are accounted on amortised cost and notional hedging is applied to hedge the interest rate risk. The Corporate Treasury book contains mainly the funding activities of NIBC and the corporate loan books. The Liquidity portfolio, Collateral portfolio and Debt Investments portfolio are part of the Banking Book and consist mainly of investments in financial institutions and securitisations.

Tables 27-1 and 27-2 illustrate the interest rate sensitivity (BPV) for EUR, USD and GBP in the Mismatch and remaining Banking book at year-end 2020 and 2019. For other currencies, the interest rate risk is minimal. The Earnings perspective numbers are the result of applying a gradual 200 bps upward shift (resulting in an on average 100 bps upward shift).

Table 27-1 Interest rate statistics Banking Book, 31 December 2020

in EUR thousands	Economic value perspective (BPV)			Earnings perspective (EaR)		
	Mismatch	Other	Total	Mismatch	Other	Total
EUR	(107)	74	(33)	(2,280)	11,004	8,724
USD	-	(4)	(4)	-	935	935
GBP	(26)	(2)	(29)	(756)	(990)	(1,746)
Other	-	(1)	(1)	-	1,146	1,146
TOTAL	**(133)**	**66**	**(67)**	**(3,036)**	**12,094**	**9,058**

Table 27-2 Interest rate statistics Banking Book, 31 December 2019

in EUR thousands	Economic value perspective (BPV)			Earnings perspective (EaR)		
	Mismatch	Other	Total	Mismatch	Other	Total
EUR	(137)	24	(112)	(2,542)	11,577	9,035
USD	-	(5)	(5)	-	554	554
GBP	(39)	(6)	(46)	(944)	(1,105)	(2,049)
Other	-	-	-	-	294	294
TOTAL	**(176)**	**13**	**(163)**	**(3,486)**	**11,320**	**7,834**

From the economic value perspective the impact of a 100 bps (upwards or downwards) shock is presented in table 28.

Table 28 Effect of an interest rate shock on economic value Banking Book

in EUR thousands	31 December 2020		31 December 2019	
Interest rate shock	-100bp	+100bp	-100bp	+100bp
EUR	3,208	(3,276)	10,960	(11,412)
USD	431	(410)	497	(474)
GBP	2,937	(2,790)	4,708	(4,452)
Other	82	(80)	60	(59)
TOTAL	**6,658**	**(6,555)**	**16,226**	**(16,396)**

MARKET RISK

NIBC defines market risk as:

- the risk of losses in the Trading book arising from adverse movements in market rates and;
- the risk of losses in the Banking Book from NIBC's credit spread risk position;
- the risk of losses in both the banking and trading book from adverse movements in currencies with respect to the Euro.

The predominant market risk drivers for NIBC are interest rate risk and credit spread risk.

In Money Markets & Trading, NIBC takes short-term positions in the EUR, GBP and USD yield curves. This book also contains interest rate risk related to derivative transactions of NIBC's clients. Note that due to the divestment of NIBC Markets in the beginning of 2020 this portfolio is not relevant anymore and therefore not included in this overview.

RISK APPETITE

The risk appetite for market risk is moderate. For all market risk types limits are set. Interest rate risk limits are monitored on a daily basis, while credit spread risk is monitored on a weekly basis.

RISK MONITORING AND MEASUREMENT

From an economic value perspective the impact of an instantaneous shift in interest rates on a static portfolio is considered. Interest BPV, credit spread BPV and interest VaR, credit spread VaR and equity VaR measures are calculated on a daily basis and reviewed by the Market Risk department. VaR is calculated using 4 years of historical data and a confidence level of 99%.

The market risk analysis is complemented by a set of scenarios, including scenarios intended as stress testing and vulnerability identification, both based on historical events and on possible future events.

Limits are set on the above measures. The limits and limit utilisation are reported to the ALCO once every month. Any major breach of market risk limits is reported to the CRO immediately.

The capital requirement for market risk is based on internal models for Money Market & Trading. Money Markets & Trading contains plain vanilla interest rate derivatives only. The capital requirement for the overall FX position of the bank is calculated with the standardised method.

CURRENCY RISK

NIBC manages its overall currency position based on the currency positions in the monthly balance sheets. The main exposures in foreign currencies for NIBC are USD and GBP; with smaller exposures in for example JPY and CHF. NIBC uses matched funding and other measures to apply its policy of not taking any currency positions. Any currency position which does show at month end is caused by movements in the fair value of assets or liabilities or interest income in foreign currencies and is hedged by entering into FX spot transactions. The total open foreign currency position, by nominal amount, was EUR 11.9 million at year-end 2020. This currency position is the position prior to hedging, which is always done shortly after month-end. Regulatory capital for currency risk is equal to 0.8 million EUR per year-end 2020.

CAPITAL REQUIREMENT

The RWA and capital requirement for Market risk for both 31 December 2020 and 31 December 2019 are provided in table 29. The RWA throughout 2020 fluctuated between EUR 54 million and EUR 76 million.

Table 29 Breakdown of RWA and capital requirement for market risk

	31 December 2020		31 December 2019	
in EUR millions	RWA	Capital requirement	RWA	Capital requirement
- of which trading portfolio	44	3	73	6
- of which FX	10	1	24	2
TOTAL MARKET RISK	**54**	**4**	**97**	**8**

GOVERNANCE

The objectives of the market risk function are to measure, report and control the market risk of NIBC subject to the Market Risk Manual. The risk management and control function is independent of the trading activities. The market risk position is monitored daily and reported to the ALCO once every month. Any requests for new limits have to be approved by the ALCO. Any major breach of market risk limits is forthwith reported to the CRO and acted upon immediately. Market Risk analyses all overshootings (i.e. occasions, where either the hypothetical or actual P&L exceeds the VaR) in the Trading book and reports them both to the CRO and regulator (DNB) within 5 working days, in accordance with Article 366 point 5 of the CRR.

The risk appetite is set, among others, by the Value-at-Risk (VaR, 99% confidence level, one-day holding period) limits. The Money Market & Trading book exists of plain vanilla interest rate risk positions only. For this book the interest VaR limit was kept constant at EUR 2.25 million during 2020 and equals the 2019 limit.

MEASUREMENT METHODS

NIBC uses multiple risk metrics to capture all aspects of market risk. These include interest basis point value **(BPV)**, credit BPV, interest VaR and credit VaR. These metrics are calculated on a daily basis and are reviewed by the Market Risk department:

- Interest and credit BPV measure the sensitivity of the market value for a change of one basis point in each time bucket of the interest rate and credit spread, respectively. In the valuation and risk management framework of fixed income products, NIBC uses multiple forward curves (o/n, 1M, 3M, 6M, 12M) and differentiates between collateralised (discounted on o/n curve) and non-collateralised (discounted on 3M curve) transactions.
- The interest VaR and credit spread VaR measure the threshold value which daily marked-to-market losses will not exceed with a confidence level of 99%. These VaR measures are based upon four years of historical data with (daily or weekly) changes in respectively interest rates and credit spreads. For Money Markets & Trading, additional VaR scenarios based upon daily historical market data are used both for limit-setting as well as for the calculation of the capital requirement.
- As future market price developments may differ from those that are contained by the four-year history, the risk analysis is complemented by stress scenarios.

Stress testing

In addition to the VaR, NIBC has defined a number of stress tests. These stress tests consist both of historical events as well as potential extreme market conditions. Market risk stress tests are conducted and reported regularly, both on portfolio as well as on a consolidated level.

Below some examples of stress tests are mentioned:

- An instantaneous parallel shift of all interest rates by 200 bps (both upwards and downwards);
- Credit crisis of 2008, where credit and basis risk spreads rose significantly;
- Hypothetical scenario, where interest rates shift by -100 basis points or + 100 basis points;
- Hypothetical scenario, where credit spreads rise significantly.

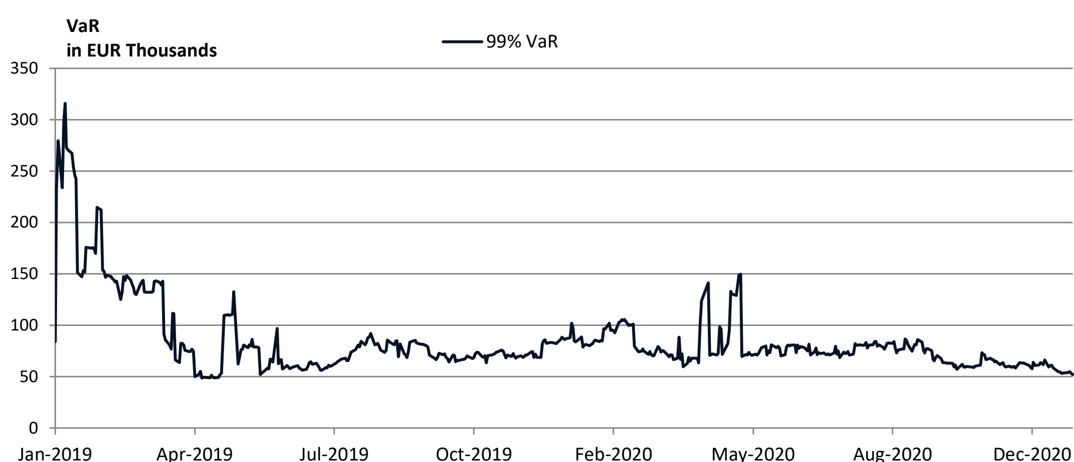
REGULATORY CAPITAL FOR MARKET RISK IN THE TRADING BOOK

Since 2008 NIBC uses the *Internal Model Approach* (**IMA**) for general interest rate risk of the Money Market & Trading book, which is the only risk driver in this book. Articles 362 to 369 of the CRR/CRD IV set all regulatory requirements for the use of Internal Models for the Trading book. NIBC complies in all material aspects with these requirements. The capital requirement for market risk in the Trading book for banks using internal models is based on the combination of the VaR and Stressed VaR (**SVaR**). The Stressed VaR is calculated based on the same methodology as the VaR, but based upon a different historical period with extreme stress in the markets. Currently, 2008 is used as historical period to determine the Stressed VaR.

VaR

By nature, trading positions fluctuate during the year. This is illustrated in graph 3, which shows the development of the VaR for the Money Market & Trading book for the years 2019 and 2020. The Money Market & Trading book consisted solely of interest rate-driven exposures. Activities comprise short-term (up to two years) interest position-taking, money-market and bond futures trading and swap spread position taking.

Graph 3 Development of VaR in the Money Market & Trading book during 2020 and 2019



In the following table key risk statistics of the Money Market & Trading book are included.

Table 30-1 Key risk statistics, Money Market & Trading book

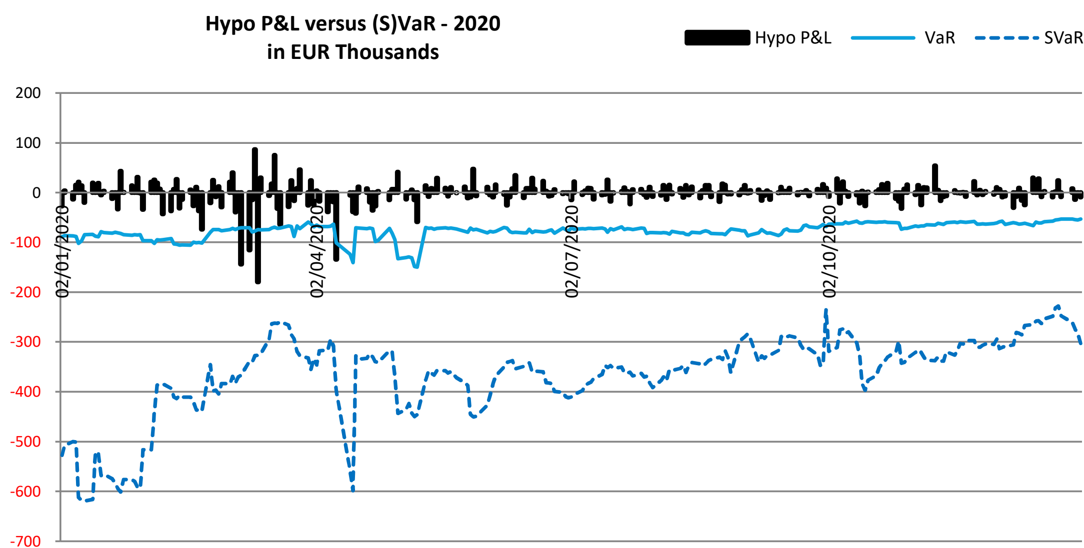
in EUR millions	31 December 2020 Interest rate BPV	31 December 2020 Interest rate VaR	31 December 2019 Interest rate BPV	31 December 2019 Interest rate VaR
Max[1]	(20)	150	44	316
Average	(2)	76	(7)	94
Min[2]	0	52	0	48
YEAR-END	**10**	**52**	**(12)**	**88**

1 Max: value farthest from zero
2 Min: value closest to zero

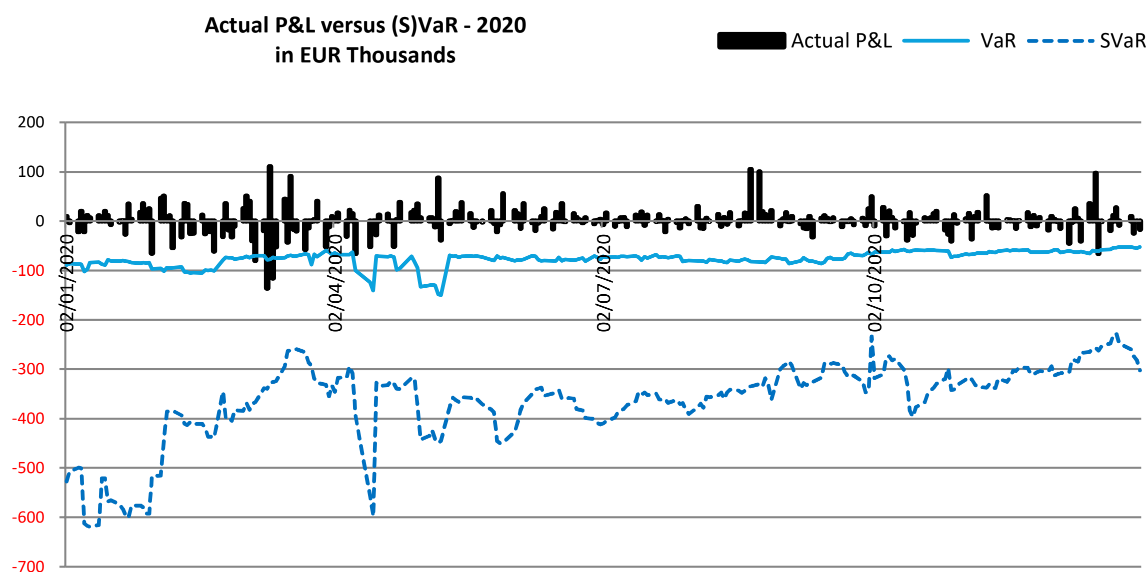
Back testing

Back testing for the Money Market & Trading book is conducted in accordance with the guidelines of the Basel Committee on Banking Supervision, as implemented in Europe by the CRR. The one-day 99% VaR is back tested with both the hypothetical *profit and loss* **(P&L)** and the actual profit and loss. The hypothetical profit and loss is calculated based upon the end-of-day trading position and the changes in market rates from the trading day to the next business day using full revaluation. Graph 4 shows the hypothetical profit and loss and 99% VaR and Graph 5 the actual profit and loss and 99% VaR. On 31 December 2020, in the last 250 business days, there were 4 outliers for hypothetical P&L and 4 outliers for actual P&L.

Graph 4 Back test results of the Money Market & Trading book during 2020 (Hypothetical profit and loss versus (S)VaR)



Graph 5 Back test results of the Money Market &Trading book during 2020 (Actual profit and loss versus (S)VaR)



MARKET RISK OUTSIDE THE TRADING BOOK

Credit spread risk

NIBC's Banking book has credit spread risk mainly in the Liquidity portfolio, Collateral portfolio and the Structured Credits portfolio. Total credit spread sensitivity changed from minus 0.3 million EUR/bp at 31 December 2019 to minus 0.2 million EUR/bp at 31 December 2020.

Foreign exchange risk

As stated previously, it is the policy of NIBC to hedge its currency risk as much as possible. NIBC uses the Standardised Approach for the calculation of regulatory capital for currency risk. At year-end 2020, the capital requirement for FX risk was EUR 0.8 million.

OPERATIONAL RISK

Operational risk is the risk of direct or indirect loss resulting from inadequate or failed processes or systems, from human error, fraud, or external events. Operational risk includes legal risk and compliance risk. NIBC also includes reputational risk, however strategic risks are not included. Reputational risk is defined as the potential risk arising from negative perception on the part of NIBC's stakeholders.

NIBC strives for a 'no surprises' operating environment by, effectively managing operational risk across all its business lines, banking activities and countries in a transparent and consistent way. Operational risk management is embedded in day-to-day processes. Every NIBC business unit and international office has an operational risk management 'Champion'. These employees assess their department's activities for potential operational risks, monitor the control mechanisms to mitigate, avoid, transfer or accept these risks and coordinate ways of resolving loss-making events. They promote awareness for operational risks within their departments.

Regulators and society are increasingly interested in operational risk factors and what banks do to prevent any wrongdoing. Increased attention is placed on Client Due Diligence (CDD), Know Your Customer (KYC), *Anti-Money Laundering* (**AML**) and Counter Terrorist Financing (CTF) measures.

The central Operational Risk Management (ORM) function identifies, monitors, controls and reports on operational risk at group level, develops policies and processes and provides methodology and tools. The tools enable an assessment whether the operational risk profile of the bank fits within the operational risk appetite. They provide an integrated view of the operational risk and control self-assessments **(RCSA)** performed bottom-up by all BUs and countries, action planning, and event and loss registration and support the operational risk management process, including planning mitigation measures. Furthermore, the department also co-ordinates the development of periodic, forward-looking scenario analysis (hypothetical external or internal scenarios ensuring that a plan exists in case these events occur) and actively supports corporate social responsibility, business continuity management and information security professionals.

In 2020, NIBC continued enhancing its forward-looking, proactive attitude and its structured approach to managing operational risk across the organization. This also includes the analysis of new products and services that NIBC plans to launch for its customers, as well as the ongoing review of existing products and services. A central element in the New Product Approval and Review Process **(NPARP)** is the client's interest; i.e. determining how the product is suitable for its clients and how NIBC will ensure it can offer the product to its clients in a controlled, responsible and sustainable manner in the markets where NIBC is active. Furthermore, the NPARP assesses the operational capacity of all internal stakeholders that need to cooperate for launching an efficient and effective product. The NPARP includes a mandatory and risk-based product review at a predefined period after launch. In addition to the NPARP, NIBC has implemented a Significant Change Approval and Review Process **(SCARP)**. This process is used to assess the impact of material adjustments in internal processes. These adjustments are reviewed for impact on operational risk.

ORM's information security professionals review outsourcing initiatives, in order to ensure material outsourcings meet regulatory requirements. They also raise awareness on a continuous basis in order to ensure staff remains vigilant on the increasing cyber risks. Business Continuity Management, as well as Crisis Management is coordinated by operational risk managers in close cooperation with IT and the Managing Board. The Information Security function is closely aligned with IT in order to manage NIBC's identity and access management framework and the bank's role model.

Operational risk in all its facets - including compliance and regulation, legal risk, dealing with integrity, change management and technology risk, reputation and conduct risk - is a key part of a bank's overall risk management practice. Doing business always means properly understanding and managing risks. As such, NIBC's risk appetite framework also includes specific risk appetite statements for operational risk, as well as other non-financial risks, such as legal, data privacy, information security/IT and compliance/conduct risks.

As part of the yearly cycle, NIBC uses the operational risk management process also as a basis for the in control and responsibility statement of the Managing Board as included in NIBC's annual report. Given its size and relatively limited complexity, NIBC applies the Standardized Approach to calculate and determine the required regulatory capital that applies to operational risk. The capital requirement under the Standardized Approach is the sum of the requirement per individual business line. Within each business line, gross income is the indicator that serves as a proxy for the scale of business operations and as such, the likely scale of operational risk exposure within each of these business lines.

The average gross income is multiplied by a CRR/CRD IV regulated factor assigned to that business line. This factor serves as a proxy for the industry-wide relationship between the operational risk loss experience for a given business line and the aggregate level of gross income for that business line.

The determination of the regulatory capital requirement for operational risk is performed annually by NIBC's Finance department. Table 31 shows the amount of RWA and the capital requirement for operational risk as at year-end 2020 and 2019.

The operational risk calculation includes data from the last three twelve-monthly observations to determine the regulatory capital charge and is restated yearly after the year-end financial closing is complete. Therefore the operational risk calculation at year-end 2020 is based on the years 2018 to 2020.

In 2020, the capital requirements for operational risk were lower than those of 2019 due to the decrease in gross income of the year 2020 added to the calculation, resulting in EUR 7 million decrease of capital requirement.

Table 31 Breakdown of RWA and capital requirement for operational risk

	31 December 2020		31 December 2019	
in EUR millions	**RWA**	**Capital requirement**	RWA	Capital requirement
Standardised approach	926	74	1,008	81
TOTAL OPERATIONAL RISK	**926**	**74**	**1,008**	**81**

Originate-to-Manage (OTM) mortgage loans

Together with our institutional partners, we have successfully grown the OTM mortgage loan proposition to EUR 7.5 billion as per year-end 2020. For OTM mortgage loans and own book mortgage loans, the processes, services and underwriting criteria are uniform. The loans are originated under the label of NIBC Direct or Lot Hypotheken. NIBC is lender of record and therefore the consumer client has a contractual relationship with NIBC. The institutional investors

bear the credit risk of these OTM mortgage loans, while other risks, such as operational risks, remain with NIBC.

LIQUIDITY RISK

NIBC defines liquidity risk as the inability of the company to fund its assets and meet its obligations as they become due at an acceptable cost.

The composition of NIBC's funding mix is actively managed and benefits from a relatively long average tenor of the wholesale funding portfolio. Active liquidity management and selective use of the various funding instruments have resulted in a stable funding spread, even though financial markets have seen volatility in the spread levels for financial institutions. The funding spread above base was 0.76% at the end of 2020.

In the wholesale funding market NIBC raised approximately EUR 0.5 billion in 2020:
- In June 2020, NIBC's senior non-preferred note with maturity 9 April 2024 was tapped by EUR 200m
- NIBC raised an additional EUR 276 million in privately place funding in different formats and currencies at various maturities;

In addition, NIBC also rolled over EUR 250 million of TLTRO in 2020. The volume of retail savings increased by more than 3% in 2020 to EUR 9.8 billion. The retail funding mix between on-demand and term deposits has been managed towards more on-demand savings (68% of the retail savings consisted of on demand deposits, compared to 61% at the end of 2019). Furthermore, the institutional deposits under the German ESF guarantee scheme decreased to EUR 0.3 billion at the end of 2020.

LIQUIDITY FRAMEWORK

Table 32 Key Liquidity Indicators, 31 December 2020

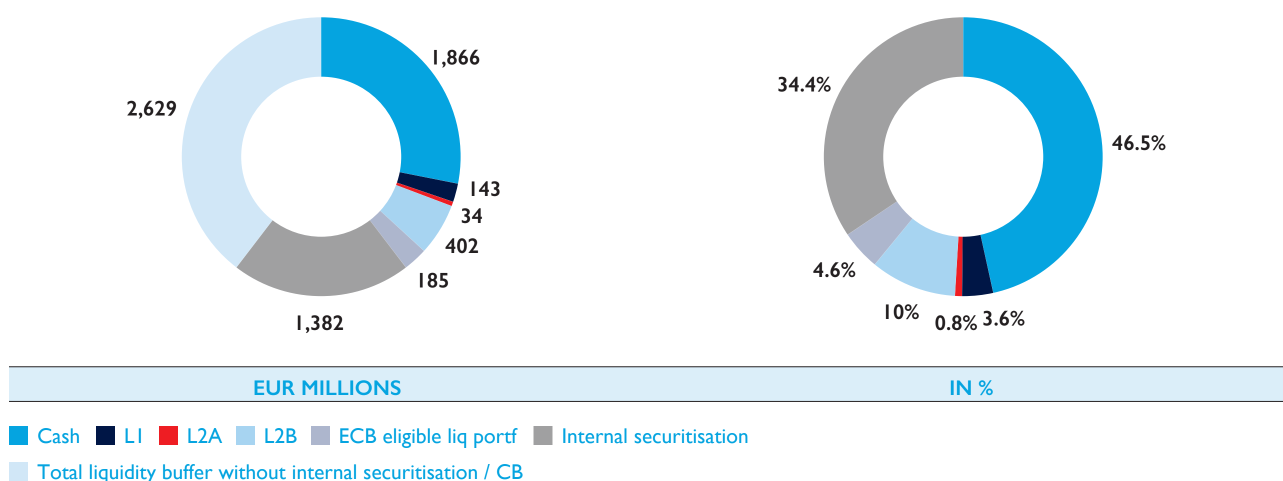
In %	
LCR	221%
NSFR	126%
Loan-to-Deposit	150%
Asset Encumbrance	26%
In EUR millions	
Liquidity Buffer	4,011

Based on the maturity profiles of existing assets and liabilities as well as on projections prepared by our business units and reviewed by the Asset and Liability Management department, several liquidity forecasts and stress tests are prepared and presented to the ALCO every two weeks. These reports form the basis of NIBC's Liquidity Risk Management. The Base Case Liquidity forecast has a 5 year horizon and takes into consideration the expected cash flows (such as maturing loans and funding, production of new assets, liquidity actions, and cash flows due to the mark-to-market of derivatives) of NIBC's assets and liabilities.

Furthermore, NIBC monitors the development of its ECB eligible assets, which consist of treasury assets and internal securitisations. Additionally, the Basel III Liquidity Ratios, the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR), are both monitored within NIBC's Liquidity Management Framework and are subject to regulatory minimum levels.

Also part of the Liquidity Management Framework are periodical analyses of liquidity gaps, the funding mix, the asset encumbrance ratio, and the loan-to-deposit ratio. For the end of 2020 a selection of the main Liquidity Ratios is presented below as well as a split of the Liquidity Buffer:

Graph 6 Liquidity Buffer Composition, 31 December 2020



STRESS SCENARIOS

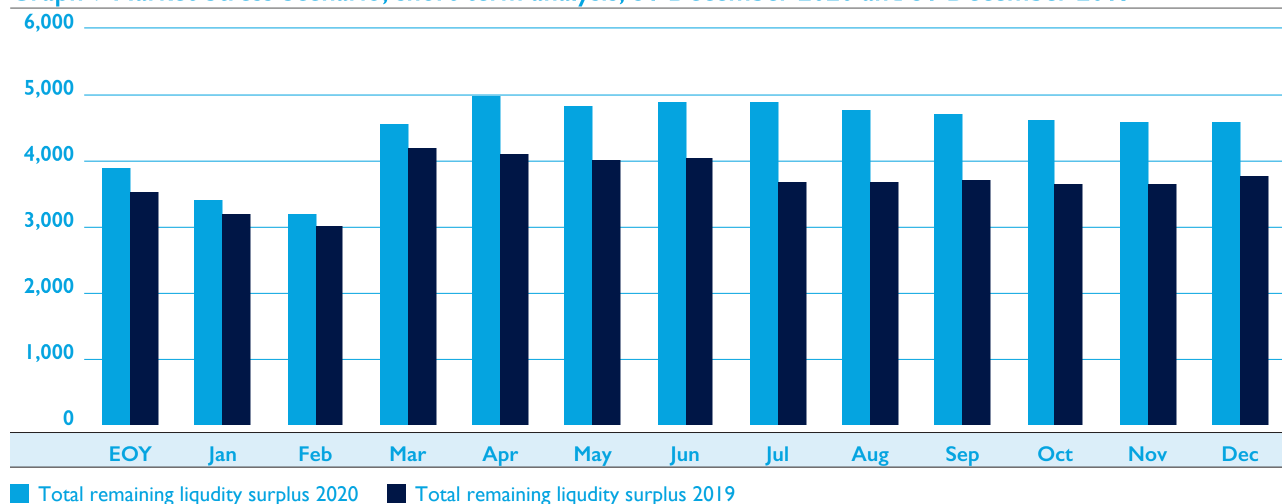
Our liquidity needs are carefully considered in the following stress scenarios:

- A 12-month market-wide liquidity crisis, characterised by an economic downturn with impact on both financial institutions (their willingness to lend and to purchase assets from each other) and non-financial institutions (leading to lower loan prepayments and larger/faster drawdowns of committed credit facilities). Such a market situation is assumed to result in no access to wholesale funding and worsening market variables (rating migration, additional haircuts on market value of collateral, MtM of derivatives cash outflow, slowing prepayments, etc.);
- A 12-month institution-specific stress test, caused by a material event that calls into question the reputation and/or credit quality of the institution, leading to a subsequent run on the bank. Furthermore, a significant credit rating downgrade applies. This is assumed to result in a significant outflow of retail savings and no access to ECB-financing in the first three months in addition to having no access to wholesale funding;
- A 12-month combined stress test that combines elements from the aforementioned market-wide and institution-specific liquidity stress tests. Essentially it captures a prolonged market stress with a relatively short period of a severe NIBC specific stress. Due to the severe character of the stress, the minimum survival period of this combined stress test equals eight months, assuming earlier management intervention. Under this scenario ECB lending is assumed to be available whereas asset market liquidity is worsened due to fire sales of assets and increased credit spreads.

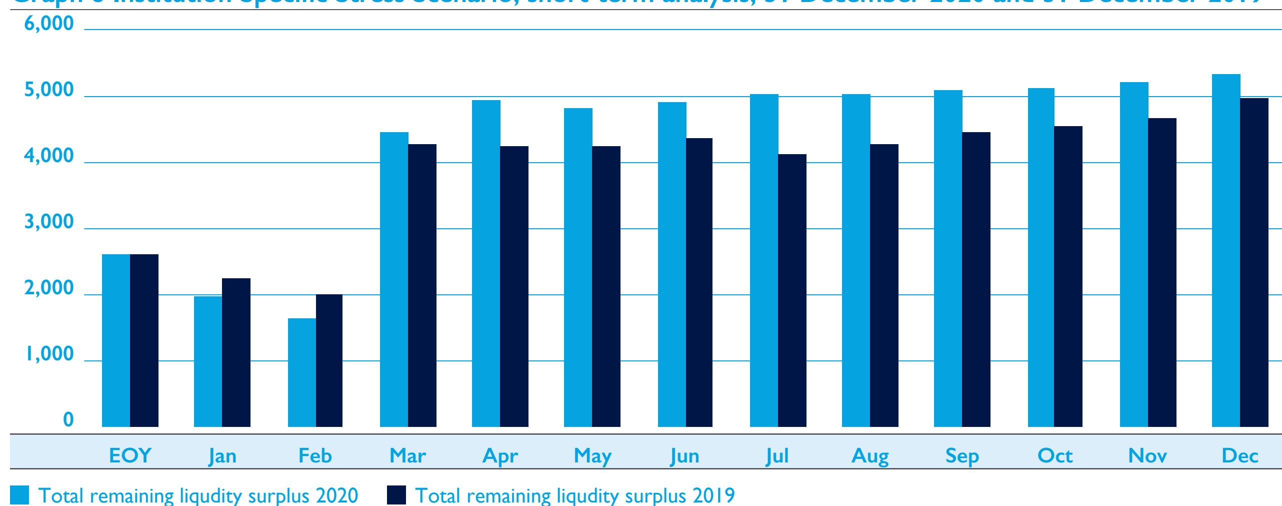
The liquidity stress tests assume that all of the NIBC's contractual obligations are met and take into consideration varying levels of access to funding markets. The outcomes of the liquidity stress tests are at a comfortable positive level and remain positive for a prolonged period, under the assumptions that normal measures are carried out. The survival period and the sufficiency of the liquidity buffers are monitored on a bi-weekly basis.

Graphs 7 to 9 show the outcomes of the 12-month market-wide stress test, the 12-month institution-specific stress test and the 12-month combined stress tests. Dependent on the stress test, the projected liquidity surplus consists of the cash position, the liquidity portfolio and other ECB capacity and is adjusted monthly for maturing assets and liabilities and the outflows as prescribed by the liquidity stress tests. For each of the three stress tests, the outcomes remain positive throughout its horizon. As displayed in the graphs below, the outcomes at 31 December 2020 are at comfortably high levels. The stress test figures are more or less in line with the last year.

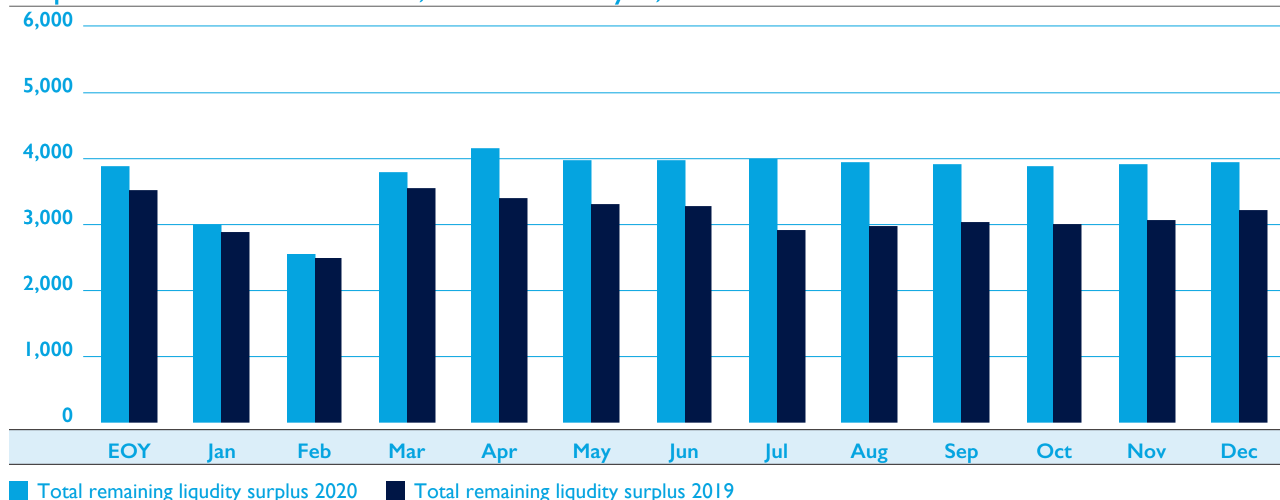
Graph 7 Market Stress Scenario, short-term analysis, 31 December 2020 and 31 December 2019



Graph 8 Institution Specific Stress Scenario, short-term analysis, 31 December 2020 and 31 December 2019



Graph 9 Combined Stress Scenario, short-term analysis, 31 December 2020 and 31 December 2019

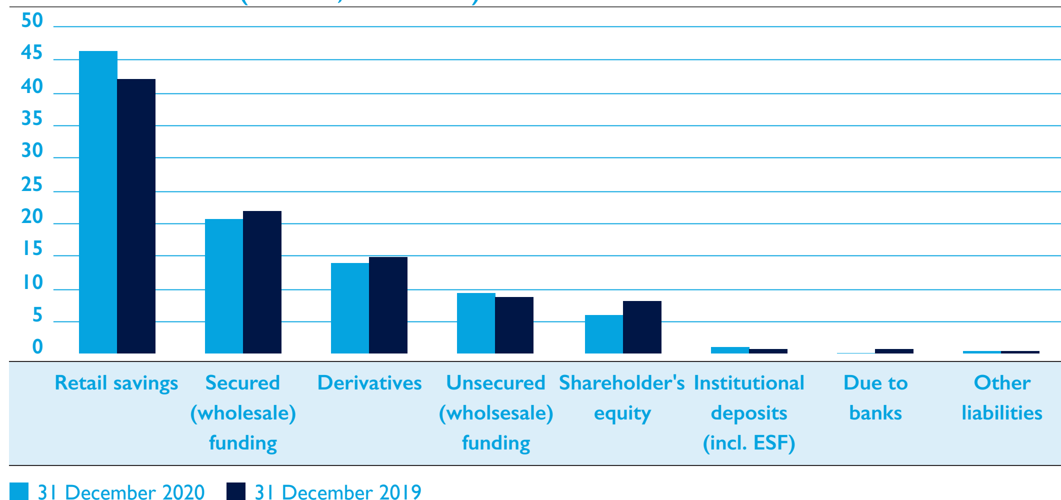


In addition to the 12-month liquidity stress analysis described above, NIBC also conducts liquidity analyses over longer periods once every two weeks according to a base scenario. These analyses assume the expected development of our loan portfolio in combination with new funding initiatives. The outcome a five year liquidity analysis shows again a positive buffer throughout the period.

FUNDING

NIBC further enhanced its funding diversification by the initiatives mentioned earlier. An overview of the total liabilities portfolio at 31 December 2020 and 31 December 2019 is shown in graph 10. This liabilities overview is based on total balance sheet amounts.

Graph 10 Breakdown of Total Liabilities in %, 31 December 2020 (EUR 21,125 million) and 31 December 2019 (EUR 22,375 million)



SECURITISATION EXPOSURES

OVERVIEW AND STRATEGY

NIBC as originator

NIBC has been active in the securitisation and structuring market for over twenty years. The types of collateral for these securitisations include residential mortgage loans, commercial mortgage loans and leveraged loans. NIBC's *Dutch Residential Mortgage Backed Securities* (**RMBS**) programme was established in 1997. NIBC's residential mortgage loan programme was later extended with the Sound and Essence issues. In 2003, NIBC started its North Westerly *Collateralised Loan Obligations* **(CLO)** programme. In 2004, NIBC became the collateral manager of its first US *Collateralised Debt Obligations* **(CDO)** transaction. In 2006, NIBC launched its introductory *Commercial Mortgage-Backed Securities* **(CMBS)** transaction under its MESDAG programme. In addition, NIBC has acted as arranger and lead manager on a number of third-party transactions. Table 33 gives an overview of the cumulative nominal amounts at 31 December 2020 of which NIBC was originator:

Table 33 Cumulative nominal amounts of NIBC's securitisations

in EUR millions	Total
UNDERLYING ASSET	
Residential mortgage loans	356
Commercial mortgages	-
CLO	3,916
TOTAL	**4,272**

At 31 December 2020, there were no synthetic originated securitisations in NIBC's Securitisations portfolio.

Objectives

NIBC's objectives in relation to securitisation activities are:

- Transfer of credit risk;
- Obtain funding, reduce funding cost and diversify funding sources;
- Earn management fees on the assets under management;
- Support selected clients in their funding needs;
- Offering attractive yields and quality investments for investors;
- Earn fees on ancillary roles in securitisations.

Roles and involvement

NIBC has fulfilled the following roles in the securitisation process:

- Arranger (structuring) of both third-party and proprietary securitisation transactions;
- Underwriter in securitisation transactions involving both third-party and proprietary transactions;
- Collateral manager for a number of managed CDO/CLO transactions;
- Liquidity facility provider for a number of residential and commercial mortgage loan securitisations;
- Calculation agent and paying agent for number of residential mortgage loan securitisations;
- Company administrator for a number of securitisations; and Investor in securitisations.

Securitisation activity in 2020

In 2020, NIBC called North Westerly IV. New transaction in 2020 is North Westerly VI.

Names of the External Credit Assessment Institutions used for securitisations

NIBC uses Moody's and Standard & Poor's to rate its securitisations.

Accounting policy

NIBC consolidates securitisation *Special Purpose Entities* **(SPE)** in its financial statements when:

- It will obtain the majority of the benefits of the activities of an SPE;
- It retains the majority of the residual ownership risks related to the assets in order to obtain the benefits from its activities;
- It has decision-making powers to obtain the majority of the benefits;
- The activities of the SPE are being conducted on NIBC's behalf according to NIBC's specific business needs so that it obtains the benefits from the SPE operations. Such an evaluation is necessarily subjective.

NIBC does not consolidate SPEs that it does not control.

The Annual Report contains more detailed information on the accounting policies used by NIBC.

NIBC as investor

Next to its role as originator of securitised products, NIBC has also been active as an investor in securitised products. Since the end of 2009, NIBC has a Liquidity Investments portfolio. This portfolio was set up to invest part of NIBC's excess liquidity in the securitisation market. Investments are limited to predominantly AAA-rated RMBS/ABS transactions backed by Dutch residential mortgage loan collateral or ABS transactions, and are eligible to be pledged as collateral with the *European Central Bank* **(ECB).**

In addition to this restrictive mandate, each investment is pre-approved by the Financial Markets Credit Risk department.

SECURITISATION EXPOSURES

Under this heading, several overviews regarding the securitisation exposures (retained and purchased) of NIBC are presented, detailing underlying collateral type and credit quality. The figures in this section are different from those in the risk notes of the Annual Report, because the IFRS rules for consolidating securitisation exposures differ from Pillar 3 classifications under the securitisation framework. Table 34 provides an overview of NIBC's exposures in securitisations at 31 December 2020. We note that a small portion of the Fintech & Structured Finance receivables financing transations are technically classified as securitisations and reported accordingly.

Table 34 EAD of Securitisations portfolio at NIBC, 31 December 2020

in EUR millions	Investor	Originator	Total
Non-Public Investments in Securitisations	138	-	138
ABS	1	-	1
CDO/CLO	1	35	36
CMBS	3	-	3
RMBS	30	29	59
TOTAL WESTERN EUROPEAN SECURITISATIONS	**172**	**65**	**237**
NL - RMBS AAA Liquidity portfolio	391	-	391
EU - ABS AAA Liquidity portfolio	208	-	208
TOTAL SECURITISATION EXPOSURE	**771**	**65**	**836**

Small differences are possible in the table due to rounding

Credit quality of Securitisations portfolio

The credit quality is based on an internal composite, following CRR/CRD IV guidelines, including external ratings from Standard & Poor's and Moody's. The non-rated portion of the portfolio relates to first-loss positions in both NIBC's own securitisations and third-party securitisations, which have been marked down to between 1% and 10% of their nominal value at 31 December 2020 or are not rated by Standard & Poor's or Moody's.

Table 35 Rating distribution of Securitisations portfolio (investor), 31 December 2020

in EUR millions	AAA	AA	A	BBB	BB	Below BB	NR	Total
Non-Public Investments in Securitisations	-	-	-	23	59	57	-	138
ABS	-	-	-	-	-	1	-	1
CDO/CLO	-	-	-	-	-	-	1	1
CMBS	-	-	-	-	-	3	-	3
RMBS	-	-	18	9	-	3	-	30
TOTAL WESTERN EUROPEAN SECURITISATIONS (INVESTOR)	**-**	**-**	**18**	**32**	**59**	**63**	**1**	**172**
NL - RMBS AAA Liquidity portfolio	322	-	-	-	-	-	70	391
EU - ABS AAA Liquidity portfolio	183	-	-	-	-	-	25	208
TOTAL SECURITISATION EXPOSURE (INVESTOR)	**504**	**-**	**18**	**32**	**59**	**63**	**96**	**771**

Small differences are possible in the table due to rounding

Table 36 Rating distribution of retained positions in the Securitisations portfolio (originator), 31 December 2020

in EUR millions	AAA	AA	A	BBB	BB	Below BB	NR	Total
ABS	-	-	-	-	-	-	-	-
CDO/CLO	13	-	2	1	1	2	16	35
CMBS	-	-	-	-	-	-	-	-
RMBS	-	18	11	-	-	-	-	29
TOTAL SECURITISATION EXPOSURE (ORIGINATOR)	**13**	**18**	**13**	**1**	**1**	**2**	**16**	**64**

Small differences are possible in the table due to rounding. One asset has a split rating AAA / A.

INTERNAL CAPITAL ADEQUACY ASSESSMENT PROCESS

The *Internal Capital Adequacy Assessment Process* **(ICAAP)** of each institution refers to the process in which risks and related capital are internally measured, allocated and managed, and by which the adequacy of available capital is assessed.

The internal capital requirements of NIBC under the ICAAP are based upon an internal Economic Capital framework. In addition to this, NIBC has set up an extensive framework of historical and theoretical stress scenarios that analyse the impact of severe shocks in the credit risk and market risk environment. The outcomes of these stress scenarios are compared to the available capital and to the Economic Capital usage, on a semi-annual basis.

ECONOMIC CAPITAL

Economic Capital (**EC**) is the amount of capital that NIBC allocates as a buffer against potential losses from business activities, based upon its internal assessment of risks. EC is based on the CRR/CRD IV regulatory capital, with the addition of EC for risks not captured by the regulatory method. Business profitability is measured relative to the risk taken using the ***Risk-Adjusted Return on Capital*** (**RAROC**), a risk-weighted measure of return. EC and RAROC are key tools used in supporting the capital allocation process according to which shareholders' equity is allocated as efficiently as possible based on expectations of both risk and return. The usage of EC is steered in the ALCO. The ALCO can adjust the maximum EC level allocated to and within each business, taking into account business expectations and the desired risk profile.

EC methodology

The EC calculation is based on a one-year risk horizon, using a 99.9% confidence level. This confidence level means that there is a probability of 0.1% that losses in a period of one year will be larger than the allocated EC, based on a constant portfolio and no management intervention.

NIBC uses a bank-wide EC framework and fully attributes all EC charges to portfolios.

NIBC uses regulatory capital for all Pillar I risks, whereas internal models are used for Pillar II risks.

Pillar I risks

Pillar I risks include credit risk, market risk (including CVA) and operational risk. As stated above the EC for Pillar 1 risks follows the regulatory capital treatment:

- The Credit Risk EC is mostly based upon the AIRB formula, using internal estimates of PD, LGD, EAD and M, whereas for a number of exposures the Standardised Approach is used;
- The Market risk EC includes regulatory capital for the Trading Book, FX risk and CVA;
- The EC for Operational risk is based upon the Standardised Approach for Regulatory Capital.

Pillar II risks

As part of the risk identification process, NIBC has assessed all risks to which it is exposed in addition to the Pillar 1 risks. These include both financial and non-financial risks. For the financial risks, NIBC uses internally developed models. Examples of Pillar 2 financial risks are Interest Rate Risk in the Banking Book (IRRBB), concentration risk both single name and sector concentration and market risk for fair value positions. The largest part of the EC for non-financial risks is based on stylized scenarios and business projections. Non-financial risks are business and reputational risk, model risk and country risk.

Diversification

NIBC does not recognise any diversification between risk types. Within certain risk types diversification is inherently included, like market risk, IRRBB and concentration risk.

Table 37 shows the EC usage per risk type for NIBC Holding.

Table 37 EC usage per risk type

in EUR millions	31 December 2020
Credit Risk	558
Market Risk (including CVA)	7
Operational Risk	74
Total Pillar I Risks	**639**
Other financial risks	367
Other non-financial risks	88
Total Pillar II Risks	**455**
TOTAL ECONOMIC CAPITAL	**1,094**

STRESS SCENARIOS

NIBC performs internal Stress Testing as part of the overall Pillar 2 framework for CRR/CRD IV. On a semi-annual basis, stress scenario outcomes estimated by NIBC's Stress Testing Framework are presented to the RMC and RPCC, providing senior management and the Supervisory Board members with information that can be taken into account for strategic decision making. Moreover, outcomes are directly linked to NIBC's Risk Appetite Framework, based on which management steers the bank's aggregated risks. The Stress Testing Framework accounts for the impact of a set of historical and hypothetical stress scenarios on the profit and loss and capital adequacy of NIBC.

CAPITAL BASE COMPONENTS

The capital base, also referred to as regulatory capital, is calculated in accordance with the CRR/CRD IV. The available regulatory capital is based on capital contributed by subsidiaries covered by prudential consolidation accounts, which should be available, without restrictions or time constraints, to cover risks and absorb potential losses. All amounts are included net of tax charges.

The available regulatory own funds at NIBC are classified under three main categories, being Common Equity Tier 1 capital, Tier 1 capital and Tier 2 capital. The two main components in the regulatory own funds are core equity and subordinated debt. The key terms and conditions of each of these categories are summarised below

The capital ratio is calculated by dividing the regulatory capital by the risk weighted assets (**RWA**).

COMMON EQUITY TIER I CAPITAL

Common Equity Tier 1 capital

Common Equity Tier 1 capital consists of common share capital including share premium accounts, retained earnings, accumulated other comprehensive income, adjusted by deduction of repurchased own shares and other eligible items.

Deduction from Common Equity Tier I capital

Cash flow hedge reserve

The amount of the cash flow hedge reserve that relates to the hedging of items that are not fair valued on the balance sheet is derecognised in the calculation of Common Equity Tier 1. This means that positive amounts are deducted.

Intangible assets (goodwill)

The deducted intangible assets contain goodwill.

Funding revaluation

Unrealized gains and losses that have resulted from changes in the fair value of liabilities that are due to changes in NIBC's own credit risk.

Deferred tax assets

Deferred tax assets are deducted from the Common Equity Tier 1 capital as far as they rely on future profitability

Securitisation exposures

NIBC has purchased subordinated bonds issued by various securitisation entities. According to CRR/CRD IV the subordinated bonds are deducted fully from the Common Equity Tier 1 capital.

AIRB provision excess of expected loss (EL)

An adjustment is made for the difference between EL and provisions for the related exposures in the regulatory own funds. The negative difference (when EL amount is larger than the provision amount) is included in the regulatory own funds as shortfall. According to CRR/CRD IV the shortfall amount shall be deducted fully from the Common Equity Tier 1 capital.

TIER I CAPITAL

Tier I capital is composed of Common Equity Tier I capital and additional Tier I capital instruments after deduction of eligible items.

Additional Tier I capital

Additional Tier I capital instruments are deeply subordinated debt instruments, senior only to Shareholders' Equity. These instruments must meet strict rules predefined by the CRR/CRD IV.

Deduction from Tier I capital

Transitional Recognition in Consolidated own funds:

The recognition in consolidated own funds refers to the treatment of capital issued by subsidiaries to third parties. Capital instruments issued by consolidated subsidiaries and held by third parties may no longer be fully recognised towards capital at group level under the CRR but only to the extent used by the subsidiary to cover the minimum capital requirements, including capital buffers. The partial de-recognition of capital issued to third parties by subsidiaries applies to all fully consolidated subsidiaries, including wholly-owned and partly owned. The partial de-recognition will affect the Additional Tier I and Tier 2 provided to third parties by all subsidiaries.

TIER 2 CAPITAL

The Tier 2 capital is composed of Tier 2 instruments. The amount possible to include in the Tier 2 capital related to dated Tier 2 capital instruments is reduced if the remaining maturity is less than five years. The outstanding nominal amount is calculated based on the number of the remaining calendar days of the contractual maturity of the instrument divided by the five years period in front of contractual maturity

Revaluation reserve

Under CRR/CRD IV revaluation reserve is part of OCI.

Deductions from Tier 2 capital

Transitional Recognition in Consolidated own funds:

The recognition in consolidated own funds refers to the treatment of capital issued of subsidiaries to third parties. Capital instruments issued by consolidated subsidiaries and held by third parties may no longer be fully recognised towards capital at group level under the CRR but only to the extent used by the subsidiary to cover the minimum capital requirements, including capital buffers. The partial de-recognition of capital issued to third parties by subsidiaries applies to all fully consolidated subsidiaries, including wholly-owned and partly owned. The partial de-recognition will affect the Additional Tier I and Tier 2 provided to third parties by all subsidiaries.

A summary of items included in the regulatory capital is as follows:

Table 38 Reconciliation of shareholders' equity to regulatory capital of NIBC Holding N.V.

in EUR millions	31 December 2020	31 December 2019
TOTAL SHAREHOLDER'S EQUITY PER ACCOUNTING BALANCE SHEET	**1,768**	**1,724**
- Called-up share capital	3	3
- Other reserves & OCI	1,405	1,407
- Retained earnings	360	281
- Profit included in the CET1 capital	-	33
Regulatory adjustments to accounting basis & Prudential Filters	(181)	(208)
- Prudent additional value adjustments	(2)	(2)
- Cash flow hedge reserve and other reserves	(13)	(17)
- Intangible assets (goodwill)	(2)	(7)
- Funding revaluation	(88)	(86)
- Deferred tax assets	(60)	(53)
- Securitisation exposures	(17)	(33)
- AIRB provision excess of expected loss (EL)	-	(10)
- Regulatory adjustments relating to unrealised gains and losses pursuant to articles 467 and 468 CCR	-	-
COMMON EQUITY TIER 1 CAPITAL	**1,586**	**1,516**
Additional Tier 1 Capital	114	137
- AIRB provision excess of expected loss (EL)		-
- Directly issued capital instruments subject to phase out from additional Tier 1	255	239
- Transitional recognition in consolidated own funds	(141)	(102)
TIER 1 CAPITAL	**1,700**	**1,653**
Additional Tier II Capital	128	163
- Subordinated loans	178	278
- Revaluation reserve		-
- Securitisation exposures		-
- AIRB provision excess of expected loass (EL)	22	-
- Transitional recognition in consolidated own funds	(72)	(115)
TOTAL REGULATORY CAPITAL	**1,828**	**1,816**

To align with regulatory treatment of (interim) profits, NIBC has adjusted the reported solvency ratios with effect from 2019. They continue to be based on the transitional implementation of CRR, but no longer include (interim) profits for which the company has not yet received approval to add to eligible capital. Profits are added to regulatory capital after attribution to retained earnings or after NIBC has received the required approval to add (interim) results to regulatory capital. As from 2019, the reported ratios have been adjusted accordingly.

Changes in Common Equity Tier 1

During 2020 the CET 1 capital including the eligible result increased from EUR 1.516 million at 31 December 2019 to EUR 1.586 million at the end of 2020. The increase of EUR 70 million is

mainly driven by the net profit of H2 2019 of EUR 47 million that was added to the CET 1 capital and a periodic recalculation of the Deferred Tax Assets which resulted in an increase of EUR 35 million CET 1 capital.

Changes in Tier 1 and Tier 2 capital

Legacy instruments

In October 2020, the European Banking Authority (EBA) issued an Opinion on prudential treatment of legacy instruments, aimed at providing clarity on the appropriate prudential treatment of such instruments to ensure a high quality of capital for EU institutions and a consistent application of rules and practices across the Union. NIBC has performed an additional review of the treatment of its outstanding legacy Tier 1 instruments. The review determined that the instruments continue to be relevant for the transitional capital ratios in 2020 and 2021 under the grandfathering arrangements for legacy Tier 1 instruments as prescribed by Art 484 (4) and 486 (3) of the CRR. The review has also led to application of the Tier 2 grandfathering limit to the remainder of the legacy Tier 1 instruments, as prescribed by Art 484 (5) and 486 (4), reducing the transitional Tier 2 capital.

These adjustments have led to a decrease in (transitional) total capital as of 31 December 2020, as a total position of EUR 68 million is no longer included. The effect of the adjustment is mitigated by the minority interest adjustment and has an overall negative impact of 0.1% on the total capital ratio (from 23.0% to 22.9%).

For further information on the capital ratio, we refer to the Annual Report 2020.

CAPITAL ADEQUACY

The capital adequacy of NIBC is managed at NIBC Holding level.

The principal ratios for reviewing the capital adequacy of NIBC are the Common EquityTier 1 ratio and the Tier 1 ratio. These ratios, which were implemented by the *Bank for International Settlements* (**BIS**), are intended to promote comparability between financial institutions. They are based on the CRR/CRD IV legislation.

NIBC monitors balance sheet developments on a continuous basis and evaluates the effects on capital ratios, including comparison between the expected ratios and the actual ratios. These ratios indicate capital adequacy to mitigate on-balance credit risks, including off-balance sheet commitments, market risks, operational risks and other risk positions expressed as risk-weighted items in order to reflect their relative risk.

CAPITAL RATIOS OF NIBC HOLDING

The Common Equity Tier-1 ratio is defined as Common Equity Tier-1 capital divided by the total RWA.

The Tier-1 ratio is defined as Tier-1 capital divided by the total RWA.

The Total Capital ratio is defined as Total Capital (which is the sum of Tier-1 capital and Tier-2 capital) divided by RWA.

NIBC Holding's fully loaded Common Equity Tier-1 capital ratio was 19.9% at end-2020. This is a healthy position that also implies that NIBC Holding can fulfil the CRR/CRD IV requirements when fully implemented as of December 31, 2020.

Basel IV

An agreement was reached on the finalisation of the Basel III reforms (Basel IV) in December 2017. In March 2020 the Basel Committee on Banking Supervision announced that it will delay the implementation of Basel IV and its accompanying transitional arrangement by one year to allow banks to focus on the COVID-19 pandemic. The standards will have to be fully implemented by January 2028.

While certain elements still require more clarification, based on our current assessment and interpretation of the Basel IV Standards, we expect the impact to be in a range of 15%–25% of RWA by 2028, compared to the RWA as determined at year-end 2020. This already includes the impact of the 30% RWA add-on following the IMI in 2019. This analysis is based on the assumption that NIBC will successfully implement the required improvements in its model landscape. This does not take into account possible management actions, nor potential changes to Pillar 2 requirements. This also assumes a portfolio composition in 2028 that is equal to the current portfolio, as well as risk weights that reflect the current economic environment.

An uncertainty for banks is that the Basel IV Standards will have to be incorporated into legislation within the European Union. The EU legislative process may take up to several years. During this process of transposition in EU and national law, adjustments may be implemented. We aim to meet the final requirements early in the phase-in period while we continue to execute our client-focused strategy

Tables 39 shows the capital ratios of NIBC Holding.

Table 39 NIBC Holding N.V. capital ratios, Basel III

in %	31 December 2020		31 December 2019	
Capital ratios	Fully Loaded	Transition	Fully Loaded	Transition
Common Equity Tier I ration	19.9%	19.9%	18.5%	18.5%
Tier I ratio	21.0%	21.3%	19.9%	20.1%
Total Capital / BIS ratio	22.1%	22.9%	22.0%	21.9%

Table 40 Breakdown of EAD, capital requirements and RWA of NIBC Holding N.V.

	31 December 2020			31 December 2019		
in EUR millions	EAD	RWA	Capital requirement	EAD	RWA	Capital requirement
CREDIT RISK	**22,032**	**6,968**	**557**	**23,556**	**7,706**	**617**
AIRB APPROACH						
- of which corporate	6,949	3,740	299	8,706	4,514	361
- of which retail	9,043	599	48	9,089	684	55
- of which securitisations	733	188	15	717	78	6
- of which equities	252	931	74	300	1,112	89
STANDARDISED APPROACH						
- of which sovereign	2,041	-	-	626	611	49
- of which corporate	726	686	55	859	183	15
- of which retail	1,165	456	36	878	334	27
- of which institutions	911	183	15	161	93	7
- of which securitisations	116	89	7	2,121	-	-
- of which other	96	96	8	98	98	8
MARKET RISK		**54**	**4**		**97**	**8**
- of which trading book VaR		44	3		58	5
- of which FX standardised approach		10	1		24	2
- of which Debt Instruments Standardised approach		-	-		13	1
- of which Equities Standardised approach		-	-		3	0
OPERATIONAL RISK		**926**	**74**		**1,008**	**81**
Standardised approach		926	74		1,008	81
CREDIT VALUE ADJUSTMENT		**33**	**3**		**29**	**2**
Standardised approach		33	3		29	2
TOTAL	**22,032**	**7,981**	**639**	**23,556**	**8,841**	**707**

The recognition in consolidated own funds refers to the treatment of capital issued of subsidiaries to third parties. Capital instruments issued by consolidated subsidiaries and held by third parties may no longer be fully recognised towards capital at group level under the CRR/CRD IV but only to the extent used by the subsidiary to cover the minimum capital requirements including capital buffers.

The partial de-recognition of capital issued to third parties by subsidiaries applies to all fully consolidated subsidiaries, including wholly-owned and partly owned. The partial de-recognition will affect the Additional Tier-1 and Tier-2 provided to third parties by all subsidiaries.

Table 41 on the next page presents the leverage ratio based on CRR/CRD IV regulation, calculated for NIBC Holding on a fully loaded Tier 1 capital. The leverage ratio of NIBC Holding increased in 2020 to 8.5%.

Table 41 Leverage ratio based on fully loaded Tier 1 Capital of NIBC Holding N.V. (balance sheet)

in EUR millions		31 December 2020
	Summary reconciliation of accounting assets and leverage ratio exposures	
1	Total assets as per published financial statements	22,125
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	-
3	(Adjustment for fiduciary assets recognised on the balance sheet pursuant to the applicable accounting framework but excluded from the leverage ratio exposure measure in accordance with Article 429(11) of Regulation (EU) No 575/2013 "CRR")	-
4	Adjustments for derivative financial instruments	(496)
5	Adjustments for securities financing transactions "SFTs"	-
6	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	(829)
EU-6a	(Adjustment for intragroup exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (7) of Regulation (EU) No 575/2013)	
EU-6b	(Adjustment for exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (14) of Regulation (EU) No 575/2013)	
7	Other adjustments	
8	**Total leverage ratio exposure**	**20,800**
	Leverage ratio common disclosure	
	On-balance sheet exposures (excluding derivatives and SFTs)	
1	On-balance sheet items (excluding derivatives, SFTs and fiduciary assets)	20,512
2	(Asset amounts deducted in determining Tier 1 capital)	(91)
3	Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets) (sum of lines 1 and 2)	20,421
	Derivative exposures	
4	Replacement cost associated with all derivatives transactions (ie net of eligible cash variation margin)	349
5	Add-on amounts for PFE associated with all derivatives transactions (mark-to-market method)	147
EU-5a	Exposure determined under Original Exposure Method	496
6	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	
7	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	
8	(Exempted CCP leg of client-cleared trade exposures)	
9	Adjusted effective notional amount of written credit derivatives	
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	
11	Total derivative exposures (sum of lines 4 to 10)	992
	Derivative exposures	
12	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	
14	Counterparty credit risk exposure for SFT assets	
EU-14a	Derogation for SFTs: Counterparty credit risk exposure in accordance with Article 429b (4) and 222 of Regulation (EU) No 575/2013	
15	Agent transaction exposures	
EU-15a	(Exempted CCP leg of client-cleared SFT exposure)	
16	Total securities financing transaction exposures (sum of lines 12 to 15a)	-

Table 41 Leverage ratio based on fully loaded Tier 1 Capital of NIBC Holding N.V. (balance sheet)

in EUR millions			31 December 2020
		Other off-balance sheet exposures	
	17	Off-balance sheet exposures at gross notional amount	1,739
	18	(Adjustments for conversion to credit equivalent amounts)	(910)
	19	**Other off-balance sheet exposures (sum of lines 17 to 18)**	**829**
		Other off-balance sheet exposures	
EU-19a		(Exemption of intragroup exposures (solo basis) in accordance with Article 429(7) of Regulation (EU) No 575/2013 (on and off balance sheet))	
EU-19b		(Exposures exempted in accordance with Article 429 (14) of Regulation (EU) No 575/2013 (on and off balance sheet))	
		Capital and total exposures	
	20	**Tier 1 capital**	**1,678**
	21	**Total leverage ratio exposures (sum of lines 3, 11, 16, 19, EU-19a and EU-19b)**	**21,746**
		Leverage ratio	
	22	**Leverage ratio**	**7.7%**
EU-22a		Leverage ratio (excluding the impact of temporary exemption of Central Bank exposures)	8.5%
		Choice on transitional arrangements and amount of derecognised fiduciary items	
EU-23		Choice on transitional arrangements for the definition of the capital measure	
EU-24		Amount of derecognised fiduciary items in accordance with Article 429(11) of Regulation (EU) NO 575/2013	
		Split-up of on balance sheet exposures (excluding derivatives, SFTs and exempted exposures)	
EU-1		Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:	20,512
EU-2		Trading book exposures	
EU-3		Banking book exposures, of which:	20,512
EU-4		Covered bonds	135
EU-5		Exposures treated as sovereigns	1,979
EU-6		Exposures to regional governments, MDB, international organisations and PSE NOT treated as sovereigns	
EU-7		Institutions	659
EU-8		Secured by mortgages of immovable properties	1,065
EU-9		Retail exposures	9,158
EU-10		Corporate	5,356
EU-11		Exposures in default	328
EU-12		Other exposures (eg equity, securitisations, and other non-credit obligation assets)	1,831

REMUNERATION POLICY

The Supervisory Board reviewed and amended NIBC's remuneration policies in 2020 The review took into account all relevant laws, regulations and guidelines: the Dutch Corporate Governance Code; the Dutch Banking Code; the DNB Principles on Sound Remuneration Policies (DNB principles), EBA Guidelines on Sound Remuneration, CRDV and the Dutch remuneration legislation for financial services companies (Wet beloningsbeleid financiële onderneming, Wbfo)

NIBC's remuneration policy is sustainable, balanced and in line with our chosen strategy and risk appetite. It revolves around these five key principles: remuneration is (i) aligned with business strategy; (ii) appropriately balanced between short and long term; (iii) differentiated and linked to the achievement of performance objectives and the results of the bank; (iv) externally competitive and internally fair; and (v) managed in an integrated manner that takes into account total compensation.

The Remuneration and Nominating Committee (RNC) and the Supervisory Board believe NIBC's remuneration policy responsibly links performance and reward and is compliant with the applicable laws, regulations and guidelines. The Supervisory Board continues to believe in prudent management of remuneration whilst recognising that NIBC operates in a competitive market place where it needs to be able to attract, motivate and retain sufficient talent. NIBC is determined to make a positive contribution towards fair compensation practices in the banking sector in consultation with its stakeholders. Furthermore, we aim to create the level playing field that regulators envisage with regard to variable compensation. As of the financial year 2020 the CEO and the members of the Managing Board are no longer eligible for variable compensation.

The 2020 Annual Report contains a detailed overview of NIBC's remuneration policy.

APPENDIX I SCOPE OF APPLICATION

The basis of NIBC's financial consolidation scope is described in the accounting policies section of NIBC Holding financial statement 2019. The scope is based on IFRS, which is determined in accordance with IAS 27 Consolidated and Separate Financial Statements, IAS 28 Investments in Associates, IAS 31 Interest in Joint Ventures and SIC 12 Consolidation Special Purpose Entities.

The regulatory consolidation scope differs from the financial consolidation scope. The regulatory consolidation does not include Special Purpose Entities where significant risk has been transferred to investors. Subsidiaries engaged in non-financial activities are excluded from the regulatory consolidation. Exposures to the Special Purpose Entities and non-financial subsidiaries are risk weighted as securitisation exposures and investments in associates (equity method).

The table present the entities that form part of the capital base of NIBC Holding N.V.

	Principal place of business	Country	Nature of activity	Percentage of voting rights held
SUBSIDIARIES OF NIBC HOLDING N.V.				
NIBC Bank N.V.	The Hague	Netherlands	Banking	100%
NIBC Investment Management N.V.	The Hague	Netherlands	Financing	100%
NIBC Investments N.V.	The Hague	Netherlands	Financing	100%
Beequip B.V.	Rotterdam	Netherlands	Financing	100%
Lendex Holding B.V.	Almere	Netherlands	Financing	100%
Fin Quest B.V.	Eindhoven	Netherlands	Financing	100%
SUBSIDIARIES OF NIBC BANK N.V.				
Parnib Holding N.V.	The Hague	Netherlands	Financing	100%
Counting House B.V.	The Hague	Netherlands	Financing	100%
B.V. NIBC Mortgage-Backed Assets	The Hague	Netherlands	Financing	100%
NIBC Principal Investments B.V.	The Hague	Netherlands	Financing	100%
NIBC Financing N.V.	The Hague	Netherlands	Financing	100%

APPENDIX 2 OWN FUNDS

The recognition in consolidated own funds refers to the treatment of capital issued of subsidiaries to third parties. Capital instruments issued by consolidated subsidiaries and held by third parties may no longer be fully recognised towards capital at group level under the CRR/CRD IV but only to the extent used by the subsidiary to cover the minimum capital requirements including capital buffers. The partial de-recognition of capital issued to third parties by subsidiaries applies to all fully consolidated subsidiaries, including wholly-owned and partly owned. The partial de-recognition will affect the Additional Tier-1 and Tier-2 provided to third parties by all subsidiaries.

The tables in this appendix contain information on:

- Reconciliation from IFRS to regulatory balance sheet;
- Own funds disclosure reflecting the capital position of NIBC;
- Transitional disclosure covering the phasing in of the regulatory adjustments;
- Capital instruments main features.

Table 42 Reconciliation of balance sheets – financial accounting to regulatory scope of consolidation.

in EUR millions	Accounting Balance sheet	Regulatory Balance sheet
ASSETS		
Cash and balance with central banks	1,909	1,909
Due from other banks	671	671
FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS		
Debt investments	69	69
Equity investments (including investments in associates)	212	212
Loans	130	130
Derivative financial instruments	494	494
FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME		
Debt investments	886	886
FINANCIAL ASSETS AT AMORTISED COST		
Debt investments	22	22
Loans	5,649	5,649
Lease receivables	613	613
Mortgage loans	9,902	9,902
Securitised mortgage loans	343	343
OTHER		
Investment property	21	21
Investments in associates and joint ventures (equity method)	15	15
Property and equipment	76	76
Intangible assets	2	2
Current tax assets	-	-
Deferred tax assets	68	68
Other assets	44	44
TOTAL ASSETS	**21,125**	**21,125**

Table 42 Reconciliation of balance sheets – financial accounting to regulatory scope of consolidation.

in EUR millions	Accounting Balance sheet	Regulatory Balance sheet
LIABILITIES		
Due to other banks	1,000	1,000
Deposits from customers	11,100	11,100
FINANCIAL LIABILITIES AT FAIR VALUE THROUGH PROFIT OR LOSS		
Own debt securities in issue	-	-
Debt securities in issue structured	171	171
Derivative financial liabilities	100	100
Liabilities of disposal group classified as held for sale		
Current tax liabilities	7	7
Deferred tax liabilities	6	6
Provisions	6	6
Accruals, deferred income and other liabilities	162	162
DEBT SECURITIES IN ISSUE AT AMORTISED COST		
Own debt securities in issue	5,954	5,954
Debt securities in issue related to securitised mortgages and lease receivables	327	327
SUBORDINATED LIABILITIES		
Fair value through profit or loss	165	165
Amortised cost	113	113
TOTAL LIABILITIES	**19,111**	**19,111**
EQUITY		
Share capital	3	3
Share premium	1,287	1,287
Other reserves	118	118
Retained profit	407	407
TOTAL PARENT EQUITY	**1,815**	**1,815**
Capital securities (non-controlling interest)	**200**	**200**
Non-controlling interests		
TOTAL EQUITY	**2,015**	**2,015**
TOTAL LIABILITIES AND EQUITY	**21,125**	**21,125**

In table 43 information on NIBC own funds are shown in accordance with the specific format that was provided in the Implementation Technical Standards of the *European Banking Authority* (**EBA**) and which is according to CRR/CRD IV.

Table 43 Disclosure NIBC own Funds (Transitional), at 31 December 2019

in EUR millions	31 December 2020	31 December 2019
Common Equity Tier 1 (CET1) Capital: instruments and reserves		
Capital instruments and the related share premium accounts	1,290	1,290
of which: instrument type 1	1,290	1,290
of which: instrument type 2		-
of which: instrument type 3		-
Retained earnings	360	281
Accumulated other comprehensive income	118	119
Funds for general banking risk	-	-
Amount of qualitfying items referred to in art. 484 (3) and the related share premium accounts subject to phase out from CET1	-	-
Public sector capital injections grandfathered until January 2018	-	-
Minority interests	-	-
Independently reviewed interim profits net of any forseeable charge or dividend	-	33
Common Equity Tier 1 (CET1) capital before regulatory adjustments	**1,768**	**1,723**

in EUR millions	31 December 2020	31 December 2019
CET1 Capital: regulatory adjustments		
Additional value adjustments (-)	(2)	(6)
Intangible assets (net of related tax liability) (-)	-	-
Empty set in the EU	-	-
Deferred tax assets that rely on future profitability excluding those arising from temporary differences	(60)	(53)
Fair value reserves related to gains or losses on cash flow hedges	(13)	(17)
Negative amounts resulting from the calculation of expected loss amounts	-	(10)
Any increase in equity that results from securitised assets (-)	-	-
Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	(89)	(86)
Defined-benefit pension fund assets (negative amount)		-
Direct and indirect holding by an institution of own CET1 instruments (-)		-
Holdings of the CET 1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate ar tificially the own funds of the institution (-)		-
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)(-)		-
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)(-)		-
Empty set in the EU		-
Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative	(17)	(33)
of which: qualifying holdings outside the financial sector (-)		-
of which: securitisation positions (-)	(17)	(33)
of which: free deliveries (-)		-
Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related eligible tax liabilities)		-
Amount exceeding the 15% threshold	-	-
Of which: direct and indirect holding by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities		-
Empty set in the EU	-	-
of which: deferred tax assets arising from temporary differences		-
Losses for the current financial year (-)		-
Foreseeable tax charges relating to CET1 items (-)		-
Regulatory adjustments applied to CET1 in respect of amounts subject to pre-CRR treatment		-
Regulatory adjustments relating to unrealised gains and losses pursuant to articles 467 and 468	-	(2)
Of which: …. Filter for unrealised losses		1
Of which: …. Filter for unrealised loss on exposures to central governments classified in the "available for sale" category in the EU endorsed IAS 39.		
Of which: …. Filter for unrealised gains		(3)
Of which: …. Filter for unrealised gains on exposures to central governments classified in the "available for sale" category in the EU endorsed IAS 39.		-
Amount to be deducted from or added to CET1 capital with regard to additional filters and deductions required pre CRR	-	-
Of Which: …		-
Qualifying AT1 deductions that exceed the AT1 capital of the institution (-)		-
Total regulatory adjustments to CET1	**(181)**	**(207)**
CET1 capital	**1,586**	**1,516**

in EUR millions	31 December 2020	31 December 2019
Additional Tier 1 (AT1) capital: instruments		
Capital instruments and the related share premium accounts	-	-
of which: classified as equity		-
of which: classified as liabilities		-
Amount of qualifying items referred to in art. 484 (3) and the related share premium accounts subject to phase out from AT1	55	-
Public sector capital injections grandfathered until 1 January 2018		-
Qualifying Tier 1 capital included in consolidated AT1 capital issued by subsidiaries and held by third parties	200	239
of which: instruments issued by subsidiaries subject to phase out	-	239
AT 1 capital before regulatory adjustments	**255**	**239**
AT 1 Capital: regulatory adjustments		
Direct and indirect holding by an institution of own AT1 instruments (-)		
Holdings of the AT1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate ar tificially the own funds of the institution (-)		
Direct, indirect and synthetic holdings by the institution 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)(-)		
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 (amount above 10% threshold and net of eligible short positions)(-)		
Regulatory adjustments applied to AT1 in respect of amounts subject to pre-CRR treament and transitional treatments subject to phase out as prescribed in Reg. (EU) No 575/2013	(141)	(102)
Residual amounts deducted from AT1 capital with regard to deduction from CET1 capital during the transitional period pursuant to art. 472 of Reg. (EU) No 575/2013	-	-
Of which: intangibles		-
Of which: shortfall of provisions to expected losses		-
Residual amounts deducted from AT1 capital with regard to deduction from T2 capital during the transitional period pursuant to art. 475 of Reg. (EU) No 575/2013	-	
Of which items to be detailed line by line, e.g. reciprocal cross holding in T2 instruments, direct holding of non-significant investments in the capital of other financial sector entities, etc.		
Amount to be deducted from or added to AT1 capital with regard to additional filters and deductions required pre CRR	-	
Of which: … possible filter for unrealised losses		
Of which: … possible filter for unrealised gains		
Of which: …		
Qualifying T2 deductions that exceed the T2 capital of the institution (-)		
Total regulatory adjustments to AT1 capital	**(141)**	**(102)**
Additional Tier 1 Capital	**114**	**137**
Tier 1 Capital (T1=CET1+AT1)	**1,700**	**1,653**

in EUR millions	31 December 2020	31 December 2019
Tier 2 (T2) capital: instruments and provisions		
Capital instruments and the related share premium accounts		
Amount of qualifying items referred to in art. 484 (3) and the related share premium accounts subject to phase out from T2	1	
Public sector capital injections grandfathered until 1 January 2018		
Qualifying own funds instruments included in consolidated T2 capital issued by subsidiaries and held by third parties (excluding row 5 and 34)	177	278
of which: instruments issued by subsidiaries subject to phase out	-	-
Credit risk adjustments		
T2 capital before regulatory adjustments	**178**	**278**
T2 capital: regulatory adjustments		
Direct and indirect holding by an institution of own T2 instruments and subordinated loans (-)		
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 ar tificially the own funds of the institution (-)		
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 entitities (amount above 10% threshold and net of eligible short positions)(-)	-	-
Of which new holdings not subject to transitional arrangements		
Of which holdings existing before 1 January 2013 and subject to transitional arrangements		
Direct and indirect holdings of the T2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entitities (amount above 10% threshold and net of eligible short positions)(-)		
Regulatory adjustments applied to T2 in respect of amounts subject to pre-CRR treament and transitional treatments subject to phase out as prescribed in Reg. (EU) No 575/2013	(73)	(115)
Residual amounts deducted from T2 capital with regard to deduction from CET1 capital during the transitional period pursuant to art. 472 of Reg. (EU) No 575/2013	22	-
Of which: shortfall of provisions to expected losses	22	-
Residual amounts deducted from T2 capital with regard to deduction from AT1 capital during the transitional period pursuant to art. 475 of Reg. (EU) No 575/2013	-	
Of which items to be detailed line by line, e.g. reciprocal cross holding in T2 instruments, direct holding of non-significant investments in the capital of other financial sector entities, etc.		-
Amount to be deducted from or added to T2 capital with regard to additional filters and deductions required pre CRR	-	
Of which: … possible filter for unrealised losses		
Of which: … possible filter for unrealised gains		
Of which: …		
Total regulatory adjustments to AT1 capital	**(51)**	**(115)**
Additional Tier 1 Capital	**128**	**163**
Tier 1 Capital (T1=CET1+AT1)	**1,828**	**1,816**

in EUR millions	31 December 2020	31 December 2019
RWA in respect of amounts subject to pre-CRR treatment and transitional treatments subject to phase out as prescribed in Reg. (EU) No 575/2013		-
Of which: … items not deducted from CET1		-
Of which: … items not deducted from AT1 items		-
Of which: … items not deducted from T2 items		-
Total risk weighted assets	**-**	**8,841**

Table 44 Capital instruments' main features

General

	Tier 1 Instrument	Tier 1 instrument	Tier 1 instrument	Tier 2 instrument
Issuer	NIBC Bank N.V.	NIBC Bank N.V.	NIBC Bank N.V.	NIBC Bank N.V.
Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	XS1691468026	XS0215294512	XS0249580357	NIB 6.95 09APR27
Governing law(s) of the instrument	The securities are governed by, and construed in accordance with the Dutch law	The securities are governed by, and construed in accordance with the English law save for the subordination clause which is governed by, and construed in accordance with, the laws of the Netherlands	The securities are governed by, and construed in accordance with the English law save for the subordination clause which is governed by, and construed in accordance with, the laws of the Netherlands	The loan is governed by the laws of the Netherlands

	Tier 2 Instrument	**Tier 2 Instrument**	**Tier 2 Instrument**	**Tier 2 Instrument**
Issuer	NIBC Bank N.V.	NIBC Bank N.V.	NIBC Bank N.V.	NIBC Bank N.V.
Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	XS0161702914	NIB VAR 01JUL99	XS0210781828	XS1183596151
Governing law(s) of the instrument	The securities are governed by, and construed in accordance with the English law save for the subordination clause which is governed by, and construed in accordance with, the laws of the Netherlands	The loan is governed by the laws of the Netherlands	The securities are governed by, and construed in accordance with the English law save for the subordination clause which is governed by, and construed in accordance with, the laws of the Netherlands	The securities are governed by, and construed in accordance with the Dutch law

Table 44 Capital instruments' main features

Regulatory treatment

	Tier 1 Instrument	Tier 1 Instrument	Tier 1 Instrument	Tier 2 instrument
Transitional CRR rules	Additional Tier 1	Additional Tier 1	Additional Tier 1	Tier 2
Post-transitional CRR rules	Additional Tier 1	-	-	Tier 2
Eligible at solo/ (sub-)consolidated/ solo & (sub-)consolidated	Solo & consolidated	Solo & consolidated	Solo & consolidated	Solo & consolidated
Instrument type (types to be specified by each jurisdiction)	Additional Tier 1 as published in Regulation (EU) No 575/2013 article 52	Additional Tier 1 (grandfathered) as published in Regulation (EU) No 575/2013 article 484.3;	Additional Tier 1 (grandfathered) as published in Regulation (EU) No 575/2013 article 484.3;	Tier 2 as published in Regulation (EU) No 575/2013 article 63
Amount recognised in regulatory capital (currency in million, as of most recent reporting date)	EUR 200 mln	EUR 33 mln	EUR 22 mln	EUR 11 mln
Nominal amount of instrument	EUR 200 mln	USD 90 mln	EUR 50 mln	EUR 11 mln
Issue price	100%	100%	100%	100%
Redemption price	Redemotion at par	Redemption at par	Redemption at par	Redemption at par
Accounting classification	Equity	Liability - fair value	Liability - fair value	Liability - amortised cost
Original date of issuance	29-9-2017	24-3-2005	30-3-2006	9-4-1997
Perpeptual or dated	Perpetual	Perpetual	Perpetual	Dated
Original maturity date	Perpetual	Perpetual	Perpetual	9-4-2027
Issuer call subject to prior supervisory approval	Yes	Yes	Yes	N/A
Optional call date, contingent call dates, and redemption amount	First call date 15/10/2024; tax, reg call; all calls at the outstanding amounts	First call date 24/03/2015; tax call, reg call; all calls at par	First cal date 30/03/2011; tax call, reg call; all calls at par	N/A
Subsequent call dates, if applicable	semi-annual calls on 15/10 and 15/04	annual call on 24/03	annual call on 30/03	N/A

Table 44 Capital instruments' main features

Regulatory treatment

	Tier 2 Instrument	Tier 2 Instrument	Tier 2 Instrument	Tier 2 Instrument
Transitional CRR rules	Tier 2	Tier 2	Tier 2	Tier 2
Post-transitional CRR rules	-	Tier 2	-	Tier 2
Eligible at solo/ (sub-)consolidated/ solo & (sub-)consolidated	Solo & consolidated	Solo & consolidated	Solo & consolidated	Solo & consolidated
Instrument type (types to be specified by each jurisdiction)	Tier 2 (grandfathered) as published in Regulation (EU) No 575/2013 article 494b	Tier 2 as published in Regulation (EU) No 575/2013 article 63	Tier 2 (grandfathered) as published in Regulation (EU) No 575/2013 article 494b	Tier 2 as published in Regulation (EU) No 575/2013 article 63
Amount recognised in regulatory capital (currency in million, as of most recent reporting date)	EUR 30 mln	EUR 38 mln	EUR 55 mln	EUR 42 mln
Nominal amount of instrument	EUR 30 mln	USD 47 mln	EUR 55 mln	EUR 50 mln
Issue price	100%	100%	100%	100%
Redemption price	Redemption at par	Redemption at par	Redemption at par	Redemption at par
Accounting classification	Liability - fair value	Liability - amortised cost	Liability - fair value	Liability - amortised cost
Original date of issuance	10-2-2003	30-6-1999	21-2-2005	24-3-2015
Perpeptual or dated	Dated	Perpetual	Dated	Dated
Original maturity date	10-2-2043	Perpetual	21-2-2040	24-3-2025
Issuer call subject to prior supervisory approval	Yes	Yes	Yes	N/A
Optional call date, contingent call dates, and redemption amount	First call date 10/02/2013; tax call, reg call; all calls at par	First call date 01/07/2009; tax call, reg call; all calls at par	First call date 21/02/2035	N/A
Subsequent call dates, if applicable	call every 5 years starting in Feb 2013	call every 10 years starting in July 2009	one time call	N/A

Table 44 Capital instruments' main features

Coupons / dividends

	Tier 1 Instrument	Tier 1 Instrument	Tier 1 Instrument	Tier 2 Instrument
Fixed or floating dividend/coupon	Fixed to floating	Fixed to floating	Fixed to floating	Fixed
Coupon rate and any related index	6% till October 2024; 5 year EUR swap rate + 5.5564% afterwards	7.5% p.a. till March 2007; min(10 year USD swap rate + 0.1%, 8.25%) afterwards	8% p.a. till March 2011; min(10 year EUR swap rate + 0.1%, 8%) afterwards	6.95% p.a.
Existence of a dividend stopper	No	No	No	No
Fully discretionary, partially discretionary or mandatory (in terms of timing)	Fully discretionary	Partially discretionary - Existence of the mandatory payment event	Partially discretionary - Existence of the mandatory payment event	Mandatory
Fully discretionary, partially discretionary or mandatory (in terms of amount)	Fully discretionary	Partially discretionary - Existence of the mandatory payment event	Partially discretionary - Existence of the mandatory payment event	Mandatory
Existence of step up or other incentive to redeem	No	No	No	No
Noncumulative or cumulative	Noncumulative	Noncumulative	Noncumulative	N/A
Convertible or non-convertible	Non-convertible	Convertible	Convertible	Non-convertible
If convertible, conversion trigger (s)	N/A	Total capital ratio below overal total capital requirement	Total capital ratio below overal total capital requirement	N/A
If convertible, fully or partially	N/A	Always Fully	Always Fully	N/A
If convertible, conversion rate	N/A	1 to 1	1 to 1	N/A
If convertible, mandatory or optional conversion	N/A	Mandatory	Mandatory	N/A
If convertible, specifiy instrument type convertible into	N/A	Preference shares	Preference shares	N/A
If convertible, specifiy issuer of instrument it converts into	N/A	NIBC Bank N.V.	NIBC Bank N.V.	N/A
Write-down features	Yes	No	No	No
If write-down, write-down trigger (s)	CET1 ratio of the Bank or Holding below 5.125%	N/A	N/A	N/A
If write-down, full or partial	Partial	N/A	N/A	N/A
If write-down, permanent or temporary	Temporary	N/A	N/A	N/A
If temporary write-down, description of write-up mechanism	Discretionaty write-up provided the CET1 ratio is in excess of the regulatory minimum	N/A	N/A	N/A
Position in subordination hierachy in liquidation (specify instrument type immediately senior to instrument)	Senior only to common equity tier 1 instruments	Subordinated to all claims subordinated only to the claims of unsubordinated creditors	Subordinated to all claims subordinated only to the claims of unsubordinated creditors	Subordinated to claims of unsubordinated creditors
Non-compliant transitioned features	No	Yes	Yes	No
If yes, specifiy non-compliant features	N/A	Mandatory payment event, Conversion to preference shares	Mandatory payment event, Conversion to preference shares	N/A

Table 44 Capital instruments' main features

Coupons / dividends

	Tier 2 Instrument	Tier 2 Instrument	Tier 2 Instrument	Tier 2 Instrument
Fixed or floating dividend/coupon	Fixed	Floating to Floating	Fixed to Floating	Fixed
Coupon rate and any related index	0% (6.35% yield)	6m USD Libor + 0.55% till 1 july 2009; 6m USD Libor + 1.55% afterwards	7% p.a till Feb 2007; afterwards min(8.5; max(10 year EUR swap rate-2 year EUR swap rate)*4, 2.85)	4.00% p.a.
Existence of a dividend stopper	No	No	No	No
Fully discretionary, partially discretionary or mandatory (in terms of timing)	N/A	Mandatory	Mandatory	Mandatory
Fully discretionary, partially discretionary or mandatory (in terms of amount)	N/A	Mandatory	Mandatory	Mandatory
Existence of step up or other incentive to redeem	No	Yes	No	No
Noncumulative or cumulative	N/A	N/A	N/A	N/A
Convertible or non-convertible	Non-convertible	Non-convertible	Non-convertible	Non-convertible
If convertible, conversion trigger (s)	N/A	N/A	N/A	N/A
If convertible, fully or partially	N/A	N/A	N/A	N/A
If convertible, conversion rate	N/A	N/A	N/A	N/A
If convertible, mandatory or optional conversion	N/A	N/A	N/A	N/A
If convertible, specifiy instrument type convertible into	N/A	N/A	N/A	N/A
If convertible, specifiy issuer of instrument it converts into	N/A	N/A	N/A	N/A
Write-down features	No	No	No	No
If write-down, write-down trigger (s)	N/A	N/A	N/A	N/A
If write-down, full or partial	N/A	N/A	N/A	N/A
If write-down, permanent or temporary	N/A	N/A	N/A	N/A
If temporary write-down, description of write-up mechanism	N/A	N/A	N/A	N/A
Position in subordination hierachy in liquidation (specify instrument type immediately senior to instrument)	Subordinated to claims of unsubordinated creditors	Subordinated to claims of unsubordinated creditors	Subordinated to claims of unsubordinated creditors	Subordinated to claims of unsubordinated creditors
Non-compliant transitioned features	Yes	No	Yes	No
If yes, specifiy non-compliant features	No contractual provisions for loss-absorption	N/A	No contractual provisions for loss-absorption	N/A

Table 45 Encumbered assets NIBC

in EUR millions	31 December 2020	31 December 2019
Carrying amount of encumbered assets		
Debt investments / Residential mortgages own book	4,509	5,105
Securitised loans and mortgages	825	927
Cash collateral (due from other banks)	120	203
	5,454	**6,235**
Matching liabilities, contingent liabilities or securities lent		
Due to other banks / Own debt securities in issue	3,746	3,732
Debt securities in issue related to securitised loans and mortgages	653	823
Derivative financial liabilities	46	112
	4,446	**4,667**

As part of NIBC's funding and credit risk mitigation activities, the cash flows of selected financial assets are transferred or pledged to third parties. Furthermore, NIBC pledges assets as collateral for derivative transactions. Substantially all financial assets included in these transactions are residential mortgages, other loan portfolios, debt investments and cash collateral. The extent of NIBC's continuing involvement in these financial assets varies by transaction.

The asset encumbrance ratio at year end 2020 was 26% (2019: 28%).

APPENDIX 3 - NEWLY ORIGINATED EXPOSURE UNDER PUBLIC GUARANTEE SCHEMES

Table 46 Newly originated exposure under public guarantee schemes, 31 December 2020

in EUR millions	Gross carrying amount		Maximum amount of the guarantee that can be considered	Gross carrying amount
		of which: forborne	Public guarantees received	Inflows to non-performing exposures
Newly originated loans and advances subject to public guarantee schemes	3,441,904	-	3,441,904	-
of which: Households	-			-
of which: Collateralised by residential immovable property	-			-
of which: Non-financial corporations	3,441,904	-	3,441,904	-
of which: Small and Medium-sized Enterprises	-			-
of which: Collateralised by commercial immovable property	3,441,904			-

APPENDIX 4 LIST OF ABBREVIATIONS

AFM	Authority for Financial Markets
AIRB	Advanced Internal Ratings' Based (approach)
ALCO	Asset & Liability Committee
ALM	Asset & Liability Management (department)
BIS	Bank for International Settlements
BPV	Basis-point Value
CCF	Credit Conversion Factor
CCR	Counterparty Credit Rating
CDO	Collateralised Debt Obligations
CDS	Credit Default Swap
CEBS	Committee of European Banking Supervisors
CLO	Collateralised Loan Obligations
EBA	European Banking Authority
EC	Economic Capital
EC	Engagement Committee
ECB	European Central Bank
EL	Expected Loss
FMCR	Financial Markets Credit Risk (department)
FX	Foreign Exchange
GCD	Global Credit Data
IC	Investment Committee
ICAAP	Internal Capital Adequacy Assessment Process
IFRS	International Financial Reporting Standards
ILAAP	Internal Liquidity Adequacy Assessment Process
IMA	Internal Model Approach
IMI	Internal Model Investigation
IRS	Interest Rate Swaps
ISDA	International Swaps and Derivatives Association
LGD	Loss Given Default
LtIMV	Loan-to-Indexed Market Value
M	Maturity
MRM	Market Risk Management (department)
NHG Guarantee	Dutch government guarantee
NPARP	New Product Approval Review Process
OCI	Other Comprehensive Income
OE	Offshore Energy
ORM	Operational Risk Management (department)
OTC	Over-the-Counter derivatives
P&L	Profit & Loss (account)
PA	Portfolio Analysis (department)
PD	Probability of Default
RA&MV	Risk Analytics and Model Validation (department)
RAROC	Risk-Adjusted Return on Capital
RC	Pillar-I Regulatory Capital
RCSA	Operational Risk and Control Self-assessments
RDA	Restructuring & Distressed Assets Management (department)
RL	Realised Loss
RLCC	Risk Management, Legal, Compliance and Corporate Social Responsibility
RMBS	Residential Mortgage-Backed Securities
RMC	Risk Management Committee
RNC	Remuneration and Nominating Committee
RPCC	Risk Policy & Compliance Committee
RWA	Risk Weighted Assets
SA	Standardized Approach
SPE	Special Purpose Entity
SREP	Supervisory Review and Evaluation Process
SvaR	Stressed VaR
TC	Transaction Committee
TLTRO	Targeted Long Term Refinancing Operation
VaR	Value-at-Risk
WbFO	Wet beloning Financiële ondernemingen
Wft	Wet op het Financieel Toezicht