DNB Group

Risk and capital management

Disclosure according to Pillar 3

07.03.2019

2018

DNB

This report contains information about risk management, risk measurement and capital adequacy in accordance with the disclosure requirements in section IX of the capital adequacy regulations. "Publication of financial information", and the guidelines issued by the European Banking Authority (EBA) "Final report on the Guidelines on Disclosure Requirements under Part Eight of Regulation 575 2013 (EBA-GL-2016-11)". The capital adequacy regulations and the CRD IV / CRR regulations only deal with parent companies, subsidiaries and associated companies in the financial sector, and exclude insurance companies. This means that disclosure on and reference to capital requirement for DNB Livsforsikring and DNB Forsikring are not included in this report. These companies prepare their own reports, Solvency and Financial Condition Report, which will be published on April 23rd.

The capital adequacy regulations consist of three pillars.

Pillar 1 includes the quantitative minimum requirements for banks' capital and descriptions of measurement methods for risk-weighted assets and eligible capital. The capital adequacy regulations allow different methods for calculating the capital requirement.

The left figure shows the methods used to calculate capital requirements for the various risk categories. DNB reports credit risk according to the advanced IRB approach (AIRB), where internal risk models for PD, LGD and EAD are used. Some credit portfolios are temporarily or permanently exempt from IRB reporting, and are reported according to the standardised approach. Market risk is measured using the standardised approach. During the last quarter of 2018, the DNB Group changed the calculation of operational risk in the capital adequacy to a standardised approach only. The right figure shows the share of risk-weighted assets (RWA) split by reporting method used in DNB.

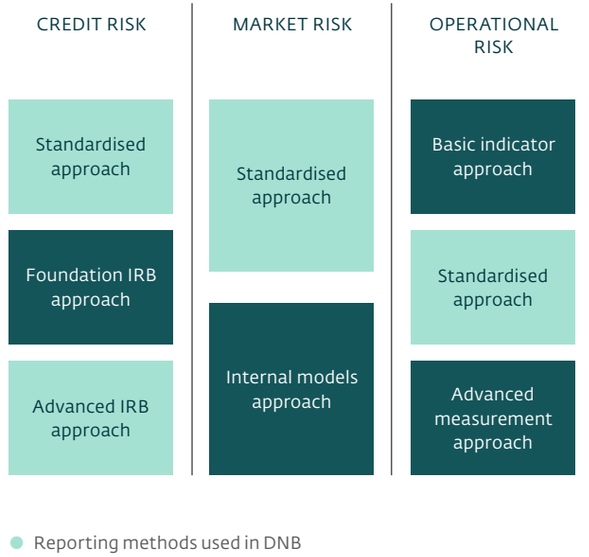
Pillar 2 sets out requirements for the Internal Capital Adequacy Assessment Process, ICAAP, and the bank's responsibility for assessing risks other than those described under Pillar 1.

Pillar 3 contains disclosure requirements and shall enable the market to assess financial institutions' capital and risk management.

Guidelines and procedures for Pillar 3 reporting have been adopted by the Board of Directors in DNB. The Board of Directors also handles the report prior to publication. The Pillar 3 report is not subject to external auditing. Tables are also published in the additional Pillar 3 disclosures.

Information on DNB's remuneration scheme is to be found in DNB's annual report here:

https://www.ir.dnb.no/press-and-reports/financial-reports



Reporting methods used in DNB, 31 December 2018

Per cent of RWA

2018 in brief, DNB Group

Risk-weighted assets
NOK billion

1 078 (1 043)

Primary capital (own funds)
NOK billion

214 (209)

CET1 capital ratio
Per cent

16.4 (16.4)

Capital adequacy ratio
Per cent

19.9 (20.0)

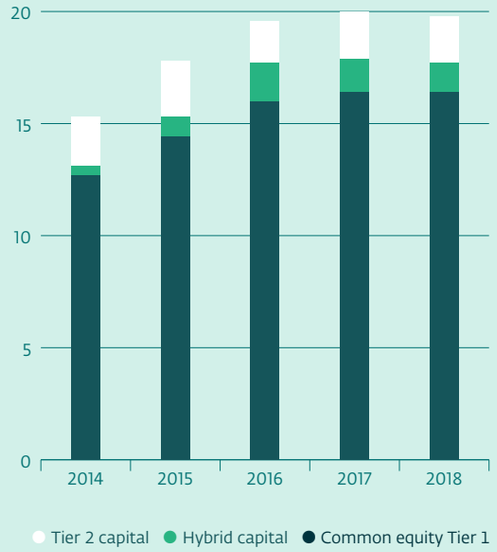
Net credit losses
NOK billion

-0.1 (2.4)

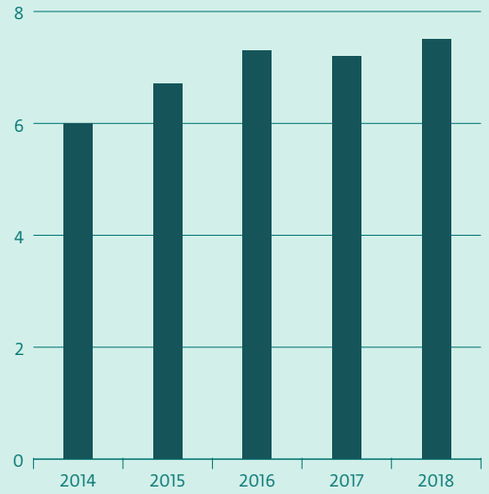
Leverage ratio
Per cent

7.5 (7.2)

Capital adequacy ratio
Per cent



Leverage ratio
Per cent



Development in risk-weighted assets
NOK billion

Legal structure and consolidation rules for capital adequacy requirements

The consolidated financial statements of DNB ASA (DNB) include DNB Bank ASA, DNB Livsforsikring AS, DNB Asset Management Holding AS and DNB Forsikring AS, all with underlying subsidiaries.

DNB prepares consolidated financial statements in accordance with IFRS. A description of the Group's accounting principles can be found in DNB's annual report. When the consolidated accounts are prepared, intra-group transactions and balances as well as unrealised gains or losses on these transactions between group units are eliminated. Consolidation of capital adequacy is regulated by the capital adequacy regulation the Financial Undertakings Act and the regulation on consolidation etc. in cross-sectoral groups and in the EU Capital Requirements Directives for banks and investment firms (CRD IV / CRR). In accordance with the aforementioned legislation and regulations, only companies in the financial sector and companies providing ancillary services will be included in consolidated capital adequacy.

Associated companies are proportionally consolidated (pro rata up to 50 per cent) based on DNB's ownership interests therein. Consolidation of capital adequacy will be based on the valuation principles used in the operating companies' financial statements. The valuation principles that form the basis for solvency calculations in the respective companies at the national level are applied to shareholdings in the foreign companies that are being consolidated.

INVESTMENTS IN ASSOCIATED COMPANIES

DNB Bank ASA has a 40 per cent ownership interest in Eksportfinans AS. The bank has also issued guarantees for other loans in Eksportfinans. The transactions with Eksportfinans have been carried out on ordinary market terms as if they had taken place between independent parties.

DNB's ownership interest in Luminor Group AB is approximately 43 per cent at the end of 2018. The company was consolidated in the accounts using the equity method. This also applies to DNB's ownership interest in Vipps AS, which is about 44 percent.

At year-end 2018, DNB's share of risk-weighted assets in Eksportfinans amounted to NOK 1.7 billion and 37.5 billion in Luminor. Risk-weighted assets in Vipps were insignificant at the end of 2018.

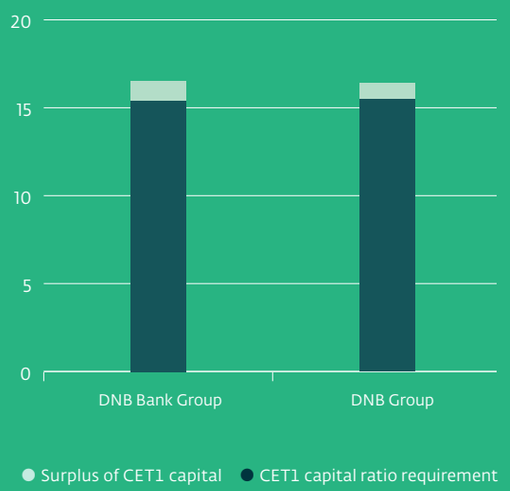
For an overview of DNB's legal structure:

https://www.dnb.no/portalfront/nedlast/en/about-us/juridisk-struktur-dnb.pdf

1
Capital adequacy

The DNB Group is very well-capitalised. At the end of 2018, the DNB Group's common equity Tier 1 (CET1) capital adequacy ratio was 16.4 per cent, which is 0.9 percentage point higher than the total regulatory minimum requirement of 15.5 per cent, and in line with the internal target.

CET1 capital adequacy ratio
Per cent



CET1 capital adequacy ratio, DNB Group
Per cent

16.4 (16.4)

CET1 capital adequacy ratio, DNB Bank Group
Per cent

16.5 (16.2)

CET1 capital adequacy ratio, DNB Bank ASA
Per cent

18.1 (17.7)

Capital adequacy ratio, DNB Group
Per cent

19.9 (20.0)

Capital adequacy ratio, DNB Bank Group
Per cent

20.9 (20.6)

Capital adequacy ratio, DNB Bank ASA
Per cent

23.5 (23.0)

CAPITAL ADEQUACY

Capital adequacy is calculated and reported in accordance with Norwegian legislation which is broadly in line with the EU capital requirements regulations for banks and investment firms (CRD IV/CRR). The institution must meet so-called Pillar 1 requirements, buffer requirements and Pillar 2 requirements. The minimum requirement for capital adequacy under Pillar 1 is 8 per cent of the institution's risk-weighted assets (RWA), of which 4.5 per cent or more should be common equity Tier 1 (CET1) capital and 6 per cent or more should be Tier 1 capital. In addition to the minimum requirements for own funds, credit institutions shall have capital buffers consisting of CET1 capital. More information about the combined buffer and risk-weighted assets can be found in later in this chapter.

Pillar 2 requirements are determined by Finanstilsynet (the Norwegian Financial Supervisory Authority) on the basis of DNB's own Internal Capital Adequacy Assessment Process (ICAAP) and Finanstilsynet's Supervisory Review and Evaluation Process, SREP. The Pillar 2 requirement for DNB increased from 1.6 per cent to 1.8 per cent at the end of 2018.

The regulatory consolidation for capital adequacy deviates from consolidation of the financial statements, in the accounts and comprises the parent company, subsidiaries and associated companies within the financial sector, excluding insurance companies. DNB Livsforsikring and DNB Forsikring are thus not included in the calculations. Associated companies are consolidated pro rata.

As the table shows, the total regulatory minimum requirement to common equity Tier 1 capital ratio and capital adequacy for the DNB Group was 15.5 per cent and 19.0 per cent by year-end 2018. DNB will have a management buffer of approximately 1 per cent above the regulatory requirement. Finanstilsynet has also expressed that DNB should have a margin to the regulatory requirements of about 1 per cent.

The objective of the management buffer is to cushion against fluctuations in risk-weighted assets and earnings to enable the Group to maintain normal growth in lending and a predictable dividend policy.

The table shows the composition of the various capital adequacy requirements applicable for year-end 2017 and 2018. In addition, it shows the requirements as they are expected to be at the end of 2019.

The requirements for the increased countercyclical buffer at year-end 2019 will result in an increase of approximately 0.4 percentage points, mainly due to the increased countercyclical buffer from 2.0 to 2.5 per cent in Norway and Sweden. Other countries where DNB has less exposure are also in the process of introducing or increasing countercyclical buffer.

Norwegian banks are subject to a transitional rule for capital adequacy calculations which stipulates that total risk-weighted assets cannot be reduced to less than 80 per cent of the corresponding figure calculated according to the Basel I regulations. The expected discontinuation of the Basel I floor in 2019 is expected to curb the increase in capital requirements.

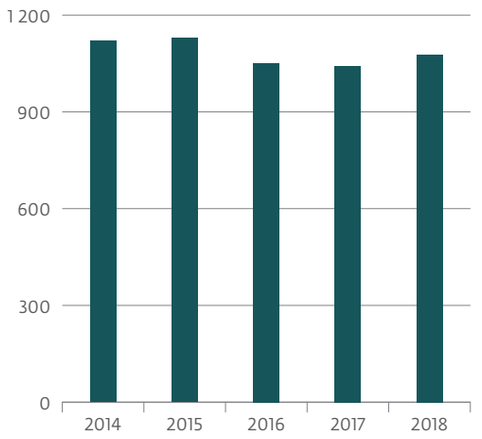
Composition of different capital adequacy requirements, DNB Group

Per cent	Dec. 2017	Dec. 2018	Dec. 2019
Minimum Common equity Tier 1 capital requirement	4.5	4.5	4.5
Systemic risk buffer	5.0	5.0	5.0
- of which buffer for systemically important institutions	*2.0*	*2.0*	*2.0*
Counter cyclical buffer	1.6	1.7	2.0
Capital conservation buffer	2.5	2.5	2.5
Pillar 2 capital requirement	1.6	1.8	1.8
Common equity Tier 1 (CET1) capital requirement[1)]	15.2	15.5	15.8
Hybrid capital	1.5	1.5	1.5
Equity Tier 1 capital requirement[1)]	16.7	17.0	17.3
Subordinated loan	2.0	2.0	2.0
Own funds requirement[1)]	18.7	19.0	19.3

1) in addition, a management buffer of approximately 1 per cent

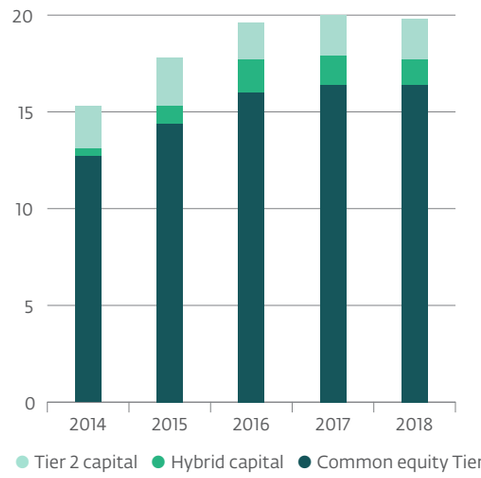
Risk-weighted assets, DNB Group

NOK billion



Capital adequacy ratio, DNB Group

Per cent



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The Basel I floor was in effect at year-end. It reduced the CET1 capital ratio by 0.8 percentage points relative to how the CET1 capital ratio would have been when included in the calculation according to Basel III without the transitional rules. CET1 for the DNB Group was 16.4 per cent and the capital adequacy ratio was 19.9 per cent at year-end, compared with 16.4 and 20.0 per cent, respectively, a year earlier.

At the end of 2017, DNB Boligkreditt had a CET1 capital ratio of 16.9 per cent and a capital adequacy ratio of 18.9 per cent, calculated according to the transitional rule for risk-weighted assets. If the transitional rule had not been applied, DNB Boligkreditt's CET1 capital ratio and capital adequacy ratio would have been 24.7 and 27.7 per cent, respectively.

LEVERAGE RATIO

As a supplement to the risk-weighted capital adequacy regime, the Basel Committee introduced a new capital measure, the leverage ratio or non-risk-based Tier 1 capital ratio.

It is calculated on the basis of equity Tier 1 capital including the hybrid capital. The calculation base consists of both balance sheet items and off balance sheet items. For off balance sheet items, the same conversion factors are used as in the standardised approach for the capital adequacy calculation. In addition, some special adjustments are made for derivatives and repurchase agreements. Insurance companies are not included. Finansdepartementet (The Norwegian Ministry of Finance) has set a minimum requirement for the leverage ratio for financial institutions and investment firms in Norway. The Norwegian leverage ratio requirement consists of a minimum requirement of 3 per cent that will apply to all financial institutions, a mandatory 2 per cent buffer for banks and an additional mandatory buffer of 1 per cent for systemically important banks (SIFI). DNB is the only institution in Norway that will be required to have a leverage ratio of 6 per cent.

The DNB Group calculates its leverage ratio in accordance with the revised article 429 of the CRR, and the regulation of the European Commission, which came into force as of 18 January 2015. DNB meets the minimum requirement of 6 per cent by a wide margin. At year-end 2018, the Group's leverage ratio was 7.5 per cent, compared to 7.2 per cent a year earlier.

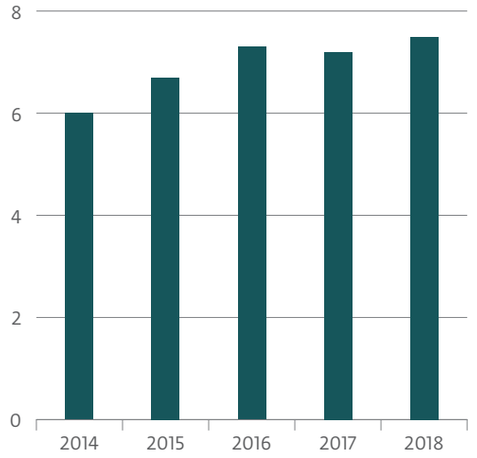
DEVELOPMENT IN RISK-WEIGHTED ASSETS

The minimum requirement for total own funds is 8 per cent of risk-weighted volume for credit risk, counterparty risk, market risk and operational risk. DNB uses both internal and standardised methods for calculating risk-weighted volume for credit and counterparty risk and standardised method for market risk and operational risk. Risk-weighted volume is also used for the calculation of conservation buffer, systemic risk buffer, buffer for systemically important institutions and counter-cyclical capital buffer. Risk-weighted volume is the basis for calculating capital adequacy requirements and is used for assessing banks' solvency.

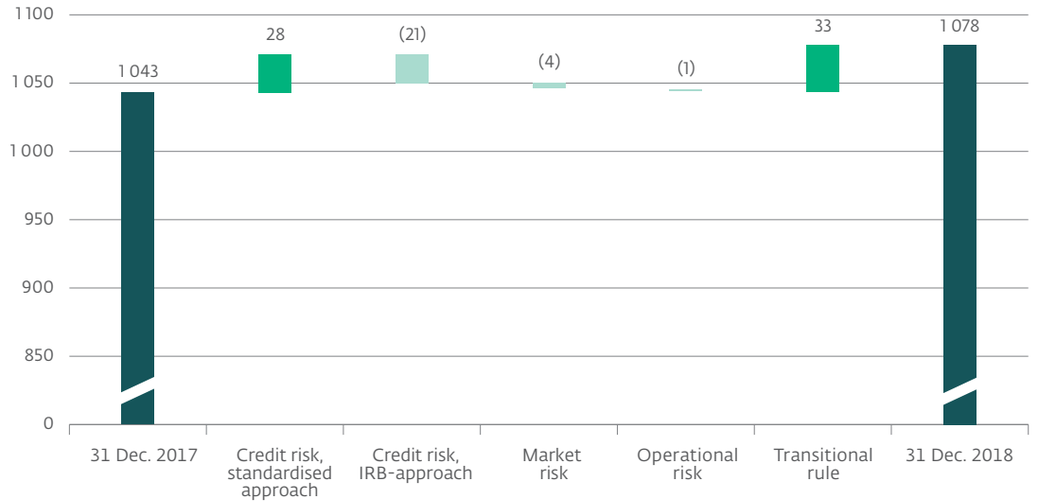
Risk-weighted assets increased by NOK 35 billion in 2018 and amounted to NOK 1 078 billion at the end of the year. Risk-weighted assets for credit risk increased by NOK 7 billion in 2018. Risk-weighted assets for the IRB reported credit portfolio decreased by NOK 21 billion, mainly due to reduction in the corporate portfolio. In 2018, a restructuring and sale of parts of the corporate credit portfolio were carried out. As a result, the quality of the credit portfolio was improved. See also the chapter on credit risk.

The risk-weighted assets reported according to the standardised approach increased by NOK 28 billion in 2018, mainly in the corporate portfolio. Sales of securities held to maturity reduced the RWA by NOK 8 billion. Additional risk-weighted assets, calculated using the transitional rule, increased by NOK 33 billion compared with year-end 2017 and amounted to NOK 48 billion at year-end 2018.

Leverage ratio, DNB Group
Per cent



Development in risk-weighted assets, DNB Group
NOK billion



Specification of risk-weighted assets and capital requirements, DNB Group

NOK million	Nominal exposure 31 Dec. 18	EAD[1] 31 Dec. 18	Average risk weights in per cent 31 Dec. 18	Risk-weighted assets 31 Dec. 18	Capital requirements 31 Dec. 18	Capital requirements 31 Dec. 17
IRB approach						
Corporate	955 626	789 415	53	421 452	33 716	35 197
Specialised Lending (SL)	12 445	11 990	55	6 579	526	454
Retail - mortgage loans	773 419	773 419	22	170 213	13 617	13 220
Retail - other exposures	102 012	87 560	25	21 589	1 727	1 745
Securitisation						626
Total credit risk, IRB approach	1 843 502	1 662 385	37	619 833	49 587	51 241
Standardised approach						
Central government	273 420	256 743	0	148	12	6
Institutions	244 919	128 361	28	35 737	2 859	2 989
Corporate	225 851	166 450	89	147 794	11 824	9 796
Retail - mortgage loans	67 981	64 835	49	31 733	2 539	2 207
Retail - other exposures	124 556	49 276	75	36 973	2 958	2 941
Equity positions	21 237	21 235	221	46 916	3 753	3 742
Securitisation						
Other assets	13 691	13 691	49	6 744	540	568
Total credit risk, standardised approach	971 656	700 592	44	306 045	24 484	22 249
Total credit risk	2 815 158	2 362 977	39	925 877	74 070	73 490
Market risk						
Position risk, debt instruments				11 583	927	1 120
Position risk, equity instruments				195	16	21
Currency risk				0	0	0
Commodity risk				9	1	2
Credit value adjustment risk (CVA)				3 891	311	468
Total market risk				15 678	1 254	1 611
Operational risk				88 005	7 040	7 077
Net insurance, after eliminations				0	0	0
Total risk-weighted assets and capital requirements before transitional rules				1 029 560	82 365	82 178
Additional capital requirements according to transitional rules[2]				48 373	3 870	1 230
Total risk-weighted assets and capital requirements				1 077 934	86 235	83 408

1) EAD, exposure at default.
2) Due to transitional rules, the minimum capital adequacy requirements cannot be reduced below 80 per cent of the corresponding figure calculated according to the Basel I regulations.

The table shows the specification of risk-weighted assets and minimum requirements for total primary capital (own funds) under Pillar 1 of 8 per cent in the DNB Group. In addition to the minimum requirement, buffer requirements and Pillar 2 mark-up are calculated as shown in the table on the next page. See the additional Pillar 3 disclosures for a specification of risk-weighted assets and capital requirements for the DNB Group's most important subsidiaries.

BUFFER REQUIREMENTS

The combined buffer is a key element in the new capital adequacy regulations. The combined buffer is the sum of the capital conservation buffer, the systemic risk buffer, the buffer for systemically important institutions and, if applicable, a countercyclical buffer. These buffer requirements must be met by CET1 capital. The same applies to the Pillar 2 requirement, which is 1.8 per cent for DNB. If CET1 capital falls below what is required to meet the minimum requirement and the combined buffer, a capital plan shall be submitted to Finanstilsynet no later than five business days after failure to comply. In the case of violations of the buffer requirements, the company cannot pay dividends to shareholders, interest on mutual funds or bonus to employees without the consent of Finanstilsynet.

The institution-specific countercyclical buffer requirement for the DNB Group amounted to 1.7 per cent at the end of 2018. This requirement is set as a weighted average of the countercyclical buffers in the countries in which the bank operates. The total combined buffer requirement for DNB at year-end 2018 was 9.2 per cent. From the end of 2019, countercyclical buffer requirements will increase to 2.5 per cent both in Norway and Sweden; this will give an effect of about 0.4 percentage points for the institutional countercyclical buffer requirement.

Total capital requirements, 31 December 2018

NOK million	Rate	DNB Bank Group	DNB Group
Risk-weighted assets		1 051 159	1 077 934
Minimum Common equity Tier 1 capital requirement	4.5 %	47 302	48 507
MinimumTier 1 capital requirement	6.0 %	63 070	64 676
Minimum Total own funds requirement	8.0 %	84 093	86 235
Allocation of capital to cover minimum capital requirements			
Common equity Tier 1 capital		47 302	48 507
Additional Tier 1 securities		15 767	16 169
Tier 2 capital		21 023	21 559
Common equity Tier 1 buffer requirements			
Capital conservation buffer	2.5 %	26 279	26 948
Systemic risk buffer	3.0 %	31 535	32 338
Buffer for other systemically important institutions (O-SII)	2.0 %	21 023	21 559
Counter-cyclical buffer[1)]	1.7 %	17 239	17 829
Combined buffer requirement	9.2 %	96 076	98 674
Common equity Tier 1 capital vs combined capital requirements			
Common equity Tier 1 capital		173 159	176 831
Minimum capital requirement		(47 302)	(48 507)
Pillar 2 capital requirement	1.8 %	(18 921)	(19 403)
Buffer capital requirements		(96 076)	(98 674)
Surplus of Common equity Tier 1 Capital		10 860	10 247

1) Countercyclical buffer is 1.7 % for the DNB Group. For the DNB Bank Group the countercyclical buffer is 1.6 %.

The table shows the compliance with the minimum- and buffer requirements as at year-end. With respect to the minimum capital adequacy requirement, supplementary capital can represent up to 2 per cent and additional Tier 1 capital can represent up to 1.5 per cent.

The CET1 capital exceeded the total capital requirements by NOK 10.9 and 10.2 billion, respectively for the DNB Bank Group and the DNB Group.

INCORPORATION OF CRD IV AND CRR INTO THE EEA AGREEMENT

The EU's capital requirements legislation CRD IV and CRR is expected to be incorporated into the EEA Agreement during the first half of 2019. The regulatory framework has for the most part already been implemented in Norwegian law, but Finansdepartementet has underlined that provisions that are not in line with the EU legislation, will not be continued. This includes the Basel I floor for IRB banks and the exception from the SME supporting factor (small and medium-sized enterprises). The introduction of the SME supporting factor implies that the banks' capital requirement for loans to small and medium-sized enterprises will be reduced by approximately 24 per cent. The consequence of the annulment of the provisions that are not in line with the EU legislation is that DNB will need slightly less capital to achieve the same level of capital adequacy. Which implies that DNB can meet the increased countercyclical buffer requirement without having to build more capital.

2

Risk management and control in DNB

The ability to identify and manage risk is at the core of financial operations, and is a prerequisite for long-term value generation over time. The primary aim of risk management in DNB is to optimise the risk-earnings ratio in a long-term perspective.

CORPORATE GOVERNANCE AND GOVERNING DOCUMENTS

Corporate governance in DNB is about how the Board of Directors and group management governs and manages the company to preserve and develop the company's values in an optimal manner. Sound corporate governance and good leadership is a prerequisite for ensuring sustainable operations. The corporate governance of DNB shall ensure that DNB's business operations are conducted in a responsible and profitable manner, in the best interests of customers, shareholders, employees and other stakeholders.

DNB has four levels of corporate governance. Governance principles form the highest level in the hierarchy of governing documents. These principles provide the main framework for all governance of operations. They may be defined by legal requirements or include areas that are of particular significance. The principles describe the desired culture, behaviour, and division of responsibilities at the overall level.

DNB's governance principles include:

- purpose and values
- governance model and authorisation structure
- instructions for the Board of Directors and management
- ethical principles (Code of Conduct)
- corporate responsibility principles in DNB
- principles for risk appetite
- the company's Articles of Association

Policies are at the next corporate governance level. The policies specify the principles for conducting business activities within the Group's key areas of operation. The policies are intended to ensure that behaviour at the lower levels is within the governance principles, and describe the purpose and expected working methods of each area. The Board of Directors has approved eight policies for the DNB Group. The main policies involving risk management are a policy for risk management, a policy for compliance and a policy for security.

The group executive vice president for Group Risk Management owns the policy for risk management, which defines the principles for risk management in DNB.

DNB's policy for risk management defines six general principles:

- Everyone in DNB must understand and act on relevant risks in their own work.
- DNB shall have a defined risk appetite for all significant risk areas.
- Risk management in DNB shall be organised in a practical and appropriate manner.
- DNB shall establish strategies and/or limits for all significant risks.
- DNB shall carry out risk assessments in connection with significant changes in operations.
- DNB shall conduct periodic risk reporting.

The policy for risk management is elaborated according to several standards. A standard is the next level of corporate governance and covers more detailed areas than a policy. Standards have been established for capitalisation, product approval, stress test, credit risk, market risk and operational risk, among others.

The group executive vice president for Compliance owns the policy for compliance, which defines the principles for the responsibility and organization of compliance work. The policy is elaborated in a number of specific standards for anti-money laundering, privacy protection, anti-corruption, conflicts of interest and compliance with competition law, among others.

The compliance policy defines six general principles for compliance with applicable regulations:

- All employees are responsible for ensuring. compliance with external and internal regulations.
- DNB shall have sound management and control of compliance risk and the compliance risk in DNB shall be low.
- DNB shall have an independent and effective compliance function.
- The compliance function shall review compliance risk.
- The compliance function shall have a risk-based annual plan.
- The compliance function shall prepare periodic reports.

The Group policy for security includes protection against unwanted incidents such as crime, cyberattacks, terrorism, fraud, and internal misconduct. Security risk is risk associated with such incidents. Assessments of security risk are implemented as part of DNB's risk management process.

The security policy defines principles related to:

- employee responsibilities
- expedient organisation
- systematic and risk-based security work
- prevention
- identification and handling of security incidents
- evaluation and reporting

The lowest level in the hierarchy of governance documents consists of instructions and rules. The credit regulations, the personnel manual and the accounting manual are examples of documents at this level.

RISK MANAGEMENT AND CONTROL

The Group's risk appetite framework is decided by the Board of Directors and is reviewed and renewed at least once a year. The Board of Directors uses the risk appetite framework to determine DNB's long-term risk profile. The approved targets and limits of the risk appetite framework are reflected in other elements of risk management, such as limits on authorisations and business activity. Risk indicators that underpin the limits stipulated in the risk appetite framework, as well as other overarching limits and strategies, form part of the group's management and reward systems. The risk appetite framework is described in more detail later in this chapter.

DNB has a responsibility to help ensure that the banking industry delivers ethical products and services, and must make conscious choices about what should be offered, how and to whom it is delivered. DNBs ethical principles, Code of Conduct, describe the Group's ethical standards. DNB shall be characterised by high ethical standards and, furthermore, shall fulfil the needs of its customers and employees, the interests of society, DNB's business targets and the expectations of its owners. All employees and others who represent DNB are required to observe the Code of Conduct. Managers shall ensure that employees are familiar with and follow the rules, and that the principles are reflected in DNB's products, services, processes and procedures. DNB has a group ethics officer whose job is to prepare, communicate and improve the framework.

Working with corporate responsibility represents sustainability in practice. Corporate responsibility is also about how DNB creates values, both for shareholders and for other stakeholders (employees, customers and society at large). Corporate responsibility is an integral part of corporate governance and shall be taken into account in decision-making processes.

The Group's internal capital adequacy assessment process (ICAAP) is integrated with the governance processes by means of the risk appetite framework and general monitoring of risk trends. ICAAP is described in more detail in the chapter on capital management and ICAAP.

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Credit approval authorisations and position and trading limits are required for all key financial areas. The authorisations and overarching limits are decided by the Boards of Directors of DNB ASA and DNB Bank ASA and are delegated in the organisation. All further delegation of limits and authorisations must be approved and followed-up by the immediate superior. All authorisations in DNB are personal. Authorisations are granted on the basis of assessments of the relevant individual's expertise and experience, and the need from a business perspective. Information about the conditions attached to, and limits of, the powers entailed by authorisations is provided when the authorisation is conferred. All authorisations granted in DNB are documented and monitored. For more information about authorisations for credit approval, liquidity and market risk, see the chapters describing the individual risk areas.

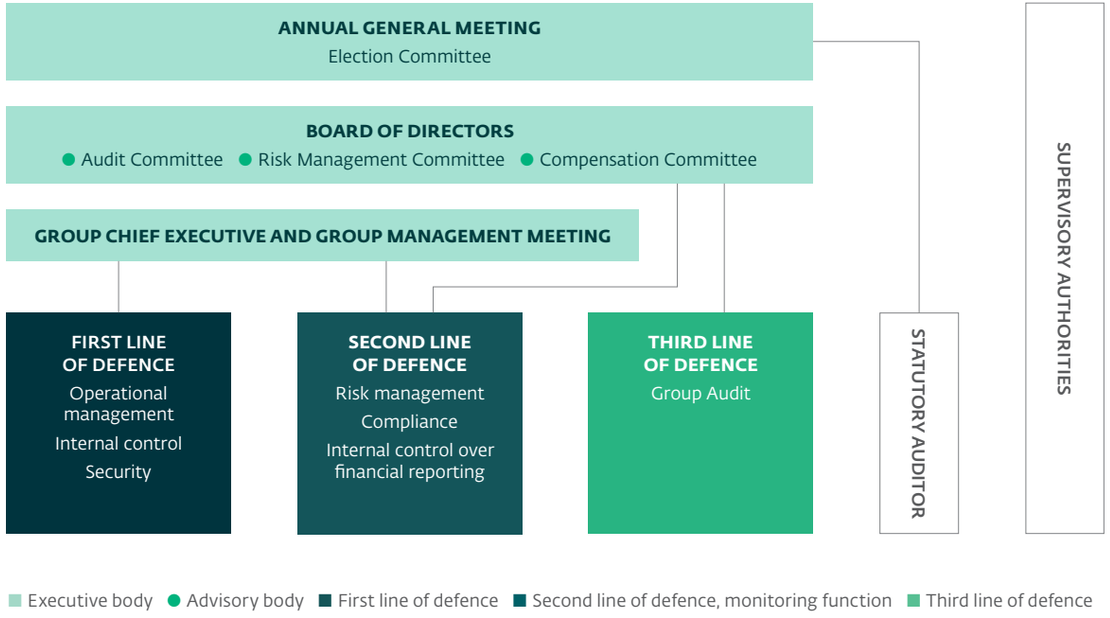
ROLES AND RESPONSIBILITIES

Risk management functions in DNB

The governing bodies and lines of defence in the DNB Group are illustrated in the figure.

Risk management and internal control are handled by three lines of defence:

- **The first line of defence** is the operations management's governance and internal control, including processes and activities to reach defined goals relating to operational efficiency, reliable financial reporting and compliance with rules and legislation. The operations management is responsible for all risk attached to the unit's activities and processes.
- **The second line of defence** is independent control functions that monitor and follow up the Group's operational functions. Autonomy is a prerequisite for the second line of defence, and means that internal control functions and tasks must be kept separate from the first line. The primary duties of personnel in DNB's second line of defence are reporting, monitoring and advisory services. Second line of defence functions in DNB are organised mainly under Group Risk Management and through the compliance function.
- **The third line of defence** is Group Audit, which reviews and evaluates group management's overall governance and internal control. Group Audit is independent of the Group's executive management and reports to the Board of Directors of DNB ASA.



Group Risk Management is headed by a group executive vice president, who is also the Chief Risk Officer (CRO) and reports directly to the group chief executive and, if necessary, directly to the Board of Directors. The CRO cannot be appointed or dismissed without the Board of Director's consent. Group Risk Management carries out the role of control function in charge of risk management. This involves ensuring that all significant risks in the Group are identified, measured and reported by the relevant organisational units.

Operational Risk Officers (ORO) are established in Group Risk Management who operate in all key business areas of DNB. ORO is tasked with following up that the first line records operational events, and that risk-mitigating measures are established. ORO quality controls risk reporting from the various areas. In addition, ORO assists when the first line conducts the annual process for assessing and verifying the quality of the internal control system. OROs in the international offices cooperate with and report to Group Risk Management. They also participate in the offices' management teams or in relevant Operational Risk Committees in the international offices.

The compliance function is headed by group executive vice president Compliance, who is also Group Chief Compliance Officer (GCCO). The compliance function shall ensure independent control of the reporting line to the Board of Directors and the group chief executive. The GCCO cannot be dismissed without the approval of the Board of Directors.

Group Compliance exercises the role of control function with responsibility for compliance with requirements set in law or regulation. This implies the control of policies and procedures to identify any risk that the company's obligations under the law and regulations are not being met, the assessment of effectiveness of policies and procedures and of measures taken to remedy lack of compliance with the regulations. Group Compliance shall also provide advice and guidance relating to compliance with external regulations as well as report on the status of compliance and compliance risk.

The Compliance function shall advise, monitor, control and report that DNB carries out its activities in accordance with external requirements. All business areas, staff and support units, international offices, and companies in the DNB Group with an extensive business scope shall have a local compliance function reporting to the GCCO as part of the Group's independent second line of defense. The function develops independent risk assessments and risk-based annual plans at both the group and local levels.

In line with the requirements of the new Money Laundering Act, DNB has appointed a group AML compliance officer as part of the compliance function. Furthermore, the Data Protection Officer (DPO) is

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organized in the compliance function. The DPO is an independent second line function that is to provide advice and guidance to management on privacy protection matters.

Group Finance is headed by a group executive vice president who is also the Chief Financial Officer (CFO) and is responsible for internal control of financial reporting.

DNB's Group Audit acts as the third line of defence and assists the Board of Directors in ensuring that the quality of all important aspects of the Group's risk management is satisfactory. Group Audit receives its instructions from the Board of Directors of DNB ASA, which also approves Group Audit's annual plans and budgets. Group Audit is responsible for ensuring the establishment and performance of adequate, effective risk management and internal control. Group Audit must also assess whether management processes and control measures are effective and contribute to the Group's target attainment.

Boards and Committees

Several advisory bodies have been established to help group executive vice presidents by preparing decision-making documents in addition to monitoring and control of various specialist areas:

- **The Asset and Liability Committee (ALCO)** is an advisory body for the Chief Financial Officer (CFO) for matters relating to the management of capital expenditure and the distribution of capital, as well as market and liquidity risk. In a risk management context, the committee is an arena for sharing information and coordinating the various units that handle the operative management of market and financing risk and Group Risk Management who sets the premises for the Group's risk-taking.
- **Three main credit committees,** The Group Advisory Credit Committee, the Advisory Credit Committee for Large Corporates and International, and the Advisory Credit Committee for Corporate Banking Norway are advisory bodies for decision-makers in the business areas and in Group Credit Management. The committees handle and endorse credit proposals by means of personal authorisations. The Group Advisory Credit Committee considers credit proposals for selected borrowers that are customers of more than one business area and advises the group chief executive and the Board of Directors when they consider large individual credit proposals. The Group Advisory Credit Committee plays a key role in formulating the Group's credit policy and Group standards for corporate social responsibility in connection with credit activity, and in the follow-up of credit strategies, rules for credit approval and portfolio risk management. The Advisory Credit Committees for Large Corporates and International, and for Corporate Banking Norway consider credit proposals that are within the scope of their decision-making authority for the respective business areas. The committees are also important consultative bodies for credit-related issues such as credit models, validation, risk reporting as well as business and credit strategies. The advisory credit committees are chaired by the group chief credit officer.
- **Advisory Group Operational Risk (AGOR)** is led by the group chief operational risk officer and helps develop the Group's operational risk management solutions to ensure effective and consistent monitoring and reporting throughout the Group. One of the committee's important tasks is to ensure that the Group's instructions for internal control and quality assurance are formulated in a manner that leads to value creation in connection with operations.
- **Responsible Investment Committee** manages and follows up the approved guidelines for responsible investments. The Committee gathers information about companies and ensures that cases are clarified as well as possible before a recommendation is made on exclusion. The committee makes recommendations to the heads of DNB Asset Management Holding AS, Group Investments and DNB Livsforsikring ASA. The committee is headed by the head of the Division for Corporate Responsibility and Public Affairs.
- **Five key resource teams** were created in 2018. The key teams are led by group executive vice presidents and will ensure interaction between the business and support areas to achieve effective achievement of strategy. The teams follow up on joint projects and manage priorities between areas. Key teams have been created for IT development, data, new business models, payment and expertise.

Group chief executive and the group management team

The group chief executive is responsible for implementing risk management measures that contribute to the achievement of targets the Board of Directors of DNB ASA sets for operations, including effective management systems and internal control. The group management meeting is the group chief executive's collegiate body for management at the group level. Major decisions concerning risk and capital management are generally made in consultation with the group management team. The group executive vice presidents for the business, support and staff areas take part in the group management meeting.

The Boards of Directors

The Board of Directors of DNB ASA is the supreme governing body for the Group's business operations and is responsible for ensuring satisfactory oversight of operations, financial reporting and asset management. The Board determines and follows up DNB's long-term risk profile through the risk appetite framework.

The Board of Directors of DNB ASA is responsible for ensuring that the Group is adequately capitalised relative to the risk and scope of operations, and that capital requirements are met. The Board of Directors monitors the Group's capital situation on an ongoing basis. This is discussed in more detail in the chapter on capital management and ICAAP.

Each year, the Board of Directors of DNB ASA reviews the group chief executive's report on the status of risk management and control, which includes assessments of the principal risk areas in the Group. The review documents the quality of the internal control and risk management efforts and identifies any weaknesses and needs for improvement. The Boards of Directors of DNB Bank ASA, DNB Livsforsikring AS and other major subsidiaries conduct equivalent annual assessments of the companies' internal control and key risk areas.

The Risk Management Committee of DNB ASA's Board oversees the Group's internal control and risk management systems as well as internal audit to make sure that they function effectively. The committee considers changes to systems and procedures that are presented to the Board of Directors for approval. In addition, the Committee provides advice on the Group's risk profile, including risk appetite, and the committee prepares the board's follow-up of risk development and risk management. Advice to the Board of Directors can be about strategies for capital and liquidity management, credit risk, market risk, operational risk, risk related to compliance and reputation, as well as other risks in the Group. The Committee consists of four members who are elected by the Board of Directors for two years at a time. DNB requires that the committee includes at least one member experienced in identifying, assessing and managing risk exposures of large, complex firms. The organisation of The Risk Management Committee and the quarterly risk management report to the Boards of Directors in DNB ASA adequately covers the requirements regarding this in the countries in which DNB operates. This includes the American CFR § 252.144 among others.

The Audit Committee of DNB ASA's Board supervises

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the process of financial reporting and considers whether the Group's internal control, including internal audit and risk management systems, works effectively. The committee shall further ensure that the Group has an independent and effective external audit. The Audit Committee reviews the DNB Group's quarterly financial statements. The committee conducts a thorough review of discretionary assessments and estimates in addition to any changes to accounting practices. The committee shall monitor internal control systems as well as the Group's internal audit, including ensuring that they work effectively, as well as evaluate changes to systems and procedures that are submitted to the Board of Directors for approval. It also deals with quarterly financial statements and proposed annual financial statements for DNB ASA and the DNB Group. Additionally, the committe deals with proposals for company- and group accounts for DNB Bank ASA and DNB Livsforsikring AS and the company accounts of DNB Boligkreditt AS.

The Compensation Committee makes recommendations on the Board of Directors' guidelines for remuneration to senior executives in accordance with Section 6-16a of the Public Limited Companies Act. The committee draws up proposals and makes recommendations to the Board of Directors about the remuneration awarded to the group chief executive in addition to advising the group chief executive on remuneration and other important personnel-related matters concerning members of the group management team and others who report to the group chief executive. The Compensation Committee has special responsibility for evaluating the remuneration system in the Group and ensuring that it is consistent with the management of the Group, including the risk appetite.

MONITORING AND REPORTING

The Group's risk situation is reported at least monthly to the group management team, and at least quarterly to the Board of Directors and the market. Group Risk

Risk reporting to the Board of Directors of DNB

Frequency	Report
Monthly	**Relevant issues concerning operational risk** The Board of Directors is kept informed of operational risk events and measures. **GCCO's Status Report** In June 2018 GCCO established a monthly status report. The Board of Directors is to be kept up-to-date on the compliance situation and risk aspects in the Group. The report is GCCO's independent assessment.
Quarterly	**The DNB Group's Risk Report** The report includes a broad review of the risk situation and changes to risk in the last quarter, with analyses and comments. The important element is the risk level measured against the risk appetite framework, the status of indicators specified in the recovery plan and monitoring the utilisation of limits set by the boards of DNB ASA, DNB Bank ASA and DNB Livsforsikring AS. Group management is given the status of risk appetite indicators every month. **The Subsidiaries' Risk Reports** Risk reports are prepared for all subsidiaries of DNB. The reports give the Board of Directors a comprehensive review of the risk picture in the company and developments in the preceding quarter, with emphasis on key risks. For the companies that have established their own risk appetite framework, monitoring of this is a central element of the risk reports.
Semi-annually	**GCCO's Semi-Annual Compliance Report** Group Compliance prepares a report on the status and development of the compliance situation for group management and the Board of Directors. The report is GCCO's independent assessment and shall provide a clear overall picture of compliance risk in the Group and form the basis for any action taken. **Status report of operational risk** The report is an assessment of the risk situation and the risk development within operational risk. The report is presented to group management and the Board along with the DNB Group's Risk Report semi-annually.
Annually	**The ICAAP Report (Internal Capital Adequacy Assessment Process)** The ICAAP report contains a detailed description of the DNB Group's process for self-assessments of risk and the capital situation, as well as analyses and an evaluation of the status at year-end. Separate assessments and ICAAP reports for major subsidiaries are included in the group report. The DNB Group's process for self-assessment of the liquidity situation, ILAAP (Internal Liquidity Adequacy Assessment Process), is an integral part of the ICAAP report. Group Audit performs a review of the ICAAP process in DNB, and a report containing the auditor's conclusions is considered in the same board meeting as the self-assessment. **Recovery Plan for the Group** The recovery plan, which is part of the crisis management regime for banks, is an integral part of the DNB Group's risk and capital management. Descriptions of various identified measures that could improve the Group's common equity Tier I capital ratio and liquidity situation in the event of a crisis, are an important element of the recovery plan. The plan is updated yearly. The status of defined recovery indicators is reported to the Board quarterly and to group management monthly. **Validation Report and IRB Compliance Report** Validation is a key element in the quality assurance of DNB's IRB system. The independent unit responsible for validation examines once a year the precision of all internal models used in the calculation of capital requirements. The results are presented to the Board of Directors in the validation report. Group Audit prepares an annual IRB compliance report showing compliance with IRB requirements. The report is considered by the Board of the bank at the same time as the validation report. **Status report on the management and control of operational risk** The report summarises the results of the internal control process carried out in all business and support areas and consists of a self-assessment of the quality of management and operations, and assessments of significant identified risks posed by operations. The summary to the Board of Directors specifies the most important risks across the Group and the proposed measures for reducing the risk.

Management has the primary responsibility for risk reporting in DNB. This applies to both internal risk monitoring and risk reporting to the market and authorities. All levels in the organisation shall have access to relevant, necessary risk data. Examining targets, limits and strategies is part of the internal risk-reporting process.

According to requirements set by the Board of Directors, the compliance function regularly reports the status and development of the compliance situation to the Board of Directors and group chief executive. Group management and the Board of Directors receive semi-annual reports. In addition, they receive regular status reports from GCCO on important issues. Local compliance functions regularly report to GCCO.

All employees in DNB have an obligation to report and deal with major events or deviations. Operational events and compliance breaches are to be registered in a loss and event database. Actions taken in respect of all major events and compliance breaches are to be registered, and status reported to the group management and the Board of Directors.

As a result of experience gained during the financial crisis, the Basel Committee has designed "Principles for effective risk data aggregation and risk reporting" (BCBS 239). The principles set the standards for management, infrastructure, quality and control in connection with risk data aggregation and risk reporting. DNB has established a project to ensure compliance with DNBs interpretation of the principles.

STRESS TESTING

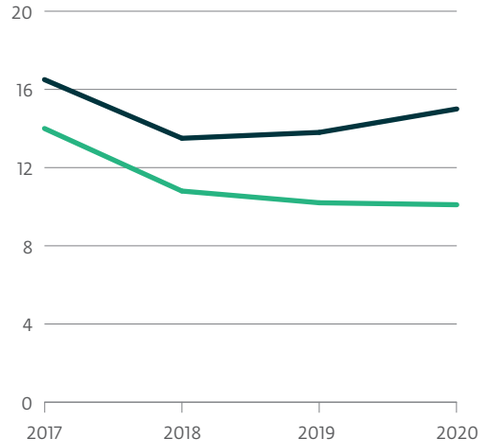
Stress testing is a key element in the assessment of the DNB Group's capitalisation and is also used in connection with financial planning. Stress tests are used to predict how changes in macroeconomic conditions will affect the need for capital. The group management team is involved in determining the scenarios and underlying assumptions that will be used in the stress tests and uses the outcome of such testing as a basis for strategies and action plans.

Stress testing is a second line function and is the responsibility of organisational units that are independent from the business areas. CRO has the overall responsibility for stress testing. Stress tests are presented to the Group Advisory Credit Committee or ALCO for their opinions, and are approved by CRO. CRO is responsible for recommending measures based on the conclusions of the stress tests.

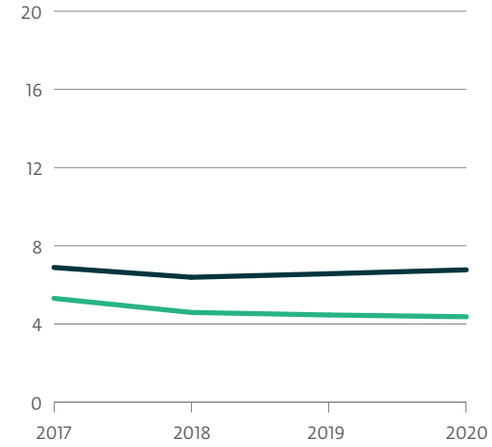
In addition to the Group's ICAAP stress test, annual stress tests of DNB Boligkreditt are performed in connection with the companies' capital assessments. For more information on the ICAAP stress test, see the chapter on capital management and ICAAP. Crisis scenarios also form part of the DNB Group's recovery plan. Individual credit portfolios are stress tested on the basis of more detailed assessments. For more information, see the chapter on credit risk.

In 2018, DNB participated in the stress tests of European banks coordinated by the European Banking Authority (EBA). The result of the stress test demonstrated that, in the most stressed scenario, the common equity Tier 1 capital ratio for the DNB Bank Group fell to 13.5 per cent at the end of 2018. DNB appeared as extremely solid, compared with the 48 European banks which took part as shown in the figures to the left. More information can be found on EBA's website.

CET1-ratio according to EBA's stress tests
Per cent



Leverage ratio according to EBA's stress tests
Per cent



RISK APPETITE

Risk appetite forms part of the strategic management of the DNB Group and consists of limits and assessment principles for the types of risks that are of particular importance for DNB. The risk appetite framework defines what is the acceptable risk level against which the Group's strategy and financial targets are to be assessed.

The risk appetite framework must be implemented throughout the organisation, by means of risk tolerances for and as a part of work with strategies and work planning in DNB. In some areas, risk indicators have been established on lower organisational levels to underpin the limits in the risk appetite framework. The risk indicators can be in the form of limits for quantifiable risk or qualitative assessments of the risk level. They need not be based on the same measurement parameters as the ones used at the group level, but it must be possible to link them to the same risk types and measure the same trends. The procedures for monitoring risk indicators are tailored to the individual business areas and are meant to ensure that risk is kept within the level stipulated in the risk appetite framework.

The risk level is measured against the risk appetite framework every month, and provides an overall summary of the risk situation in the DNB Group. The risk appetite framework contains 16 different risk dimensions, across different risk types and business areas. The table gives an overview of the framework and associated dimensions applicable at the end of 2018.

Risk types and associated dimensions in the risk appetite framework

Risk type	Dimensions
Profitability and earnings	→ risk-adjusted profit
Capital adequacy	→ common equity Tier 1 capital adequacy, the DNB Group and the DNB Bank Group → solvency margin DNB Livsforsikring, with and without transitional rules
Market risk	→ market risk as a percentage of financial capital → regulatory capital requirements for market risk, DNB Bank Group and DNB Livsforsikring
Credit risk	→ concentration risk towards industries and counterparties → credit quality (expected loss), total and per customer segment → annual credit growth, total credit portfolio and per business area
Liquidity risk	→ Liquidity Coverage Ratio measured against minimum requirements → Net Stable Funding Ratio → deposits to loans, DNB Bank Group
Operational risk	→ operational losses → stability of IT operations → forward-looking risk assessment, information security → forward-looking risk assessment, overall operational risk
Reputation risk	→ overall risk assessment, potential events and consequences

Governance principles for risk appetite

As part of the risk appetite framework, four governance principles have been defined that set out the procedures and responsibilities for the entire DNB Group.

- **Ownership:** The risk appetite framework is owned by the Board of Directors. All changes to the framework and the governance principles must be approved by the Board of Directors.
- **Responsibility:** Each risk appetite statement is owned by a coordinator in group risk management, who is responsible for monitoring and preparing action plans if defined risk levels are exceeded. The coordinator is also responsible for evaluating whether the measurement picks up satisfactorily on risk changes.
- **Annual review:** The risk appetite framework must be reviewed at least once a year. This review must be independent of the strategic and financial planning process.
- **Reporting:** Group management receives a monthly report on risk levels in the group in the form of a "status report". The Board of Directors receives quarterly status reports with comments and analyses.

MEASUREMENT AND MONITORING

Constant monitoring of risk appetite ensures that risks that are identified as the most significant at an overarching level are followed up and discussed by operative units in the organisation.

Risk appetite is reported to the Board through risk reports every quarter. In addition, group management is given a monthly report. The status is assessed against the risk appetite limits, and appears in the form of a green, yellow, orange, or red status light. Each status has a clear meaning, and defined action rules apply in the event of the breach of limit values, as follows:

- Breach of the yellow limit can be handled by the administration.
- Breach of the orange limit can be handled by the administration, but the Board of Directors shall be informed.
- Breach of the red limit shall be reported to the Board on the agenda for the next board meeting. Concrete proposals for possible countermeasures shall be presented and/or proposals for extending the limits for risk appetite.

RESOLUTION AND RECOVERY PLAN

Since 2013, the DNB Group has formulated recovery plans based on the recommendation from the European Banking Authority, EBA. The preparation of such a plan is required according to the EU's Bank Recovery and Resolution Directive, BRRD, which came into force in the EU as of 1 January 2015. From 2019 it has become a legal requirement in Norway for banks to have a recovery plan.

The recovery plan is prepared as an integrated part of the Group's risk and capital management framework and will be activated if pre-defined recovery indicators are breached. Recovery indicator breaches will trigger a thorough assessment of the situation and whether

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actions should be implemented. If the bank's recovery is not feasible, it will be subject to liquidation. The authorities will then be responsible for developing a plan for this phase. The recovery plan is meant to ensure that the Group can recover from a very serious stress situation without involving or getting support from the authorities. DNB has also submitted a liquidation plan, Living Will, to the US authorities concerning its operations in the USA.

DNB has a contingency plan for liquidity that includes descriptions of how the bank should handle a liquidity crises that either only affect the bank or affect the entire industry. Based on the types of crises that could affect the bank's liquidity situation and assessments done by ALCO and group management, Group Treasury sets up a plan for remedying the liquidity shortfall. The plan specifies triggers and time frames for all measures that are to be implemented, in addition to the priorities with respect to funding sources and costs of alternative solutions and the possible effect on the banks' capital coverage. Possible measures include making use of assets available as collateral, changing deposit terms, restricting lending and pledging holdings of collateral to raise money in the market for repurchase agreements (the repo market) and draw on central bank facilities.

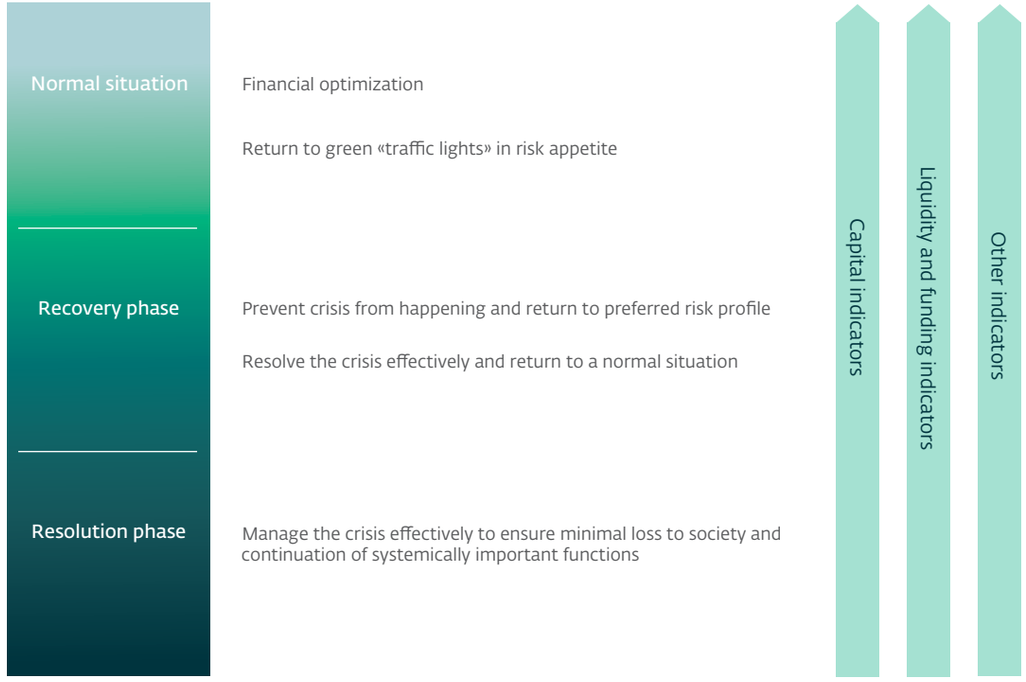
DNB has a hierarchy of contingency measures as illustrated in the figure on the next page. Because the risk appetite framework functions as an early warning system, there are a number of overlaps between indicators in the risk appetite statements and recovery plans. For common indicators, red lights in a risk appetite context coincide with threshold values (recovery threshold) in the recovery plan.

The recovery plan includes the following descriptions:

- strategic analysis of the DNB Group and essential social functions performed by DNB
- operational and legal dependencies within and outside the Group
- governance processes in recovery planning and recovery plan implementation
- crisis scenarios that could trigger a recovery situation.
- recovery measures that could improve the Group's capital adequacy and liquidity situation
- preparatory measures to ensure the effectiveness of the recovery measures
- communication plan in crisis situations

The recovery plan is updated annually and is then reviewed by Finanstilsynet (The Financial Authority of Norway) and the DNB collegiate body[1)]. The supervisory authorities may suggest improvements, but may also give direct orders for changes. In 2018, the group management conducted an exercise based on a crisis scenario where the recovery plan was tested. The indicators are reviewed monthly as part of the risk reporting to ALCO, and quarterly to the Board of Directors of DNB ASA.

1) The DNB collegiate body is composed of the supervisory boards of its subsidiary banks in the EU/EEA area



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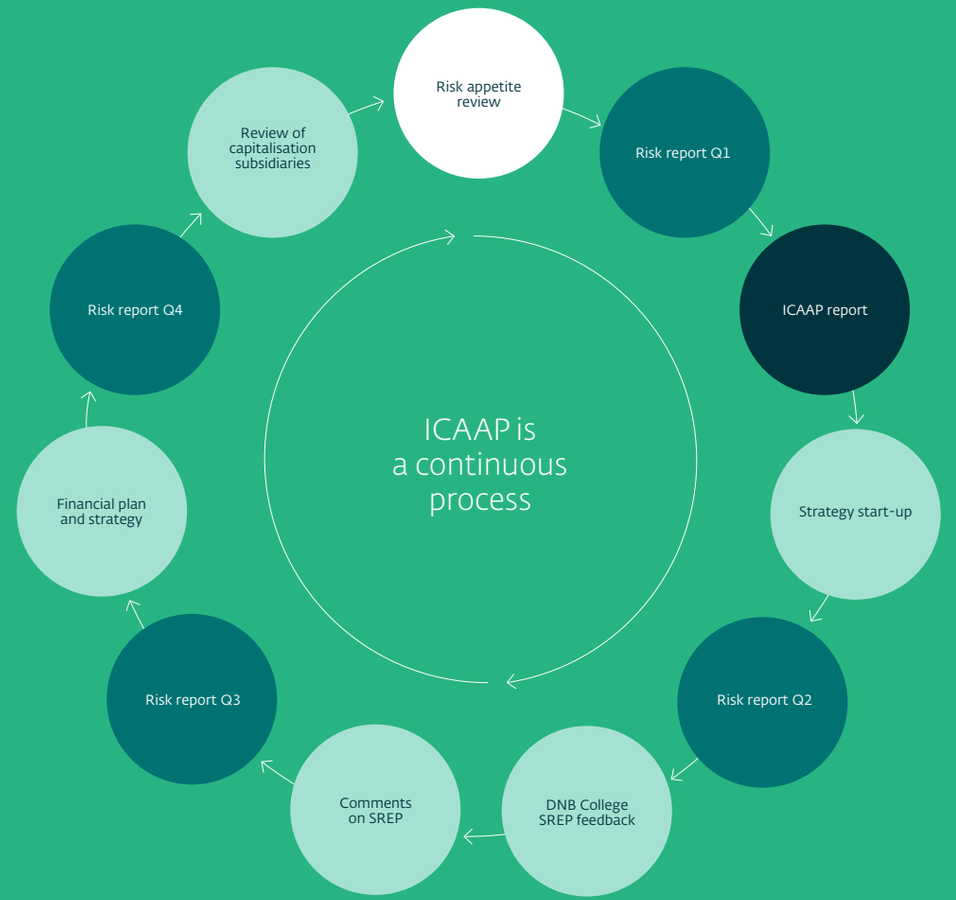
Capital management and ICAAP



Financial institutions are required to carry out an Internal Capital Adequacy Assessment Process, ICAAP, at least once a year. Capital adequacy assessments should be forward-looking and take into account business plans, access to capital markets and general economic conditions. The capital adequacy assessment process also has to cover risks which are not included when the minimum capital requirement stipulated by the authorities is calculated, and reflect that risk quantification is based on methods and data that contain uncertainties. The Group's liquidity and funding situation must be reviewed in the Internal Liquidity Adequacy Assessment Process (ILAAP) in connection with capitalisation. The supervisory authorities do annual assessments of the ICAAP and ILAAP processes and outcomes of these (Supervisory Review and Evaluation Process, SREP).

The figure on the first page shows the ICAAP activities in DNB during the year. Annual updating of risk appetite limits, financial plans and strategies and setting of financial target indicators are important elements of the ICAAP process. Quarterly risk reports are prepared for the Boards of DNB ASA and DNB Bank ASA and include assessments of the Group's capitalisation based on macroeconomic trends, risk exposure, the capital situation and expected future profitability. The Risk Management Committee and the Boards of DNB ASA and DNB Bank ASA receive risk reports at the same time as the Group's quarterly financial report, to enable the Group's financial performance to be weighed against changes in risk.

The targets and limits in the risk appetite framework are updated and renewed in the first quarter. The assessments in ICAAP, ILAAP and feedback from the supervisory authorities through the Supervisory Review and Evaluation Process, SREP, are important elements of the decision-making basis. Targets for capital adequacy, the solvency margin and liquidity risk are operationalised in the risk appetite framework. The risk appetite framework is subject to monthly review.

The Group's strategy and financial targets for the next three years are prepared in the second half of the year. The capital situation is a key element of strategic and financial planning. In the financial strategy process, the target for the Group's return on equity is converted to a required yield on allocated capital. A key principle of DNB's governance model is that the Group's capital requirements are to be fully allocated to the business areas. Economic capital, meaning capital requirements calculated by internal risk models, is one of several bases for capital allocation.

The Group's ICAAP is documented annually through a separate ICAAP report, which is presented to the Boards of Directors of DNB ASA and DNB Bank ASA and sent to Finanstilsynet (The Financial Supervisory Authority in Norway). An international supervisory collegiate body[1)] has been established for DNB and is headed by Finanstilsynet. The ICAAP report is part of the basis for the supervisory collegiate's assessment of the DNB Group's risk and capitalisation. Several of DNB's subsidiaries prepare their own ICAAP documentation, which is included in the Group's ICAAP.

ASSESSMENT OF RISK PROFILE, CAPITAL REQUIREMENTS AND REGULATORY CAPITAL LEVELS

The capital adequacy regulations specify a minimum primary capital (own funds) requirement based on risk-weighted assets that include credit risk, market risk and operational risk. In addition to meeting the minimum requirement, the bank must satisfy various buffer requirements. For more information on minimum and buffer requirements see the chapter on capital adequacy.

1) The DNB collegiate body is composed of the supervisory boards of its subsidiary banks in the EU/EEA area.

Finanstilsynet conducts assessments to determine whether there is a need by individual institutions for additional capital to cover risk elements that are not adequately covered by the basis of calculation for the minimum requirements and the general capital requirements (Pillar 1). These are referred to as the Pillar 2 requirements. In the event of non-compliance with all requirements, including the Pillar 2 requirements, the bank will be required to give Finanstilsynet an account of the reasons for the non-compliance and planned measures to address this. In such a situation, Finanstilsynet will have the same intervention options as in the event of non-compliance with the buffer requirements, but with a greater scope of action.

The main conclusion of Finanstilsynet's assessment in last year's SREP process was that, based on the prevailing risk level and external factors, the DNB Group was adequately capitalised as at 31 December 2017.

The Group's capital strategy and dividend policy justify the Group's position as one of the best capitalised financial services groups in the Nordic region based on equal calculation principles. Dividends are determined on the basis of factors such as the need to maintain satisfactory capital adequacy and changes to external regulatory parameters. DNB's capitalisation guidelines specify the targeted capitalisation level, the frequency of reviews of DNB's capital situation and the measurement methods that are to be used, such as capital adequacy and stress tests. The capitalisation guidelines are reviewed each year based on ICAAP and feedback from the authorities through SREP.

ECONOMIC CAPITAL

DNB calculates economic capital for all of the main risk categories. Economic capital shall correspond to 99.9 per cent of unexpected losses within a horizon of one year, i.e. economic capital should reflect a "millenial loss". A simulation model is used that calculates unanticipated losses for different types of risk and for the Group as a whole. The calculations cover all of the important business units, customers and products. The quantification is based on statistical probability distribution for the different types of risk, derived from historical data. In cases where the quality of the historical data is not good enough, discretionary estimates are used. The model simulates the risk of loss attached to the different risk categories individually, before calculating the total risk. A diversification effect arises when the risks are assessed together, since it is unlikely that all of the loss events would occur at the same time. Due to the diversification effects between different risk categories and business areas, the Group's economic capital ends up being lower than it would have been if all of the business areas had been independent companies.

INTERNAL ASSESSMENTS AND REGULATORY REQUIREMENTS

The key element in assessing financial strength and capitalisation is the comparison of risk with available loss-absorbing capital, including accumulated earnings. In addition, various stress tests will be important references.

The figure on the next page shows a comparison of economic capital and the regulatory minimum capital requirements in Pillar 1, which is 8 per cent of risk-weighted assets. Economic capital and regulatory policy are based on the same confidence level, the 99.9th percentile.

At the end of 2018, the internal risk calculation was lower than the regulatory minimum requirement. The difference is primarily attributable to the measurement of credit risk. The main reason for this is that 33 per cent of the credit portfolio, measured by risk-weighted assets, is measured according to the standardised approach in calculating the capital adequacy requirement. The

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standardised approach provides a higher risk weight than the IRB method. Internal classification models are used for calculating economic capital for all portfolios, regardless of whether the models have formal IRB approval. The credit portfolio is considered well diversified with respect to industries and therefore there is no calculated addition in economic capital for concentration risks against industries. There is a small add-on for concentration risk against individual customers.

The internal method (IMM) for calculating market risk is more conservative than the method used to calculate the capital adequacy requirement. The main difference is that equity investments in the banking portfolio are treated as credit risk in the capital adequacy calculations, with a risk weight of 100 per cent, and corresponding capital adequacy requirement of 8 per cent. Economic capital intended for the same investments is approximately 45 per cent of the exposure. The internal market risk measurement includes elements that are not covered by the regulatory Pillar 1 requirements. These are risk aspects covered by the Pillar 2 supplement in the regulatory capital requirement.

DNB has a significant profit risk related to basis swaps in the banking activities. These are derivative contracts that are used to convert funding in foreign currency to lending in Norwegian kroner. The contracts are valued on an ongoing basis at fair value in the financial statements and affect the bank's earnings. However, since the contracts in practice fall due for payment at maturity, value fluctuations will be neutralized over the life of the contracts. The risks associated with the value fluctuations in the basis swaps are included in the assessment of how large a margin DNB should allow to the regulatory requirements.

Market risk in life insurance operations is treated separately with regard to economic capital. Asset volumes, asset mix, the size of buffer capital and the rate of return guaranteed to customers are taken into account. The model also calculates the risk of accounting losses resulting from the liability adequacy test.

The capital adequacy requirement for insurance operations depends on the amount of equity and other subordinated capital injected by the rest of the Group into the insurance arm. The measurement methods are therefore fundamentally different. DNB's model generally measures the risk as higher than what follows from the capital requirement.

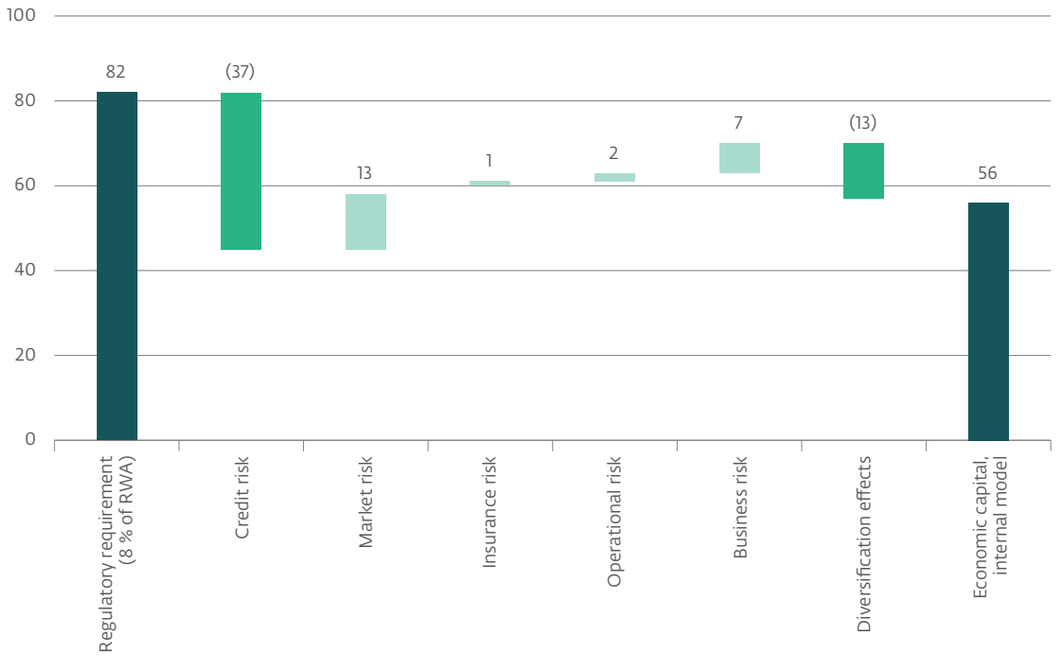
SYSTEMIC RISK

In accordance with Norwegian regulations, banks' ICAAP should include an assessment of systemic risk. In the EU's capital adequacy regulation, systemic risk is

Economic capital, DNB Group

NOK billion	31 Dec. 2018	31 Dec. 2017
Credit risk	37.5	40.2
Market risk	7.4	7.8
Market risk in life insurance	7.4	3.5
Insurance risk in life insurance	0.8	0.8
Non-life insurance risk	0.6	0.6
Operational risk	8.9	8.5
Business risk	6.8	6.1
Gross economic capital	69.3	67.5
Diversification effect	(13.1)	(11.2)
Net economic capital	56.2	56.2
Diversification effect in per cent of gross economic capital	18.9	16.6

Comparison of capital requirements and economic capital
NOK billion



defined as the risk of disruptions to the financial system that have potentially serious consequences for the financial system and the real economy. The drivers of systemic risk are often factors that are already included in risk assessments, such as house price movements. In order to assess whether the systemic risk entails an increase in capital requirements, the measures that have already been implemented to cover such risk must be reviewed.

A high household debt-to-income ratio, high housing prices and the Norwegian economy's dependence on oil prices are factors that increase systemic risk in Norway. However, these are counteracted by other characteristic features of the Norwegian economy, such as a national currency, an independent monetary policy, considerable fiscal flexibility and a strong social security network. Risk in the housing market has been addressed by means of higher risk weights for residential mortgage loans in the calculation of the banks' capital adequacy requirements, and requirements for down payments, payments of principal and debt servicing capacity in the Regulation on Requirements for Retail Mortgage Loans.

The analyses of the international rating agency Standard and Poor's (S&P) are partly based on the Banking Industry Country Risk Assessment (BICRA), which covers key systemic risk elements. Like Sweden and a handful of other countries, Norway has a very good S&P score. Furthermore, the Norwegian financial sector is relatively small in relation to most other comparable European countries. DNB therefore considers systemic risk to be relatively low in Norway.

STRESS TESTING OF CAPITAL

At least once a year, an extensive stress test is presented to the Board of Directors as a basis for evaluating whether the Group's risk profile is satisfactory. This is normally done in connection with the Group's ICAAP report.

The ICAAP stress test assumes a significant deterioration of macroeconomic conditions and shows how this could affect the Group's total risk situation, profit performance and capitalisation. A stress scenario based on relevant risk factors is worked out as the basis for the annual stress test. The scenario is reviewed by ALCO and approved by the CRO. In the stress test, calculated loan losses are used in accordance with IFRS 9. The Group's model for calculating economic capital is used to estimate losses related to market risk and operational risk.

In the ICAAP stress test for 2019, emphasis was placed on the following macroeconomic risk factors:

- House prices plummet. This has ripple effects in the form of a drop in private consumption and investments, which leads to significant weakening of Mainland GDP and increased unemployment.
- Protectionism and a large-scale trade war accelerates in 2020 and leads to a global trade war. US Customs and other trade barriers against China and other traditional allies such as Europe, Japan and Canada are met by similar countermeasures, weakening global growth.
- A Chinese recession occurs in 2020, triggered by major imbalances in the Chinese economy. A strong drop in Chinese GDP leads to a global downturn. Long fixed-income securities and stock markets fall internationally.
- Oil prices fall due to a combination of a steep drop in global demand for energy, and poor cooperation between the member countries in the Organization of the Petroleum Exporting Countries (OPEC).

The economic shocks were converted into specific development paths for key macro variables. The most important ones are described below. The national shocks were believed to take place from early 2019 to be further exacerbated by an international crisis in 2020. The macroeconomic scenario and its assumptions were thought to correspond to a 50 year crisis in the worst year. The stress was set so that the bank should operate with a loss in at least one of the projection years.

The macro economic scenario and its assumptions are as follows:

- Mainland GDP growth drops from 2.3 per cent to minus 1.3 per cent the first year. The mainland economy shrinks by 3.5 per cent in the first three years. The GDP growth rate assumed in this scenario is based on historical data, as well as important macroeconomic variables for the Norwegian economy.
- The oil price drops to USD 30-35 per barrel. Oil investments on the Norwegian continental shelf decline significantly.
- The unemployment rate rises to around 6.3 per cent, which is higher than the level in the beginning of the 1990s.
- House prices drop by more than 30 per cent. Households respond to falling house prices, declining real wage growth and an uncertain labour market by reducing their spending and increasing their rate of savings. This in turn reduces economic growth even more.
- The key policy rate has been cut to zero but higher money market premiums, especially in the beginning of the scenario will hold 3-month NIBOR at around 0.6 to 1.6 per cent throughout the stress test period.
- The GDP of Norway's trading partners falls steeply in 2020. Moreover, weak growth in the global economy and Norwegian exports of traditional goods and services are weakened substantially despite a weakening Norwegian krone.

The results of the stress test showed negative results in two out of four years. The negative profits are primarily due to a drop in interest income and substantial loan losses. Common equity Tier 1 capital ratio drops to 14.9 per cent in the first year, until positive results restore it to 16.4 per cent towards the end of the period.

In addition to DNB's own stress testing, Finanstilynet carry out an annual stress test of DNB. American regulatory requirements for stress testing are therefore fulfilled according to CRF § 252.146.

4

Liquidity risk and asset and liability management

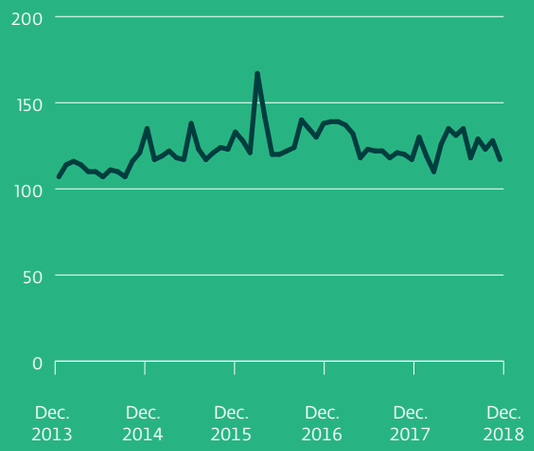
DNB had good access to both long-term and short-term funding throughout 2018. The activity in the markets for long-term funding was more volatile in 2018 than in previous years. The markets for short-term borrowing in Norwegian kroner were price-sensitive to a bigger extent than before, with higher prices.

DEFINITION

Liquidity risk is the risk that the Group will be unable to meet its obligations as they fall due, or will be unable to meet its liquidity obligations without a substantial rise in associated costs. Liquidity is vital for financial operations, but as a rule this risk does not materialise until other events give rise to concern about the Group's ability to meet its financial obligations.

Development in total LCR, DNB Bank Group

Per cent



Liquid assets

NOK billion

490 (621)

Total net long-term debt securities

NOK billion

604 (598)

Average LCR in 2018

Per cent

127 (126)

DEVELOPMENTS IN LIQUIDITY RISK IN 2018

DNB seeks to maintain well-diversified funding, which includes a broad deposit and funding base from personal and commercial customers. However, the Norwegian funding market is relatively small, and DNB relies on international funding in various currencies.

DNB had good access to both long-term and short-term funding throughout 2018. In 2018, the markets for short-term borrowing in Norwegian kroner were price sensitive to a greater extent than previously, which led to increased prices. The price drivers were increased funding requirements of DNB's Scandinavian peers and an increased supply of short-term sovereign debt. The increased demand for short-term funding gave the investor base a greater choice, and the issuers had to adapt to investors' price expectations.

The activity in the markets for long-term funding was more volatile in 2018 than in previous years. The activity was good in the first quarter with a high turnover and low credit spreads, which suited the issuers. Many issuers expected the credit spreads to increase and therefore wanted to obtain long-term funding at favourable levels. In March 2018, when the European Central Bank (ECB) started scaling back on the quantitative easing, credit spreads rose and funding costs increased for both covered bonds and senior bonds. The movement was further reinforced by global political uncertainty. Through the third quarter, there was a large supply of new covered bonds, but credit spreads remained stable until October. The ending of the European Central Bank's (ECB) quantitative easing and political uncertainty relative to Brexit and the trade conflict between USA and China among others, created uncertainty in financial markets in the fourth quarter. Credit spreads increased considerably for all debt instruments, but DNB still had good access to long-term funding at attractive levels. In the fourth quarter, the market for senior bonds was affected by the issuance of subordinated senior debt in preparation for the forthcoming requirement of Minimum Requirement for Own Funds and Eligible Liabilities (MREL). The MREL is an EU requirement stating that banks must have a minimum amount of own funds and eligible liabilities that can be written down or converted into equity (bail-in) when a bank is close to liquidation. On 1 January 2019, the new rules on deposit guarantees and crisis management took effect. The regulation on amendments to the Financial Services Regulation provides further rules on how the minimum requirement for convertible debt (MREL requirement) shall be determined for the individual bank, including that it must be fulfilled by liabilities with lower priority than ordinary liabilities. In addition, the regulation gives authority to Finanstilsynet (the Financial Supervisory Authority in Norway) to establish interim rules that correspond to complementary EU regulations, until the regulations are incorporated into the EEA Agreement. It is not decided what the requirement of subordinated debt in MREL will imply for DNB, but it is expected to be completed during 2019.

The Liquidity Coverage Ratio (LCR), establishes requirements for the bank's liquidity reserve, both in total and in the main currencies – euro, US dollars and Norwegian kroner. There is a minimum requirement for LCR of 50 per cent in NOK and 100 per cent in other significant currencies. The LCR stayed well above the minimum requirement of 100 per cent throughout the year and reached 117 per cent at the end of December. The table below shows the LCR in the main currencies and in total at year-end 2017 and 2018.

LCR development, significant currencies, DNB Bank Group

Per cent	EUR	USD	NOK	Total
31 December 2018	190	243	65	117
31 December 2017	191	137	93	117

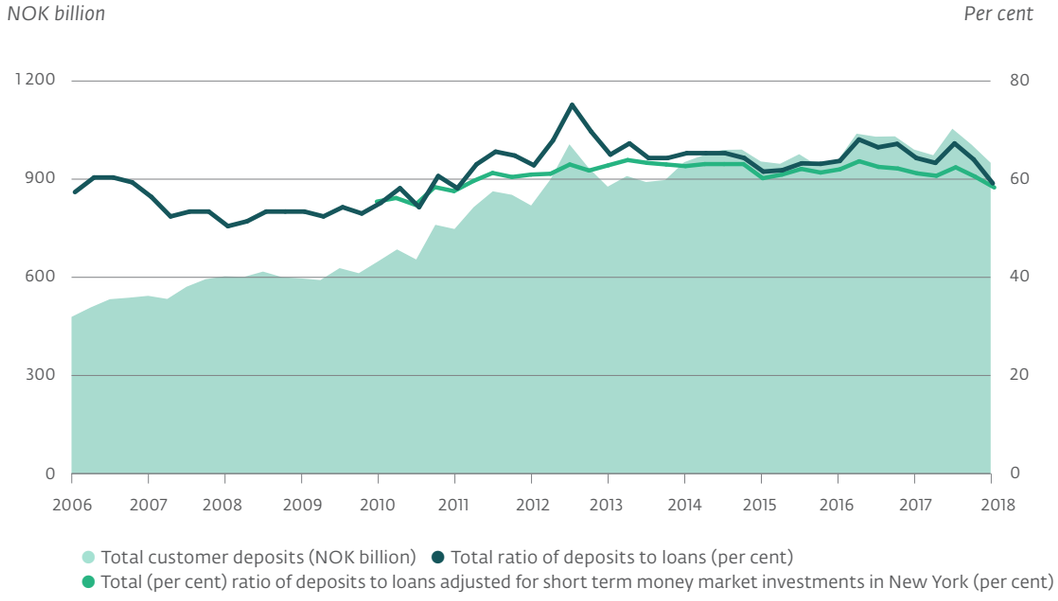
The long-term liquidity risk target, NSFR, defines illiquid assets, including lending to customers, which must be funded by stable funding sources. Customer deposits, equity and borrowing with more than 12 months of residual maturity are considered to be stable funding sources. DNB has an internal target for NSFR and it is measured monthly. NSFR has been above the internal target throughout 2018.

FUNDING

The DNB Bank Group 's deposit to loan ratio, measured as customer deposits as a share of net lending to customers, and following adjustment for short-term money market positions, decreased from 61.7 per cent at the end of 2017 to 58.2 per cent at the end of 2018. This is due to divergent growth in borrowing and lending volumes between business areas with a high deposit to loan ratio and business areas with a historically low deposit to loan ratio.

The DNB Bank Group's lending to customers increased by NOK 67 billion, which corresponds to 4.4 per cent in 2018. Customer deposits decreased by NOK 14 billion, corresponding to -1.5 per cent.

Customer deposits and ratio of deposits to loans, DNB Bank Group



Average term to maturity for long term funding, senior debt and covered bonds, DNB Bank Group

Years

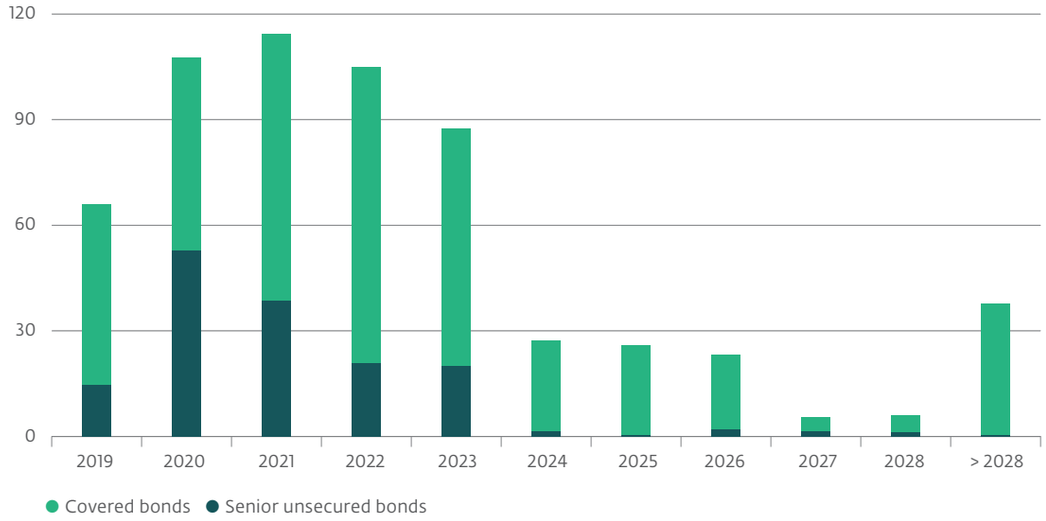
The nominal value of long-term debt securities issued by the Group totalled NOK 604 billion in 2018, compared to NOK 598 billion the previous year.

The figure above shows the development in average term to maturity for long-term funding of senior unsecured bonds and covered bonds. At year-end 2018, the average residual maturity for debt securities issued was 4.1 years, compared to 4.0 years at the end of 2017. The average maturity has been around 4 years in the last few years.

The figure to the right shows the maturity-profile of the long-term funding in senior unsecured bonds and covered bonds. The maturity profile is about the same level as last year.

Long-term funding, maturity profile, DNB Bank Group

NOK billion



Issued senior debt and covered bonds, DNB Bank Group

	Senior debt		Covered bonds	
NOK billion	NOK	Currencies	NOK	Currencies
31 December 2018	6.7	147.5	70.9	380.8
31 December 2017	9.2	150.5	72.2	366.3

Ordinary senior bond funding is mainly issued through the European Medium Term Note (EMTN) programme. Senior bond programmes have also been established in US dollars and Japanese yen. Covered bond programmes have also been established in Europe and the USA. The national covered bond market in Norway has become larger than the Norwegian government bond market and is as liquid. The covered bond is an important instrument for long-term funding in DNB and is issued by DNB Boligkreditt. Investors are provided with security in the companies' portfolios of residential and commercial real estate loans. Covered bonds have proved to be a more robust and lower priced funding instrument in turbulent periods than ordinary senior bonds.

DNB uses a number of short-term commercial paper programmes for short-term funding. These programmes provide DNB with good access to short-term funding as well as considerable flexibility with respect to catering to investors' interests. They also contribute positively to the bank's liquidity needs. In addition, DNB attracts substantial funds from other banks, central banks and money market funds in the form of deposits and excess liquidity. Together with commercial paper funding, they constitute a short-term liquidity buffer.

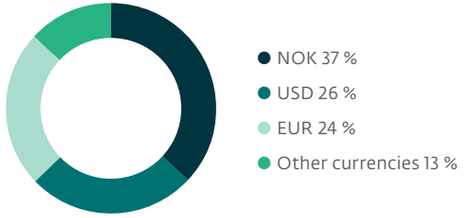
LIQUID ASSETS

As an element of its ongoing liquidity management, DNB needs to hold securities in the form of bonds as well as other liquid assets, such as deposits in other banks and central banks. DNB is a bank with a good credit rating in a strong economy, and attracts substantial funds from other banks, central banks and money market funds. The funds include deposits and excess liquidity from national and international banks, which, together with commercial paper funding, serve as a short-term liquidity buffer.

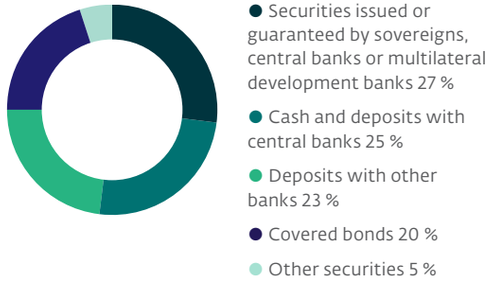
Among other things, the securities are used as collateral for short-term loans from central banks and are an element of the liquidity buffers for ensuring fulfilment of regulatory liquidity requirements.

Total liquid assets amounted to NOK 490 billion at the end of the year.

Liquid assets split by currency, DNB Bank Group, 31 December 2018
Per cent



Liquid assets split by asset type, DNB Bank Group, 31 December 2018
Per cent



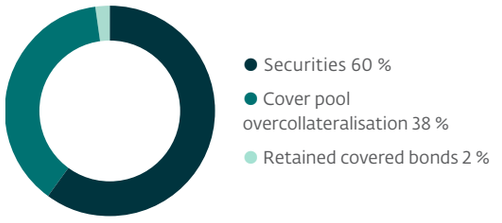
PLEDGED ASSETS

The use of covered bonds has contributed to raising awareness of pledged assets. The proportion of loans secured by pledged assets is high in Norway. This is because Norway has no securitisation market and almost all loans are kept on the banks' balance sheet. In addition, the home ownership rate is high in Norway and this ownership is loan-financed. The current level of pledged assets is comfortable considering the Group's diversification, capitalisation and liquidity.

At the end of 2018, pledged assets amounted to NOK 520 billion, which amounted to 28 per cent of the DNB Bank Group's balance sheet. Covered bonds (residential property) comprise 88 per cent of the pledged assets.

In addition to the already pledged assets, DNB owns assets that are available for secured funding. The value of assets available for secured funding was NOK 549 million by the end of 2018. The figure shows the distribution by asset type.

Additional assets available for secured funding, DNB Bank Group, 31 December 2018
Per cent



THE BOND PORTFOLIO

The bank's bond portfolio consists of an international portfolio and a Norwegian portfolio. At year-end 2018, the total bond portfolio amounted to NOK 166 billion. The Norwegian portfolio amounted to NOK 84 billion. Of this, NOK 35 billion comprised of Norwegian government securities and second level 1 assets issued by the public sector. Other level 1 assets in the form of covered bonds accounted for NOK 44 billion while the remainder consisted of level 2A assets. Level 1 and level 2A refer to the categorisation of liquid assets within the LCR framework, where level 1 represents the most liquid assets.

The international liquidity portfolio totalled NOK 82 billion at year-end, consisting of a trading portfolio and a portfolio of foreign currency bonds. The trading portfolio amounted to NOK 77 billion with AA rating or better.

Public sector bonds aggregated to 63 per cent of the portfolio and the remainder consisted of covered bonds. The weighted average maturity of the trading portfolio was 2.2 years and the change in value resulting from a one basis point change in spreads was NOK 16.7 million at year-end 2018.

RATINGS

Credit ratings are forward-looking and are meant to reflect how future events could impact the issuer's creditworthiness. The credit rating represents the rating agencies' assessment of the issuer's capacity and willingness to meet financial obligations on time. Strong credit ratings issued by recognised rating agencies are thus important for ensuring predictable, flexible access to funding.

Credit Ratings of DNB Bank ASA

Rating agency	Rating	Latest rating report	Latest rating action
Standard & Poor's	Short term: A-1+ Long term: AA- Outlook: Stable Resolution Counterparty Rating: AA- (LT)	S&P rating report – January 2019	22 Jan. 2019
Moody's	Short term: P-1 Long term: Aa2 Outlook: Negative Counterparty Risk Rating: Aa1 (LT)	Moody's Credit Opinion – January 2019	16 Mar. 2016
Dominion Bond Rating Service (DBRS)[1)]	Short term: R-1 (middle)[1)] Long term: AA (low)[1)] Outlook: Stable[1)]	DBRS rating report – August 2018	29 Sep. 2015
Scope Ratings[1)]	Short term: S-1[1)] Long term: AA-[1)] Outlook: Stable[1)]	Scope rating report – March 2018	2 Feb. 2017

1) Unsolicited rating

A short-term credit rating is an expression of the probability of an issuer failing to meet its financial obligations in the current year, and of the expected financial loss resulting from non-fulfilment of the obligations. A long-term credit rating is an expression of the same probability but over a period of one year or more.

In January 2019, the rating agency Standard & Poor's (S&P) upgraded DNB's short-term credit rating from A-1 to A-1+ and the long-term credit rating from A+ to AA-. This means that DNB has an AA credit rating from both Moody's and S&P.

MANAGEMENT AND CONTROL OF LIQUIDITY RISK

The Group's risk appetite framework defines the limits for liquidity management in DNB. Internal limits are established for the LCR, NSFR and ratio of deposit to loan for the banking group. Risk appetite is operationalised through DNB's liquidity strategy and limits. These must be approved by the Board of Directors at least once a year. The corporate policy for financial management and reporting supports the risk appetite framework. The Group policy is elaborated in a standard for managing liquidity risk and sets out more detailed requirements for organisation, the division of responsibilities and risk reporting.

In line with the bank's operations in general, liquidity risk should be low and bolster the bank's financial strength. This implies that the bank should seek to have a balance sheet structure that reflects the liquidity risk profile of an international bank with AA level long-term credit ratings issued by recognised rating agencies. Maintaining a low risk profile calls for adequate diversification of the sources of funding with respect to both contractual counterparties and instruments.

The DNB Bank Group's liquidity risk management is centralised and has been delegated to DNB Bank ASA. The liquidity risk in branch offices and subsidiaries is consolidated in the banking group's balance sheet and included in the basis for the banking group's liquidity management. Liquidity risk within the banking group is managed on both the consolidated and individual levels. DNB ASA is funded by the banking group and its primary function is to be a financially sound and mainly equity-based owner.

The subsidiaries in DNB ASA; DNB Livsforsikring AS, DNB Forsikring AS and DNB Asset Management, manage and administrate customer assets. This management is covered by internal liquidity rules in the respective companies.

Group Treasury is responsible for providing funding to subsidiaries and branch offices outside Norway. DNB Bank ASA and DNB Boligkreditt AS have entered into a bilateral agreement that regulates the coordination of funding and liquidity between these two entities. Group Treasury is responsible for ensuring that the Group stays within the liquidity limits at all times. The unit is also in charge of managing the bank's liquidity portfolio. Group Treasury's liquidity risk responsibilities are part of the Group's first line of defence.

The organisation of liquidity management in DNB is based on a clear authorisation and reporting structure and is in conformity with the Norwegian regulations on prudent liquidity management. The Boards of Directors of DNB Bank and DNB set the limits and guidelines and regularly review the bank's liquidity risk. Liquidity limits are determined annually or more often when needed. The principles and limits for liquidity management are drawn up in cooperation between Group Treasury and Group Risk Management through the note on Limits and Strategy for Liquidity Risk Management in DNB Bank Group. These are endorsed in the Asset and Liability Committee (ALCO) before being decided by the group management and the Board of Directors.

The limit structure for liquidity risk is in conformity with the structure in the EU capital requirements regulations. The liquidity risk is controlled internally through the short-term liquidity risk requirement, LCR, as well as the long-term structural liquidity risk target NSFR. In addition, the Group has limits for internal liquidity indicators that supplement LCR on a shorter and longer horizon. The objective of the liquidity risk limits is to reduce the bank's dependence on short-term funding from domestic and international money- and capital markets. The reason for this is that funding from such sources tends to be more credit- and market sensitive than ordinary deposits.

The liquidity risk and the utilization of liquidity limits are reported regularly and monitored by the Group Treasury, the risk management unit in DNB Markets and Group Risk Management. LCR, its limits and operational liquidity are reported daily, whereas NSFR and its limits are calculated and reported monthly. LCR, NSFR and the ratio of deposits to loans are reported monthly to ALCO and group management and quarterly to the Board of Directors through the Group's risk report.

The risk management unit in DNB Markets is responsible for reporting deviations from liquidity risk limits to the relevant parties and committees. Deviations from the limits for LCR and NSFR are immediately reported to Group Treasury, Group Risk Management, and to the group executive vice president DNB Markets and CFO. The CFO reports on to group management and ALCO. Deviations are reported to the Board at least quarterly as part of the Group's risk report.

The credit ratings of the underlying securities in the bond portfolio are continuously monitored and reported. Monitoring of market risk in the liquidity portfolio is discussed in the chapter on market risk.

A contingency plan for liquidity has been prepared and is discussed in the chapter on risk management and control in DNB.

STRESS TESTING LIQUIDITY RISK

The bank conducts regular stress tests to ensure that DNB has sufficient liquid assets to cope with difficult situations in a satisfactory manner. The bank must periodically assess the assumptions on which liquidity risk management is based. Among other things, this implies a reappraisal of the assets the bank holds that can be classified as liquid, and that can be used as collateral in Norges Bank, the Central Bank of Norway, or other central banks. The degree to which assets defined as stable meet the requirements for stability in a stressed situation is also assessed. Stable liabilities are the portion of the bank's funding that are not deemed likely to fluctuate substantially in the short-term. Examples include deposits from customers, equity capital and long-term covered bonds.

DNB simulates the liquidity effect of a downgrading of the bank's credit rating due to one or more negative events. The results of the stress tests are included in the bank's contingency plan for liquidity management during a financial crisis. The effects that a financial crisis lasting for up to 12 months could have on liquidity are tested. The stress tests differentiate between a financial crisis that only affects the bank, a so-called bank-specific crisis, a crisis that affects the banking industry in general, a so-called systemic crisis, and a combination of the two. Applied stress testing factors are derived from historically observed data. Expert assessments are used in cases where the available data is limited, or market developments are deemed to be of little relevance. The stress factors are continuously assessed by Group Treasury in connection with the implementation of the stress test.

The need to strengthen DNB Boligkreditt's cover pool in a stressed situation is quantified in an extended stress

→

test. This stress test estimates the bank's potential liquidity exposure in the event of a steep fall in housing prices combined with a major change in the market value of the derivative contracts between DNB Boligkreditt and DNB Bank. A weakening of the Norwegian krone is the factor that has the greatest effect on changes in the value of the derivative contracts. This counterparty credit risk is reported weekly and is closely monitored and managed by Group Treasury.

A reverse liquidity stress test is used to identify circumstances that could drain the bank's liquidity reserves in the longer term. The combined stress scenario described above is used as the point of departure. In addition, it is assumed that there will no longer be a market for issuing and refinancing covered bonds, and that the bank experiences that large corporate customers withdraw their deposits. A calculation is then done to determine the amount of deposit attrition among private individuals and small businesses the bank can withstand in the course of 30 days before its liquidity reserves become negative.

The stress tests are performed each quarter, and the results are reported to the bank's Board of Directors. The stress tests provide information about potential challenges to the funding situation and form the basis for the Group's contingency plans, including the setting and possible adjustment of liquidity limits.

The liquidity stress tests in DNB are considered to cover all requirements relating to liquidity risk in all countries in which DNB operates. This includes the principles and requirements of the Basel Committee and the US CFR article 252.145.

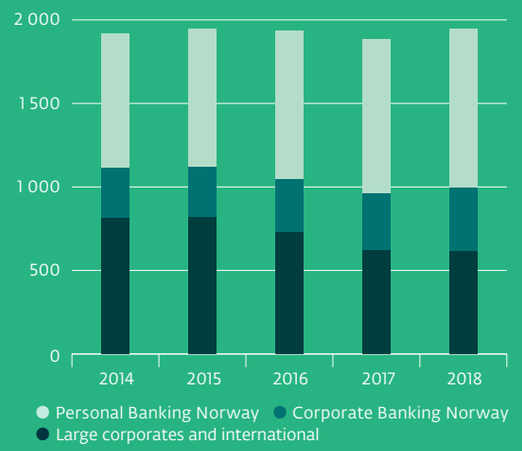
5
Credit risk

DNB's credit portfolio has been stable throughout the year. The portfolios of retail mortgage loans and loans to small and medium-sized enterprises in Norway grew steadily and incurred very low losses in 2018. The large corporate customer portfolio has been rebalanced, and the exposures to shipping and oil related industries have been substantially reduced. There are still challenges in the offshore sector, but funding and liquidity are assured for most of DNB's customers for the next few years.

DEFINITION

Credit risk is the risk of financial losses due to failure on the part of the Group's customers to meet their payment obligations towards DNB. Credit risk is attached to all claims against customers, primarily loans, but also liabilities in the form of other extended credits, guarantees, interest-bearing securities, undrawn credits, derivative trading and interbank deposits. Credit risk also includes residual risk and concentration risk. Residual risk is the risk that the value of securing an exposure is lower than expected. Concentration risk is risk associated with large exposures to a single customer, concentration within geographical areas, industries or with homogeneous customer groups.

Development in total credit portfolio, EAD, DNB Bank Group
NOK billion



Capital requirements
NOK billion

74.1 (70.7)

Economic capital
NOK billion

37.5 (40.2)

Net credit loss
NOK billion

-0.1 (2.4)

THE FOLLOWING COMMITMENT CATEGORIES ARE USED IN THIS CHAPTER:

- EAD is the sum of the drawn amount and the unutilised credit multiplied by a credit conversion factor (CCF) and before impairment, but after write-offs. Central governments, banks and equity positions are not included.
- Net exposure is the nominal amount after impairment and write-offs. The figures differ from exposures that show risk-weighted assets and capital requirements where the exposures are before impairments and write-offs.
- Gross exposure is the exposure before impairment, but after write-offs.

The activities in Luminor are not included in any of the figures. For figures including Luminor's credit exposure, see the tables according to the EBA's guidelines in the additional Pillar 3 disclosures.

DEVELOPMENTS IN CREDIT RISK IN 2018

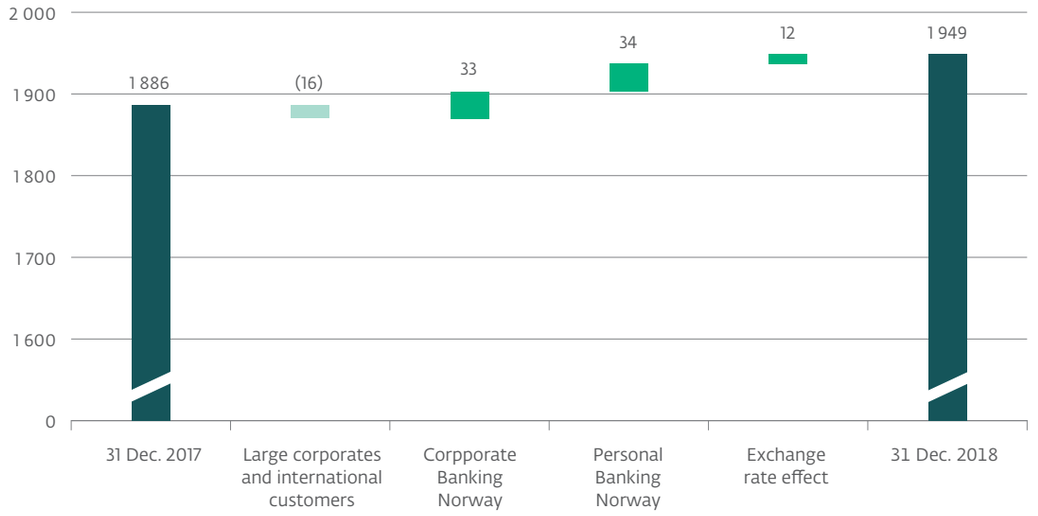
Throughout 2018, DNB has continued its efforts to reduce risk concentrations and exposure to volatile industries such as oil, gas, offshore and shipping. A restructuring and sale of parts of this credit portfolio was implemented and as a result, the quality of the credit portfolio improved. The rebalancing of these portfolios is completed. The bank's impairments have also consistently been very low throughout the year and in total net impairments were reversals of NOK 139 million. That the bank ends up with net reversals by year-end 2018 is an unusual situation that will not persist. The level of new impairments according to IFRS 9 stage 3, which corresponds to what was previously called individual impairments, was about the same as last year. For more information, see the section on impairments and defaults later in this chapter.

The figure shows developments in the credit portfolio measured in EAD.

The bank's total portfolio has grown, mainly distributed between Norwegian corporate banking and retail mortgage loans for private individuals. In the personal customer market, the retail mortgage loans portfolio has grown in excess of 3 per cent during 2018. Corporate Banking Norway grew by 9 per cent where factoring and car financing as well as financing of residential property accounted for the bulk of the growth. DNB is a major player in the financing of new housing construction. Most banks in Norway have had a balanced approach to this segment throughout 2018 and have set requirements for pre-sale of the projects before approving construction loans. This has meant that only projects that meet agreed pre-sales are realised in the market, and this has helped stabilize the supply side. No significant problems have been registered within this segment. The quality of the corporate portfolio in Norway was good and almost unchanged throughout the year.

The credit card portfolio is very limited compared to the bank's size and amounts to 3 per cent of the bank's total balance measured in EAD and was at the same level as the end of last year. DNB has deliberately not been particularly active in the segment and will emphasise accountability and social responsibility in future commitments. Both defaults and losses in this portfolio are very low and manageable.

Change in credit portfolio, EAD, DNB Bank Group
NOK billion



The large corporate and international customers portfolio was reduced by 2.7 per cent. The exposure to shipping, oil, gas and offshore was reduced by approximately 4 per cent during the year as measured against the overall large corporate customer portfolio. The rest of the portfolio has maintained a stable good quality.

DNB maintains a branch office in Grand Cayman, which is under the New York office. The bank's operations directed at the corporate market are about to be moved to DNB New York. When this process is completed, DNB will only have money market and liquidity management activities at the Grand Cayman branch.

Corporate social responsibility has always been an important element of DNB's credit business. In 2018, corporate responsibility assessments were given an even more central position in DNB's credit decisions. Environment, climate, social conditions and corporate governance (known as Environmental Social and Governance, ESG) are assessed on an equal basis as financial analysis in extension of credit and are important parameters on an equal basis as debt servicing capacity. DNB's long-term profitability is dependent on its customers also integrating corporate responsibility into their strategic choices. DNB has influential power as a lender. By requiring customers to be accountable DNB can both make a positive contribution to society, and also reduce customers' and own risks. The DNB Group's resources shall be used to meet customer needs without coming into conflict with the bank's and our customers' responsibility to contribute to sustainable social development. DNB integrates corporate responsibility into the credit process as it is ethically correct to do so, while also providing sound risk management. The reporting and follow-up of ESG in the credit process have also been further developed in 2018. For all commitments with a value of more than NOK 50 million, risk levels for ESG associated with the loan are registered. Eventually, the goal is to be able to report on the main ESG risk types as well.

IMPORTANT TERMS USED TO DESCRIBE CREDIT RISK

DNB calculates PD, EAD and LGD on the basis of internal models for all credit exposures.

- The probability of default (PD) is the probability that a given customer will default on their credit exposure within the next 12 months. PD is calculated on the basis of financial and non-financial factors and forms the basis for risk classification of credit exposures. Defaulted exposures are automatically assigned a PD of 100 per cent.
- Exposure at default (EAD) indicates the share of the approved commitment that is expected to be drawn at the time of any future default, at the same time as there is a downturn in the market.
- Loss given default, (LGD) indicates how much the Group expects to lose if a customer fails to meet his obligations at the same time as there is a major downturn in the market. The models take into account the collateral pledged by the customer, future cash flows and other relevant factors.
- Expected loss (EL) indicates the average annual expected loss over an economic cycle.
- EL = PD x LGD x EAD. In good/normal times, EL should be higher than actual losses because the calculation takes into account both higher probability of default (the PD factor) and higher losses (the LGD factor) during a recession.

In this chapter, reference is made to four risk categories. These are defined as follows:

- low risk: PD 0.01 – 0.75 per cent
- moderate risk: PD 0.75 – 3 per cent
- high risk: PD over 3 per cent, but not defaulted
- defaulted portfolio (assigned a PD of 100 per cent)

DNB defines forborne exposures as loans or credits whose terms and conditions have been changed in a manner that would not have been approved if the customer had not had financial problems.

Definition of default

DNB's definition of a defaulted portfolio is in conformity with the IRB rules (Section 10-1 of the capital adequacy regulations): An exposure is deemed to be in default if an owed amount is more than 90 days overdue, the overdue amount is significant, and the default is not due to delays or incidental circumstances that affect the counterparty. In DNB, a "significant overdue amount" is defined as more than NOK 2 000. The amount for credit cards is NOK 200.

An exposure should also be classified as defaulted if the bank:

- Due to a weakening of the counterparty's creditworthiness, records an impairment loss representing a not insignificant amount.
- Due to a weakening of the counterparty's creditworthiness, sells a claim at a discount and the discount represents a not insignificant amount.
- Expects debt settlement, bankruptcy proceedings or public administration to be opened against the counterparty.
- Agrees to changes of terms and conditions, due to the counterparty's payment problems, that it must be assumed will reduce the value of the cash flow by a not insignificant amount.
- Has other reasons for expecting that the payment obligation will not be met (anticipated default).

Anticipated default means that there is a probability that ordinary business operations will not give the customer sufficient debt-servicing capacity to meet all of its debt obligations. An anticipated default is classified as a loss event. The factors used to evaluate debt-servicing capacity include:

- sufficient cash flow to service all financial obligations, including an assessment of refinancing risk
- the probability that new capital will be injected
- sale of assets

The rule for corporate customers is that if there is a default event, the borrower is deemed to have defaulted on all of its loans. If there are controlling interests or financial ties between multiple debtors in a corporate group, the default of one debtor will result in all of the debtors being defined as being in default at the same time.

For personal customers, default events are deemed to have occurred if the exposure has been defaulted for more than 90 days or if the outcome of an individual assessment indicates that the exposure should be classified as being in default before this point.

The definition of default in the IRB regulations is used to describe the portfolios' credit risk in calculation of capital adequacy requirements and in the information on the IRB portfolios. The accounting definition of default (IFRS) is used where it is commented on in figures from the financial statement.

In September 2016, the European Banking Authority, EBA, published new recommendations on the definition of defaulted exposures. DNB has started making preparations to ensure these recommendations can be followed. The changes include clarification of the definition of anticipated default, contagion between agreements to the same debtor, materiality threshold levels and a required minimum disqualification period after defaulted exposure has been reclassified as performing. This will lead to changes for DNB and will have consequences for the interpretation and reporting of defaults and for the bank's IRB models. The deadline for fulfilment of the recommendation is 1 January 2021.

DNB will continue to work on reporting solutions in 2019.

DEVELOPMENTS IN CREDIT RISK IN SELECTED INDUSTRIES

The industries that are monitored especially closely either due to the size of the portfolio, or because they are seen as challenging and cyclical are commercial real estate, oil related industries and shipping. DNB regards exposures to the oil and gas sector, oil supply industry, pipeline transport and offshore industries as oil related industries. Measured by EAD, DNB's retail mortgage loans portfolio comprised 44 per cent of DNB's credit portfolio, and is therefore also mentioned below.

RETAIL MORTGAGES LOANS

DNB's retail mortgage loans portfolio mainly consists of loans for financing of homes in Norway. The market share was approximately 25 per cent, and has trended slightly downwards in recent years.

84 per cent of the bank's retail mortgage loans portfolio belonged to DNB Boligkreditt at the end of 2018, which served as the basis for issuing covered bonds.

DNB's retail mortgage loans portfolio was of high quality, and 80 per cent of the loans were classified as low risk at year-end 2018. Defaults in the retail mortgage loans portfolio were still at a very low level. At year-end 2018, the percentage of defaulted loans was 0.2 per cent of the portfolio, and unchanged from the previous year.

The regulation on requirements for residential mortgage lending was extended with effect from 1 July 2018. This was done to counter the strong growth in housing prices and household debt, especially in Oslo. Financial institutions may grant loans that do not meet one or more of the criteria in the regulation for up to 10 per cent of the value of total approved loans. For loans secured with collateral in homes in Oslo, the limit is set to a maximum

→

of 8 per cent deviation. DNB monitors lending practices closely and ensures compliance with the regulations in all parts of the bank.

The loan-to-value ratio (LTV) is a measurement of the degree to which a collateral object, such as a property, is loan-financed. For the retail mortgage loans portfolio, the loan-to-value ratio is calculated as the loan's share of the property's market value. Short-term bridge loans and loan offers are not included in the calculation. The market values of all the homes are updated with a new estimated value each quarter. The weighted average LTV for all of DNB's Norwegian retail mortgage loans was 60.3 per cent at the end of 2018, compared with 59.6 per cent one year earlier.

The figure below shows an object-oriented distribution of the retail mortgage loans portfolio. That is, all loans associated with the same property are included in the calculation, and the total lending volume per security object is placed in the same loan ratio.

COMMERCIAL REAL ESTATE

The commercial real estate (CRE) portfolio, excluding residential property, constitutes the second largest risk concentration in DNB and amounted to approximately 9 per cent of the total portfolio at the end of the year. The volume is reduced to some extend in 2018. The main reason is an internal reclassification of projects to residential property. The quality is very good. The portfolio is mainly concentrated around the largest cities and the largest regional centres in Norway.

The bond market has become an increasingly important source of funding for property companies and, as with other traditional banks, DNB is experiencing increased competition from this market.

The prices of commercial real estate, especially in the best locations in Oslo, are at historically high levels. The low yield level of commercial real estate is expected to rise going forward due to higher interest rates. There are expectations of increased rental rates and still lower availability in the most desirable locations due to low new construction activity. On the demand side, tenants require more flexibility which entails a shorter term for rental contracts. This will result in an increased risk for the lessors.

The credit quality was somewhat strengthened throughout the year, and 96 per cent of the portfolio was classified as either low or moderate risk at the end of 2018. The volume of defaulted exposures was reduced and was 0.4 per cent at the end of 2018, compared with 0.6 per cent the previous year.

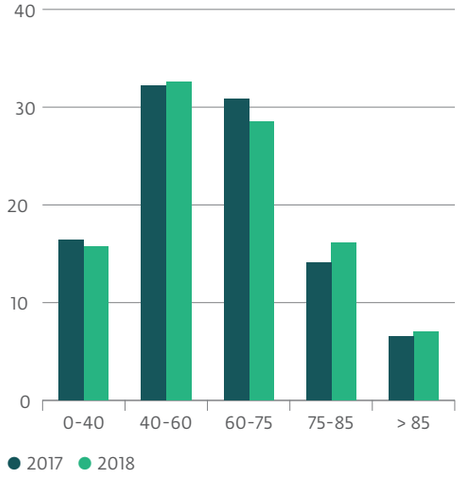
OIL RELATED

The oil related portfolio accounted for 5 per cent of DNB's overall credit portfolio, and the volume was reduced by close to 5 per cent. The portfolio has been reduced by roughly 36 per cent in the last three years. This is in line with DNB's strategy of reducing risk concentrations in volatile industries.

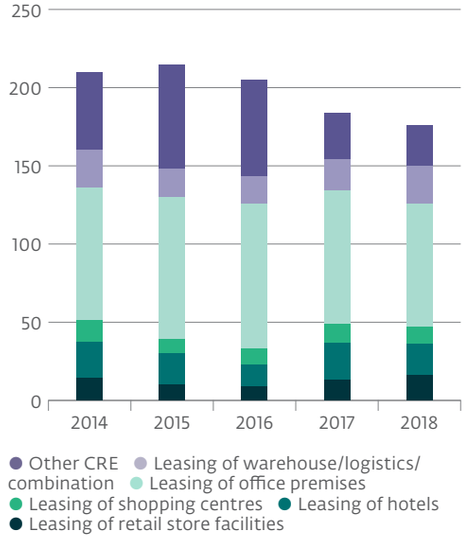
The portfolio is well-diversified with respect to both segments and geography. The goal is to have a low-risk portfolio and exposures to financially sound companies.

At the end of 2018 oil prices fell sharply and then stabilised around 60 US dollars a barrel after the year end. Rig shares fell sharply over the same period. On the other hand, the level of activity is relatively high but at low rates. The market is twofold where modern rigs for demanding climatic conditions achieve significantly better day rates and have a higher degree of utilisation than "ordinary" floaters and jack-up rigs. Expectations to investments on the Norwegian continental shelf continue to increase, contributing positively to Offshore Supply Vessels (OSVs) that depend on increased investment levels. So far, the rate increase has not materialised as there is still a substantial volume of idle tonnage. Developments over the last four years have severely weakened credit quality and increased impairment losses for suppliers in the oil service sector, especially offshore. At the end of 2018, there was a higher level of activity due to increasing investment plans on both the Norwegian continental shelf and internationally.

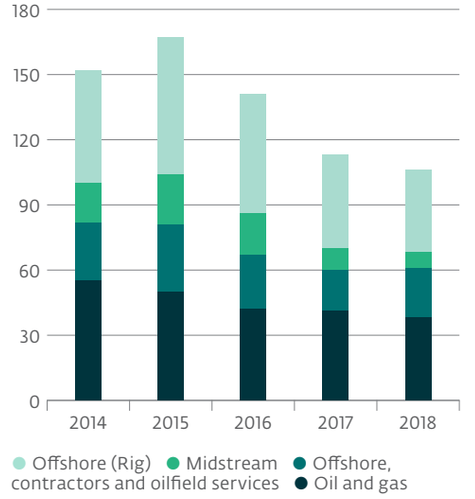
Loan-to-value, retail mortgage loans, granted volume
Per cent



Development in CRE portfolio, EAD
NOK billion



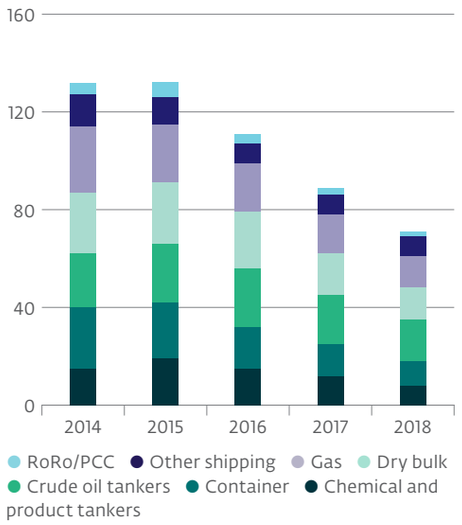
Development in oil related portfolio, EAD
NOK billion



The degree of utilisation for larger vessels was slowly rising, but observed rates remained weak.

The proportion of high risk has been significant in the last two years, but development in 2018 was good and amounted to 15 per cent at the end of the year, compared to 30 per cent the previous year. 70 per cent were classified as low or moderate risk, while the proportion of defaulted commitments increased by 3 percentage points to 15 per cent.

Development in the shipping portfolio, EAD
NOK billion



SHIPPING

DNB's shipping portfolio amounted to NOK 71 billion at the end of 2018, and amounts to less than 4 per cent of the credit portfolio. This was a reduction of 19 per cent since last year and an approximate halving from 2015, which was in line with DNB's strategy to reduce risk concentrations in volatile industries. The shipping portfolio was strengthened throughout the year with improved credit quality.

The tanker market was weak throughout most of 2018 while the rates quadrupled in the fourth quarter. The prospects are relatively good even though the risk factors are many. Dry bulk is recovering slowly after a weak start to 2018 when it was constrained by low scrapping and a drop in imports of iron ore to China. Based on a limited fleet growth and good demand, the future outlook is weakly positive and the same applies to gas freight. At the opposite end is the container market, where demand growth has fallen during fleet growth.

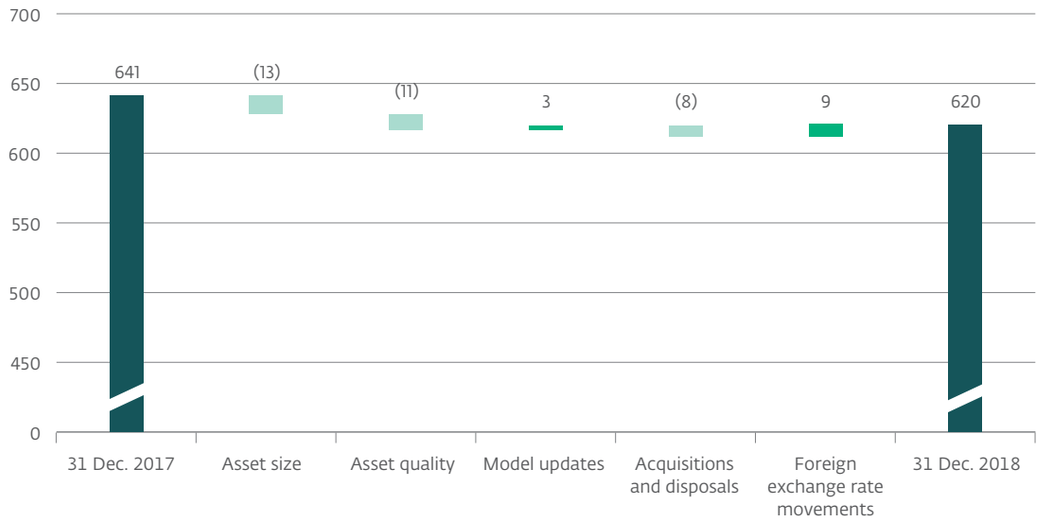
The proportion of high risk was about 16 per cent at year end, which is unchanged from the year before. 79 per cent of the portfolio was classified as low or moderate risk, while the proportion of defaulted commitments comprised 5 per cent, an increase of approximately 1 percentage point from the previous year.

CAPITAL REQUIREMENTS FOR CREDIT RISK

The total capital requirement for credit risk in the DNB Bank Group without exposures in associated companies at the end of 2018 came to NOK 71.9 billion, an increase of NOK 1.2 billion compared to the year before. Credit risk reported according to the standardised approach increased by NOK 2.8 billion. Credit risk reported according to the IRB method decreased by NOK 1.7 billion.

The figure shows the change in the risk-weighted assets for the IRB reported credit portfolio in the DNB Bank Group in 2018. The change is the result of several underlying causes. The hold-to-maturity portfolio was sold in the first quarter of 2018. The credit volume was reduced in 2018 and led to a decline in risk-weighted assets of NOK 13 billion. The rebalancing of the large corporate customer portfolio continued in 2018 and is one of the main reasons for the reduced volume. In addition, a number of exposures in the large corporate customer portfolio were reinstated to performing which reduced risk-weighted assets by another NOK 11 billion. Changes in the credit conversion factors for some products in the corporate market were implemented in the second quarter. This resulted in an increase in the risk-weighted assets of NOK 3 billion. The weakening of the Norwegian krone resulted in an increase of NOK 9 billion.

Development risk-weighted assets, credit risk, IRB-portfolio, DNB Bank Group
NOK billion



Specification of risk-weighted assets and capital requirements, credit risk, DNB Bank Group

NOK million	Nominal exposure	EAD	Average risk weights in per cent	Risk-weighted assets	Capital requirement 31 Dec. 2018	Capital requirement 31 Dec. 2017
IRB approach						
Corporate	955 626	789 415	53	421 452	33 716	35 197
- of which SME	*203 599*	*181 423*	*43*	*78 885*	*6 311*	*6 267*
Specialised Lending (SL)	12 445	11 990	55	6 579	526	454
Retail - mortgage loans	773 419	773 419	22	170 213	13 617	13 220
Retail - other exposures	102 012	87 560	25	21 589	1 727	1 745
Securitisation						626
Total credit risk, IRB approach	1 843 502	1 662 385	37	619 833	49 587	51 241
Standardised approach						
Central government	273 420	256 743	0	148	12	6
Institutions	264 968	148 410	31	45 799	3 664	3 312
Corporate	225 852	166 452	89	147 795	11 824	9 816
Retail - mortgage loans	67 981	64 835	49	31 733	2 539	2 207
Retail - other exposures	124 556	49 276	75	36 973	2 958	2 941
Equity positions	10 508	10 506	92	9 674	774	662
Other assets	11 141	11 141	57	6 354	508	513
Total credit risk, standardised approach	978 426	707 362	39	278 476	22 278	19 458
Total credit risk	2 821 928	2 369 747	38	898 309	71 865	70 699

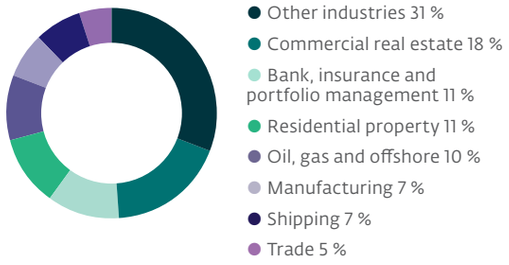
OVERVIEW OF CREDIT EXPOSURES

NET EXPOSURE BY CUSTOMER SEGMENT, INDUSTRY SEGMENTS AND COUNTRIES

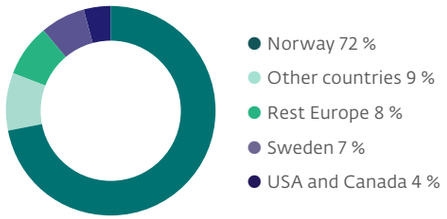
The DNB Bank Group's net exposure, including exposure to banks, but excluding exposures in associated companies, amounted to NOK 2 148 billion at the end of 2018, down by NOK 52 billion from the end of 2017. The figures show net exposure split by customer segment, industry and country. Most of DNB's credit portfolio is linked to Norway or Norwegian customers. Norwegian-related exposures accounted for 72 per cent of the portfolio at year-end 2018. 45 per cent of the total credit exposure consisted of loans or credit to personal customers. This is an increase from the previous year when the proportion was 41 per cent. The corporate loan portfolio is well diversified among different industries. As previously commented, commercial real estate was the largest industry in the corporate portfolio at the end of the year and measured in net exposures, the volume was virtually unchanged from the previous year. More detailed information can be found in the additional disclosures to this report.

Net exposure, split by customer segments, DNB Bank Group, 31 December 2018
Per cent

Net exposure, corporate portfolio split by industry segments, DNB Bank Group, 31 December 2018
Per cent



Net exposure split by countries , DNB Bank Group, 31 December 2018
Per cent



GROSS FORBORNE EXPOSURES

Forborne exposure is a credit whose terms and conditions have been changed in a manner that would not have been approved if the customer had not had financial problems. This includes both defaulted and performing exposures. The objective of forbearance is to help customers get through financially challenging periods and the customers are expected to meet their obligations at a later date. Forbearance is an element of DNB's strategy for limiting losses.

The most common forms of forbearance are:

- changing the term of the loan
- refinancing
- debt forgiveness, including forgiveness of overdue interest payments
- deferment of overdue interest payments

Procedures for handling these exposures have been incorporated in the credit process. Operative guidelines have been prepared describing the procedures in the business unit for identifying, analysing and approving forbearance cases.

Since 2014, the bank has reported forborne exposures to Finanstilsynet (the Norwegian Financial Supervisory Authority). The DNB Bank Group's total exposure including forborne exposure came to NOK 40.8 billion at year-end 2018. Total forborne exposures decreased by NOK 3.5 billion in 2018. The defaulted exposures increased by 1.1 million during the year and the restructuring and sale of exposures in the offshore portfolio contributed considerably to the decline in the healthy segment of this portfolio.

DEFAULTS AND IMPAIRMENT

The term default as used here is based on the accounting definition (IFRS). According to this definition exposures that have been restructured to avoid default are performing. For a more detailed definition of default, see the text box at the beginning of the chapter.

A loan commitment shall be assessed for impairment as soon as a loss event occurs that provides objective evidence of a reduced future cash flow for servicing the loan. Loss events include:

- significant financial problems
- payment defaults or other material breach of contract
- the approval of deferred payment or new credit to pay instalments
- agreed changes to interest rates or other loan terms due to financial problems or the likelihood that the borrower will enter into debt negotiations
- other financial restructuring, or if the borrower is subject to bankruptcy proceedings

Impairment is calculated as the difference between the value of the loan in the balance sheet and the net present value of estimated future cash flows discounted by the original internal rate of return on the loan, which is the bank's funding cost plus the original margin and amortised fees.

Impairment in accordance with IFRS 9

DNB amended the accounting principle from IAS 39 to IFRS 9 in 2018. Net impairment losses on loans and guarantees for the DNB Bank Group at the end of 2018 were a reversal of NOK 139 million, a reduction of NOK 2.5 billion from 2017. The change in the model for the calculation of impairment, in addition to improvement of the portfolio and the macroeconomic factors explain this reduction.

DNB has a model for calculating the expected credit loss (ECL), where all exposures are divided into three groups. The calculation of impairment for stage 1 and 2 is done in models that estimate future losses based on forecasts of future economic development.

- Stage 1: Includes loans and corresponds to what was previously a collective impairment
- Stage 2: Includes commitments with a substantial increase in PD compared to PD at the time of approval. In addition, it includes loans with PD between 5 and 40 per cent, exposures with forbearance and retail customers with delayed payments between 30-60 days.
- Stage 3: Includes defaulted exposures and is the same metric that was previously called individual write-downs.

Gross carrying amount with forbearance measures, DNB Bank Group

NOK million	31 Dec. 2018	31 Dec. 2017
Exposures with forbearance measures not in default	25 540	30 134
Exposures with forbearance measures in default	15 299	14 176
Total exposures with forbearance measures	40 839	44 310

The figure shows the quarterly development of net impairments during 2018. Positive amounts are net impairments, while negative amounts are net reversals. For further information on DNB's calculation of impairment in accordance with IFRS 9, see note 5 in DNB's annual report.

Accumulated impairment losses on the DNB Bank Group's balance sheet

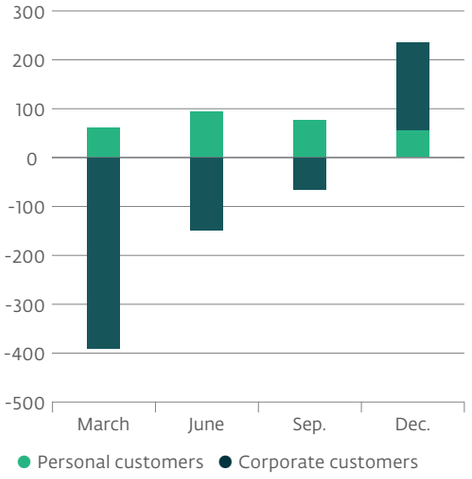
The figure below shows the change in accumulated impairment losses on the balance sheet according to IFRS 9 from year-end 2017 to year-end 2018. Accumulated impairment losses were reduced by NOK 3.4 billion and amounted to NOK 11.6 billion at the end of the year. The majority of the reduction is due to the write-offs of previous impairments in addition to the improvement of macroeconomic factors included in the calculation of ECL in stage 1 and 2.

Net defaulted commitments

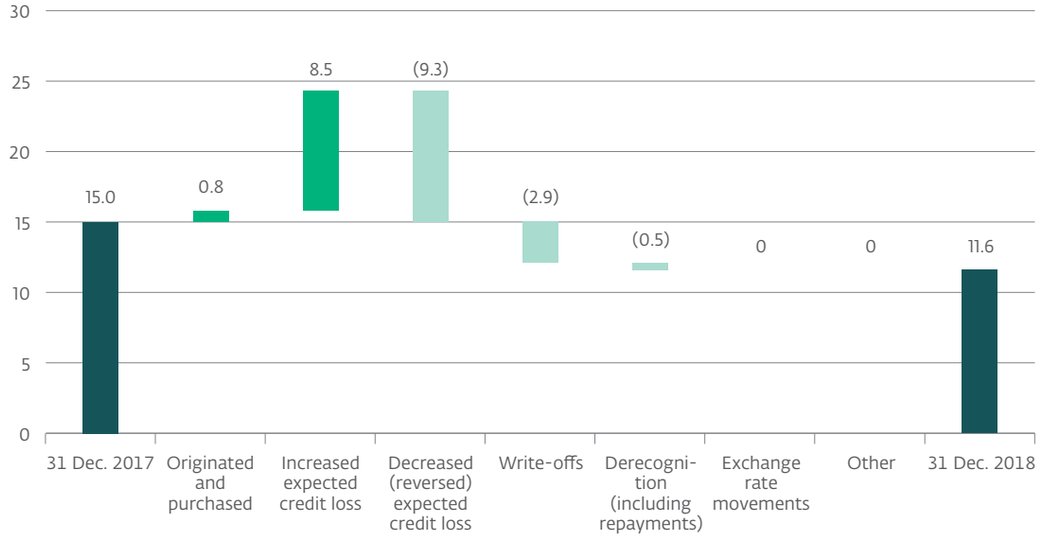
Net defaulted commitments in the DNB Bank Group increased by NOK 2 billion in 2018 and amounted to NOK 19.5 billion at year-end. This corresponds to approximately 1 per cent of the loan portfolio. The offshore sector is still experiencing challenges and this is the main explanation for the increase, but the challenges in the shipbuilding industry also contributed.

The figure shows the distribution of net defaulted commitments by industry segments. More detailed information can be found in the additional disclosures to this report..

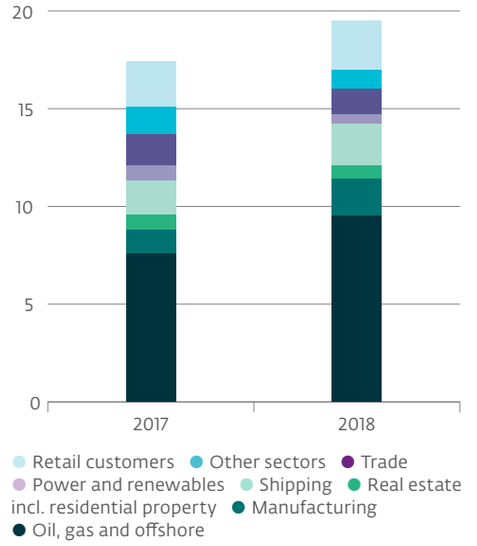
Development in net impairments according to IFRS 9 in 2018, DNB Bank Group
NOK million



Development in accumulated impairment of loans and financial commitments, DNB Bank Group, 31 December 2018
NOK billion



Net defaulted exposures, DNB Bank Group
NOK billion



Gross past due loans and overdrafts

The table below shows overdue amounts on loans and overdrafts on credits/deposits broken down by the number of days after maturity. Overdue loans and overdrafts on credit lines/deposit accounts are monitored on an ongoing basis. In cases where it has been determined that the customer's ability to pay is likely to be reduced, the commitment is assessed for impairment. In most cases where there is determined to be no need for impairment, the main reason is that the value of the mortgaged asset exceeds the outstanding balance on the loan. There has been a reduction in disordered loans and overdrafts on credits of more than 90 days last year. This reduction reflects that the challenging period certain industries have been through appears to be over.

Past due exposures not subject to impairment, gross carrying values, 31 December 2018

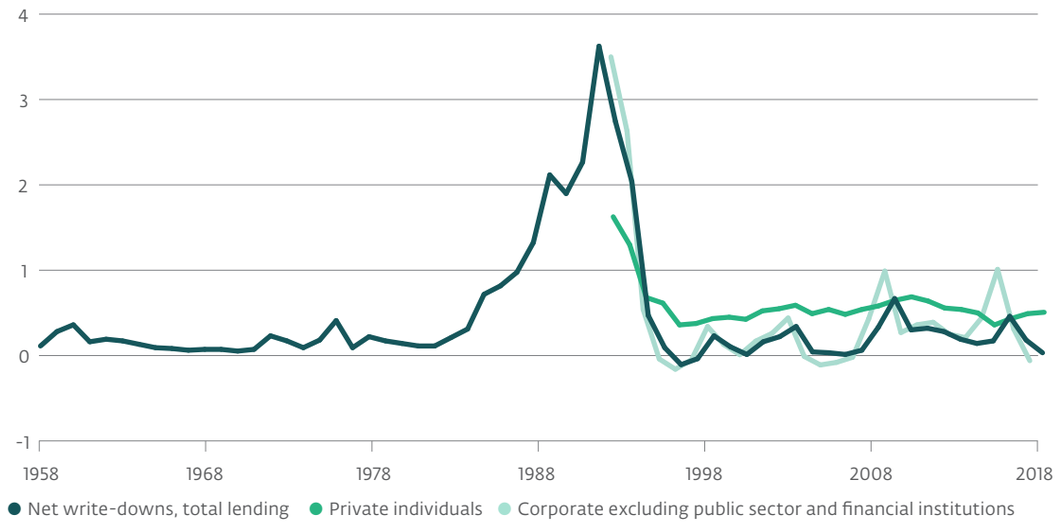
NOK million	Less than 30 days	30 to 60 days	60 to 90 days	90 to 180 days	180 days to 1 year	More than 1 year
Loans	10 753	1 685	527	2 415	3 590	4 011
Debt securities						
Total exposures	10 753	1 685	527	2 415	3 590	4 011

Development in annual net impairment losses

The figure shows the net annual impairment losses as a proportion of lending for the period 1957-2018. From 1992, net impairment losses are also broken down between personal customers and corporate customers, excluding the public sector and credit institutions. The period from 1987 to 1993 is referred to as the Norwegian banking crisis and stands out from other years. Other years that stand out are 2009, when the financial crisis led to increased losses, inter alia linked to Baltic operations, and 2016 when DNB was compelled to record substantial impairment losses on the oil related portfolio.

Net impairment losses per year, 1958 - 2018

Per cent



INTERNAL RATING BASED METHODS (IRB)

DNB started using internal credit risk models in 1995. DNB received its first formal permission to use the IRB approach in early 2007. Most of the risk models used in the bank's IRB system have now been approved by Finanstilsynet. The calculations from the IRB system are fully integrated in the bank's internal management tools. DNB only uses the advanced IRB (AIRB) approach for its corporate portfolios. The foundation IRB (FIRB) is not used. There is no distinction between AIRB and FIRB for retail.

The table below shows the reporting methods used for the different credit portfolios in DNB, distributed among asset classes.

The IRB approach is used for most of the companies in the corporate portfolio to which the DNB Bank Group has exposure. The standardised approach is used for housing cooperatives and newly-founded businesses. The exposures in Poland are also reported by means of the standardised approach. Retail, which mostly consists of DNB's retail mortgage loans portfolio, is reported using the IRB approach. The exceptions are Private Banking and exposures in Poland, which are reported by means of the standardised approach. The retail, other exposures portfolio is also reported by means of the IRB method and largely consists of credit cards.

The purpose of the IRB regime is to ensure sound risk management and fulfilment of capital adequacy requirements. This calls for high quality and transparency throughout the value chain. The Board of Directors assesses the need for capital on the basis of risk measurements and an overall evaluation of operating parameters and business and strategic targets. All links in the value chain must be validated to determine whether the authorities' requirements and internal quality requirements have been met. The validation will thus both verify the adequacy of the IRB system and identify needs for improvement.

A standard has been established for the decision-making process for risk classification and quantification models that sets out the guidelines for all work on classification models in DNB. Suggested changes and new models must be presented to the Group Advisory Credit Committee for consideration and any changes must thereafter be approved by the Chief Risk Officer (CRO). Affected parties are expected to have been involved in the process. The independent unit in charge of validating the IRB models also needs to do an assessment before any decision is made. Group Audit does not play any role in the development of IRB models but prepares an annual IRB compliance report. Group Audit normally does an independent assessment when applications for new IRB models are submitted.

In its circular 3/2015, Finanstilsynet specified the changes of models for which permission must be requested and the ones that are subject to a duty of notification or must be reported afterwards.

Measured by EAD, 70 per cent of the portfolio was reported according to the IRB approach at year-end 2018, compared to 77 per cent at year-end 2017. The figure shows the distribution of asset classes in the IRB portfolio.

The most important areas of application for the IRB models are:

- capital adequacy calculations
- decision-support in the credit process
- setting limits in the risk appetite framework and credit strategies
- risk measurement and ongoing reporting
- pricing risk and measuring portfolio profitability

Reporting methods for credit portfolios in DNB

Asset class	Main reporting method
Corporate and Specialised Lending (SL)	AIRB
Retail, mortgage loans	IRB
Retail, other exposures	IRB
Governments and central banks	Standardised approach
Institutions	Standardised approach
Equity positions and other assets	Standardised approach

Asset classes in IRB portfolio, EAD, DNB Bank Group, 31 December 2018
Per cent

RISK CLASSIFICATION

DNB divides its performing credit portfolio into ten risk categories based on the probability of default (PD) for the exposures. The risk classification should reflect the long-term risk on the customer and the exposure. Defaulted exposures are assigned a PD of 100 per cent.

RISK CLASSIFICATION MODELS

DNB's models for classifying risk on individual customers are adapted to industries and segments and are updated if calibrations show that their explanatory power has diminished.

DNB's models reflect the fact that different variables give the best explanations for risk in different portfolios. As far as possible, DNB's IRB models are developed on the basis of historical data using statistical methods. This is the case for the models used for retail mortgage loans and SME. There tends to be less and less available data the farther back in time. A distinction is therefore made between data used to develop models and the data used for calibrating them. The historical data used for calibration purposes covers a longer period of time that includes a major economic slump. There are fewer customers and few defaults in the large corporate customer portfolio. These models are therefore developed as a combination of statistical method and expert assessments. DNB also uses data from Global Credit Data (GCD) and has been a member since 2008. GDC is a non-profit association owned by 53 member banks that collects important default data from member banks.

The PD level in the models should reflect the expected average default frequency over a full business cycle. By the same token, the EAD and LGD models should reflect exposure at default and loss given default during an economic slump. DNB is required to include the Norwegian banking crisis in the period 1988-1993 when calibrating models.

An uncertainty factor is added to the PD estimate to increase the probability that the models do not underestimate the risk over time.

Finanstilsynet has stipulated that, in practice, PD in the large corporate customer portfolio should provide a virtually invariable capital requirement irrespective of economic conditions. In addition, a floor has been set for LGD which makes the models more conservative than that warranted by the statistical basis.

Finanstilsynet has set requirements for the PD level in the retail mortgage loans portfolio by defining the level during recessions, in addition to weighting good and bad economic periods. There is a minimum PD requirement of 0.2 per cent for all credit agreements. Finanstilsynet has also issued requirements for LGD levels. As a result of these requirements, the risk-weights for the retail mortgage loans portfolio are much higher than they would have been if they had been based on unbiased estimated PD and LGD.

Models used in IRB reporting at year-end 2018

No new models were implemented in 2018. Several models have been developed, but need to be approved by Finanstilsynet before they can be implemented. This applies to PD models for asset financing and the small business segment.

During 2018, updated calibration levels for the PD and LGD models have been prepared for large corporate customers. The application to be able to implement the new levels has been sent to Finanstilsynet.

Efforts to apply a new default definition in calibration levels for models applicable from 2021 are underway.

For a full overview of all the IRB models used by DNB, please see the additional Pillar 3 disclosures. The tables display a brief description of the models and comments are included where models have been adjusted to meet requirements issued by Finanstilsynet.

VALIDATION

Validation is a key element in the quality assurance of DNB's IRB system. According to the capital adequacy regulations, the Board of Directors of DNB Bank ASA shall be presented with the results from the validation process at least once a year. The validation results provide a basis for considering whether the classification and quantification of the Group's credit risk are satisfactory.

The validation should constitute a comprehensive assessment of the models to reveal cases where the risk of using the model is higher than the bank's tolerance limit. The validation of the IRB system consists of a quantitative and qualitative assessment. Quantitative validation involves testing the models' discriminatory power and ability to determine the correct level (calibration) of risk parameters for all portfolios on which there are sufficient statistics for this. The qualitative validation involves reviewing the underlying assumptions, data quality, stability and documentation of the models. Validation also considers how the risk models are applied in the decision-making process and reporting.

The discriminatory power is the PD model's ability to differentiate between customers that are likely to default on their loans and the ones that are unlikely to do so. When evaluating the LGD models, methods are employed to test the model's ability to predict the exposures on which the Group will incur large losses, and the ones on which significant losses are not anticipated.

The calibration level is validated by means of tests to determine whether the risk parameters have been set at the right level. The criterion for determining this is whether predicted values are consistent with observed

DNB's credit risk classification

Risk grade	From PD	To PD	Moody's	Standard & Poor's
1	0.01	0.10	Aaa - A3	AAA - A÷
2	0.10	0.25	Baa1 - Baa2	BBB+ - BBB
3	0.25	0.50	Baa3	BBB÷
4	0.50	0.75	Ba1	BB+
5	0.75	1.25	Ba2	BB
6	1.25	2.00		
7	2.00	3.00	Ba3	BB÷
8	3.00	5.00	B1	B+
9	5.00	8.00	B2	B
10	8.00	Defaulted[1)]	B3, Caa/C	B÷, CCC/C

1) PD in risk grade 10 goes to maximum 40 per cent.

outcomes, or whether deviations are anticipated or acceptable given the phase of the business cycle at the time. PD is meant to express the estimated average during a full economic cycle. The tests are therefore based on the maximum number of periods available for the individual model or portfolio. The LGD level should reflect the loss severity in a recession lasting several years. Over a normal period of several years, the average observed loss severity should thus be lower than the LGD. The same applies when different conversion factors are used for the various types of products that are included when the EAD is calculated. Assessments of the conversion factors for EAD are based on observed exposures at default relative to the associated predicted EAD 12 months prior to the time of default.

Comparison of risk parameters with actual outcomes

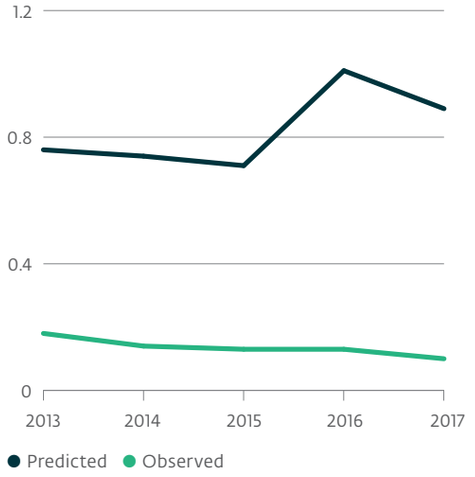
The validation results for 2018 are being processed and will be considered by the Board of Directors in July 2019. After they have been approved, they will be posted in the additional Pillar 3 disclosures. The comments and figures in this text are based on the results for 2017. The validation report showed that most of the models have good predictive ability.

The observed default frequency has been lower than expected for retail mortgage loans throughout the period. The increase in predicted PD in 2016 is due to the implementation of new requirements from Finanstilsynet. The observed values for SME were also lower than those predicted for the period. The same applies for retail, other exposures. The observed default frequency among large corporate customers is volatile because there are so few defaults in the portfolio.

The calibration levels for PD and LGD for large corporate customers have been reconsidered during 2018, and are awaiting approval by Finanstilsynet prior to implementation.

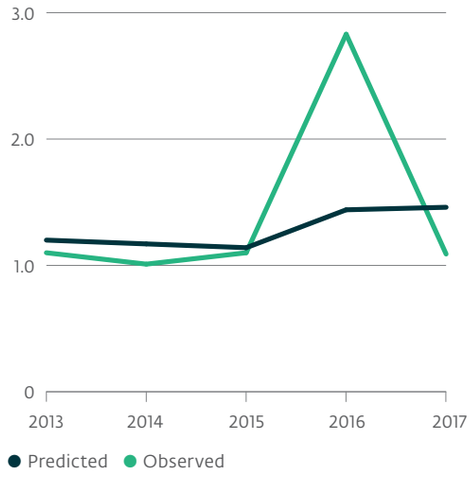
Comparison of predicted and observed PD for retail, mortgage loans

Per cent



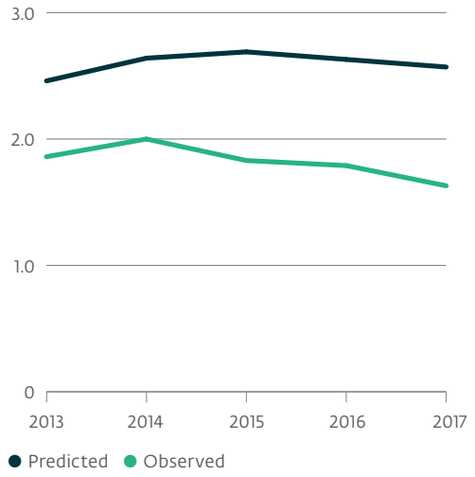
Comparison of predicted and observed PD for large corporates

Per cent



Comparison of predicted and observed PD for small and medium-sized enterprises

Per cent

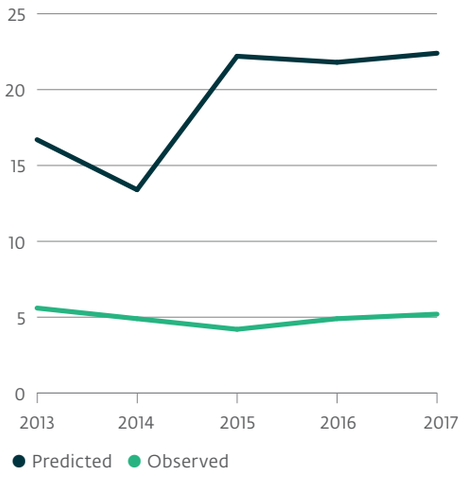


The figures show the number weighted predicted default frequency at the beginning of the year compared with the observed default frequency in the course of the year for the largest portfolios. Other results are shown in the additional Pillar 3 disclosures.

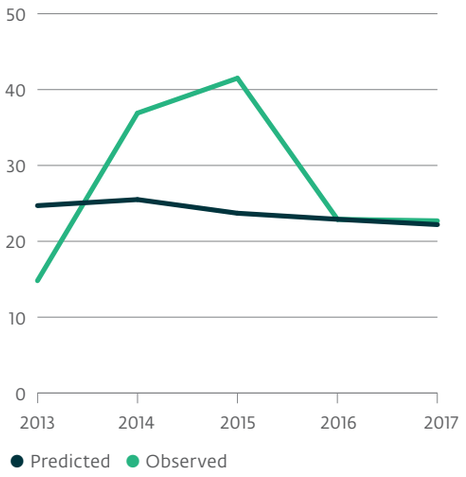
The LGD figures show the predicted volume-weighted LGD at the beginning of the year, compared with the observed volume-weighted loss rates for defaults that occurred in the course of the year. The LGD values are based on the defaulted portfolio, which normally gives an average that is higher than the average for the entire portfolio. The large corporate customer portfolio is an exception, as the predicted values there are the average for the entire performing portfolio at the beginning of the year. The figures show the validation results for the main LGD models.

The observed loss rate is considerably lower than the predicted LGD for all the models in the retail mortgage loans portfolio. For SME and the large corporate customer portfolios, many of the defaults were not completed as at the publication of the validation report, which entailed that loss rates were an uncertain estimate. For the large corporate customers portfolio, close to two-thirds of the volume was still in default, while about half of all SME customers were still in default. As a result, the loss rates will change until the defaults are finalised.

Comparison of predicted and observed LGD for retail, mortgage loans
Per cent



Comparison of predicted and observed LGD for large corporates
Per cent



Comparison of predicted and observed LGD for small and medium-sized enterprises
Per cent

TOTAL EXPOSURE FOR APPROVED IRB PORTFOLIOS

The proportion of DNB's credit portfolio reported according to the IRB approach amounted to NOK 1 662 billion, corresponding to 70 per cent, at the end of 2018. The risk parameters DNB uses to measure risk in the large corporate customer and retail mortgage loans portfolios are different from those that have been approved for calculating capital adequacy according to the advanced IRB approach. The approved models have mandatory mechanisms that ensure more stable capital adequacy requirements over time. More risk-sensitive risk models are preferable for internal management purposes. Internal risk measurements may thus be either higher or lower than those used to calculate capital adequacy. The tables on the following pages show only key figures used in the capital adequacy calculation. There are no new or amended requirements for the models in connection with the external capital calculation in 2018.

PD DISTRIBUTION IN THE IRB PORTFOLIOS

The tables show the different risk parameters for the IRB portfolios distributed by PD intervals used in the CR6 table in EBA's guidelines for Pillar 3 reporting.

The proportion of the IRB retail mortgage loans portfolio that has a PD below 0.5 per cent is 43 per cent, and virtually unchanged from the previous year. Finanstilsynet does not allow agreements in the retail mortgage loans portfolio, to have a PD lower than 0.2 per cent. The exposure in the performing portfolio, measured in EAD, rose about 3 per cent and the proportion in default is virtually unchanged compared to the previous year.

In the corporate portfolio the volume in the lowest PD interval is 13.0 per cent, versus 10.2 per cent the previous year. In excess of 43 per cent of the volume in the

IRB retail mortgage loans

	Capital requirement, 31 December 2018				Capital requirement, 31 December 2017			
	EAD, NOK billion	PD, %	LGD, %	Risk weight, %	EAD, NOK billion	PD, %	LGD, %	Risk weight, %
PD 0.00 to 0.15								
PD 0.15 to 0.25	88.4	0.20	18	7.8	80.8	0.20	18	7.8
PD 0.25 to 0.50	247.1	0.31	20	11.6	241.9	0.31	20	11.6
PD 0.50 to 0.75	195.6	0.61	20	19.2	195.0	0.63	20	19.5
PD 0.75 to 2.50	187.3	1.35	21	32.9	178.0	1.37	21	33.2
PD 2.50 to 10.00	51.6	3.40	21	58.1	49.6	3.41	21	57.6
PD 10.00 to 100.00	1.9	14.77	22	115.8	2.0	16.52	22	116.5
Performing portfolio	771.9	0.87	20	21.6	747.4	0.88	20	21.7
Defaulted portfolio	1.5	100.00	24	222.3	1.3	100.00	25	217.2
Total	773.4	1.06	20	22.0	748.7	1.06	20	22.1

IRB corporate portfolio

	Capital requirement, 31 December 2018				Capital requirement, 31 December 2017			
	EAD, NOK billion	PD, %	LGD, %	Risk weight, %	EAD, NOK billion	PD, %	LGD, %	Risk weight, %
PD 0.00 to 0.15	84.6	0.08	29	17.3	78.7	0.08	31	20.0
PD 0.15 to 0.25	63.0	0.20	26	26.5	68.7	0.20	28	29.3
PD 0.25 to 0.50	183.2	0.38	24	33.0	182.3	0.38	25	33.9
PD 0.50 to 0.75	116.5	0.61	24	38.6	124.9	0.62	24	41.8
PD 0.75 to 2.50	225.1	1.36	25	55.3	204.3	1.31	26	57.9
PD 2.50 to 10.00	95.1	4.59	26	84.9	102.4	4.38	28	92.3
PD 10.00 to 100.00	6.2	13.85	29	130.1	13.2	13.83	30	143.2
Performing portfolio	773.6	1.28	25	45.3	774.4	1.38	26	49.3
Defaulted portfolio	27.8	100.00	29	280.3	26.3	100.00	30	240.3
Total	801.4	4.70	25	53.4	800.7	4.61	26	55.5

portfolio had a PD lower than 0.5 per cent, which is practically unchanged from the previous year. The exposure in the performing portfolio, measured in EAD, increased by about 3 per cent and the defaulted portfolio is unchanged compared to previous year.

Equivalent tables for other IRB portfolios, specialised lending and retail other exposures are available in the additional Pillar 3 disclosures.

The retail mortgage loans portfolio had approximately the same quality at the end of 2018 as a year earlier.

Improvements in key figures last year are due to sales of exposures and a general improvement in the quality of the oil related portfolio (oil, gas and offshore). There has also been an improvement in the Norwegian corporate banking portfolio. For more information on the developments in PD and LGD, see the remarks earlier in the chapter where the developments in credit risk in 2018 are discussed.

IRB PORTFOLIO DISTRIBUTED BY INDUSTRIES

The table shows an overview of the IRB portfolio distributed by industry segments.

The reduction in volume in the public, state and municipality segment is mainly due to a reclassification of a large portion of the portfolio that is mainly reclassified to the service industry segment. The reduction in the shipping, oil, gas and offshore segments is due to the already mentioned rebalancing of these cyclical segments. The change in the weighted PD for trade is due to the challenges facing the industry as a result of changes in the way people trade, including the increase in e-commerce. The bank's exposure to the sector is limited and the risk is verifiable. For other changes, the description of developments in the credit portfolio is shown in general and for the special industries at the beginning of this chapter.

The IRB portfolios by industry segments

	31 December 2018					31 December 2017				
			Performing portfolio					Performing portfolio		
NOK million	EAD	EAD default, %	Weighted PD, %	Weighted LGD, %	Risk weight, %	EAD	EAD default, %	Weighted PD, %	Weighted LGD, %	Risk weight, %
Commercial real estate	162 352	0.4	0.98	21	35.3	167 691	0.7	1.01	22	38.4
Shipping	69 324	4.5	1.87	31	74.7	87 068	3.1	1.84	32	78.6
Oil, gas and offshore	106 253	14.7	2.04	26	58.1	112 091	11.1	2.58	30	71.0
Power and renewables	46 768	1.1	0.52	29	33.8	40 335	5.1	0.50	29	31.6
Healthcare	37 677	0.0	0.63	23	37.0	32 808	0.0	0.86	24	38.7
Public, state and municipality	1 418	0.0	0.10	22	7.4	18 189	2.0	1.18	24	46.4
Fishing, fish farming and farming	37 234	0.5	0.93	23	35.2	35 120	0.5	1.19	24	37.9
Trade	41 420	6.4	1.43	28	48.0	40 472	6.8	1.33	29	48.1
Manufacturing	71 407	3.3	1.08	26	42.9	72 629	2.6	1.09	27	43.8
Technology, media and telecom	35 445	0.2	1.29	30	51.0	35 201	0.5	1.40	32	54.3
Hotel, cruise and tourism	17 959	0.3	1.06	19	33.7	16 057	0.3	0.80	19	30.6
Services	46 213	2.0	1.84	26	51.9	35 032	2.0	1.46	27	48.9
Residential property	63 555	0.8	1.23	21	35.7	51 728	0.9	1.14	21	34.4
Construction	17 978	4.5	1.65	28	48.0	17 094	5.5	1.55	27	44.7
Transport road/rail	13 940	0.6	0.98	26	46.0	13 971	1.8	1.03	25	44.1
Bank, insurance and portfolio management	26 000	0.3	1.29	25	45.1	17 506	0.6	1.45	27	54.0
Other	6 463	0.8	1.22	31	57.1	7 716	1.1	1.72	29	54.7
Total corporate portfolio	801 405	3.5	1.28	25	45.3	800 708	3.3	1.38	26	49.3
Retail, mortgage loans	773 419	0.2	0.87	20	21.6	748 668	0.2	0.87	20	21.7
Other exposures to personal customers	87 560	1.7	1.26	33	23.0	85 663	1.6	1.33	33	24.0
Total	1 662 385	1.9	1.08	23	32.9	1 635 039	1.8	1.14	24	35.1

The table shows the weighted PD for the performing IRB corporate portfolio distributed by industry segment and country. The geographic distribution is based on the customers' addresses.

The weighted PD is higher in the Norwegian portfolio because it includes a large sub-portfolio of small and medium-sized enterprises. There are also greater elements of acquisition financing in the Norwegian portfolio, and a substantial part of the shipping- and offshore portfolio belongs to Norway. In the opposite end lies the Swedish portfolio which only comprises large corporate customers, and has little exposure to cyclical industries. The table showing EAD distributed by country can be found in the additional disclosures to this report.

IRB corporate portfolio, weighted PD by industry segments and countries

	Norway	Sweden	Rest of Europe	North America	Other countries	Total 2018	Total 2017
Commercial real estate	0.99	0.57	1.33	0.25	0.00	0.98	1.01
Shipping	2.22	1.54	1.67	1.33	1.80	1.87	1.84
Oil, gas and offshore	1.98	1.38	1.72	2.23	2.72	2.04	2.58
Power and renewables	0.16	0.30	0.47	0.62	1.62	0.52	0.50
Healthcare	1.71	1.47	0.81	0.46	0.96	0.63	0.86
Public, state and municipality	0.34	0.03	0.00	0.00	0.00	0.10	1.18
Fishing, fish farming and farming	0.87	2.93	0.86	1.73	1.29	0.93	1.19
Trade	1.57	1.38	1.03	0.11	0.00	1.43	1.33
Manufacturing	1.52	0.70	0.67	0.87	0.51	1.08	1.09
Technology, media and telecom	1.97	2.39	1.07	0.12	0.21	1.29	1.40
Hotel, cruise and tourism	1.57	0.35	1.50	0.76	1.90	1.06	0.80
Services	1.92	1.42	2.35	0.86	0.74	1.84	1.46
Residential property	1.27	0.37	0.00	0.00	0.00	1.23	1.14
Construction	1.75	0.62	0.63	0.00	0.00	1.65	1.55
Transport road/rail	0.95	0.35	1.37	0.00	1.07	0.98	1.03
Bank, insurance and portfolio management	1.79	1.14	1.03	0.62	3.59	1.29	1.45
Other	2.13	0.04	0.35	1.83	0.52	1.22	1.72
Total corporate portfolio	1.32	0.96	1.26	1.11	1.67	1.28	1.38

ANNUAL MIGRATION IN THE IRB PORTFOLIOS

Risk classifications of all customers to which DNB has credit exposure must be done at least once a year. The figures show how volumes, measured by EAD, in the IRB corporate and retail mortgage loans portfolio migrated between risk categories last year. Positive figures indicate migration to better risk categories. Migration is measured for customers to which the bank has had exposure for the entire year. New customers that were added to the portfolios in the course of the year are not included.

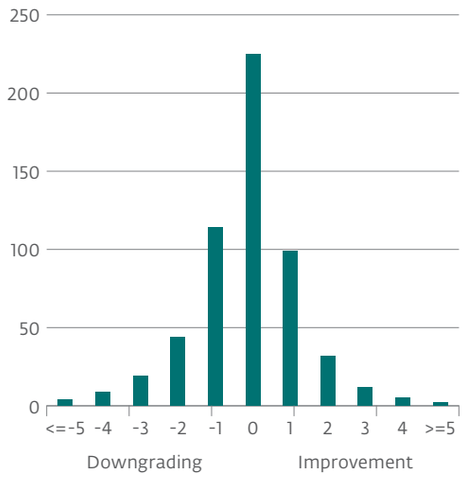
COMPARISON OF EXPECTED LOSS AND ACTUAL VALUE ADJUSTMENTS

The figures below show expected losses (EL) at the beginning of the year compared with new impairment losses in IFRS 9 stage 3 recorded during the year for the largest IRB-approved portfolios in the DNB Bank Group. EL is calculated by means of the same key figures that are used in the capital adequacy calculation.

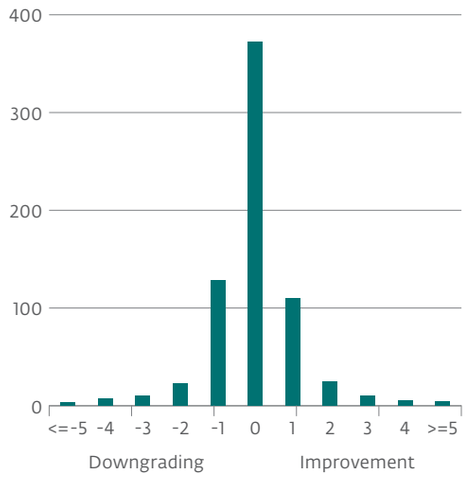
Both EL and the actual changes in value for the retail mortgage loans portfolio have increased over the past year, but by less than the underlying volume growth. The increases in EL in recent years are mainly due to a requirement by Finanstilsynet that the average LGD should be at least 20 per cent at the portfolio level and a minimum requirement to PD of 0.2 per cent at the agreement level. The actual changes in value are still significantly lower than the estimated EL.

In the corporate portfolio, both EL and actual changes in value rose during 2018. The increase in EL is mainly due to the fact that in 2017 a temporary adjustment of calibration levels for the LGD models for large corporate customers was made in anticipation of an update of the PD and LGD models. The increase in the changes in value is mainly due to a larger single exposure in offshore where the bank had to carry out a larger impairment, in addition to increased impairment in production.

Year-on-year migration, IRB retail, mortgage loans, 2018
NOK billion

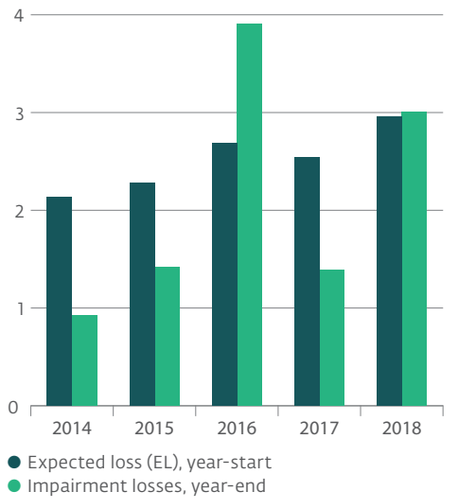


Year-on-year migration, IRB corporates, 2018
NOK billion



Comparison by expected and actual value adjustment, IRB retail, mortgage loans
NOK billion

Comparison by expected and actual value adjustments, IRB corporates
NOK billion



STANDARDISED APPROACH

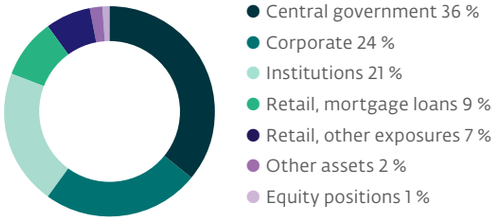
DNB reports the portfolios that are not IRB approved by means of the standardised approach but grouped in IRB categories. In addition, exposures that could have been reported according to the IRB approach but on which DNB does not have sufficient available data, are reported by means of the standardised approach. Finanstilsynet has granted an exception from the IRB approach for governments, central banks and equity positions. Other portfolios reported according to the standardised approach are considered to be temporary exceptions. This applies to exposures to housing cooperatives in Norway and corporate and retail mortgage loans portfolios in DNB's subsidiary in Poland. DNB's securitisation investments are reported according to the IRB approach, while portfolios in the associated companies are reported according to the standardised approach.

30 per cent of the DNB Bank Group's credit portfolio, measured by EAD, was reported by means of the standardised approach at the end of 2018.

Estimated risk-weighted assets and capital adequacy for the portfolios reported according to the standardised approach are presented in the section on capital adequacy.

In the standardised approach, external ratings are used to set credit ratings for foreign government risk and public administration outside Norway as well as international banks and credit institutions, i.e. the exposure categories governments and institutions. The ratings are based on the country ratings and are generally set as the average of the ratings from Moody's, Standard & Poor's and Fitch.

Asset classes in standardised portfolio, EAD, DNB Bank Group, 31 December 2018
Per cent



MANAGEMENT AND CONTROL OF CREDIT RISK

The risk appetite framework defines maximum limits for credit exposure. Limits have been set for annual growth, risk concentrations and expected losses (EL). An upper limit for growth, measured in terms of EAD, is set for each business area. To limit concentration risk, limits are set for risk exposure on individual customers and certain industries. The limit for expected losses applies to all types of credit risk and is measured by means of the Group's internal credit models.

The risk appetite framework is operationalised through credit strategies for the individual customer segments. In addition, risk indicators are established and used for monitoring managers on all levels. To read more about risk appetite, please see the chapter on risk management and control in DNB.

DECISION-MAKING PROCESS AND AUTHORISATIONS

Group Risk Management is responsible for checking and monitoring the quality of credit portfolios and the effectiveness of the credit process. Group Credit Management is part of Group Risk Management and is responsible for establishing the framework for the credit process and for credit management in all business areas.

Group Credit Management performs Credit Risk Reviews (CRR) to determine whether the standard for credit activities, credit strategies and credit rules is followed. The findings of CRRs are also used for training purposes. Credit Risk Reviews are continuously conducted in Personal Banking Norway, the corporate banking area and the international units. All of the regions and sections in the personal and corporate banking areas in Norway are reviewed annually. CRRs are performed once a year in the New York office and every other year in the other international units. In 2019, CRR will be a separate section in Group Credit Management and staffed with employees who will perform CRR in Personal Banking Norway, Corporate Banking Norway, as well as Large Corporates and International, including international offices. This change will clarify CRR as an autonomous and independent second line function.

Model Input Review (MIR) shall ensure correct and consistent use of the IRB models using subjective input. MIR is a collaboration between Group Risk Management and the business areas involving, as a minimum, one credit officer, analysts from Group Risk Management and a representative for the relevant business area. At least five credit proposals are reviewed each quarter. The findings of the reviews are used for training purposes to ensure constant improvement.

Each business area is responsible for managing its own credit activities and portfolios within the confines of the risk appetite limits and credit strategies. To ensure effective, high-quality decisions, DNB has established multiple levels of credit approval authorisations. The levels are based on the size, complexity of the credit, the required expertise and the risk involved.

The "two pairs of eyes" principle must be observed in connection with all extension of credit. This means that a credit is approved by one person based on a recommendation from another person. In cases where the requested credit exceeds a specific level, the decision must be endorsed by a credit officer in Group Risk Management. For the smallest credits in the corporate segment, however, automated risk classification can replace one of the "pairs of eyes".

For large corporate customers, the credit process is being digitised and work is in progress to increase digitisation of credit proposals (DCP). This will, among other things, imply that more straightforward credit proposals with a low risk category will be able to be given a more automated and simplified credit processing.

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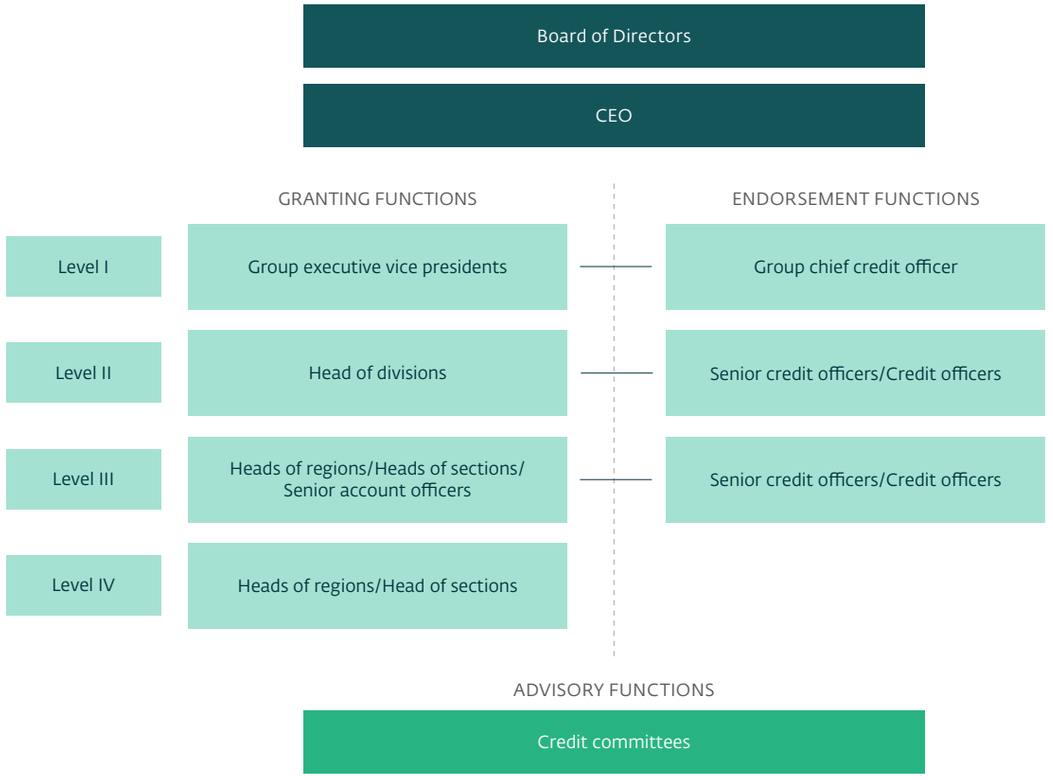
Credit decisions in DNB



The group chief executive has delegated credit-approval authorisations to the business areas and Group Risk Management. These are exercised in a decision-making system where the business area approves the application and Group Credit Management endorses decisions up to the board level on behalf of Group Risk Management.

All credit approval and endorsement authorisations are personal. The exception is the Board of Directors which approves credit proposals as a collegiate body. The Board decides credit applications of an extraordinary nature that could, for example, affect the Group's reputation and credit applications corresponding to more than 10 per cent of the bank's equity. If the decision-maker is not sure whether the credit is within the limit of his/her authorisation, or if the credit is of an unusual nature or raises concerns about ethical or reputational issues, the matter must be escalated to a higher level decision-making body.

The credit committees are advisory committees for business-area employees who approve credits, and employees in the independent risk organisation who endorse credit decisions. The Group Advisory Credit Committee, led by the group chief credit officer, considers applications from borrowers in more than one business area.

For the smallest corporate customers, a digital credit proposal flow was implemented at the end of 2018, by which customers can apply for credit via the online bank.

In the Personal Banking area, which has a large number of customers, most credit applications are processed by means of automated measurement and decision-support systems. Applications from low-risk customers with good debt-servicing ability and a moderate debt/asset ratio are approved automatically. The digitised credit process automatically collects data on income, debt and assets, as well as updated information about the value of the collateral in connection with refinancing existing loans and issuing pre-qualification letters.

CREDIT RISK REPORTING

The economic capital required to cover the credit risk is calculated for all credit agreements and forms the basis for evaluating the profitability of the agreements. The calculation is based on the risk parameters in the internal credit models and takes into account factors like industry concentration, geographic concentration, especially volatile segments and large individual exposures.

Exposure relative to the limits set in the risk appetite framework is reported to group management each month. If limits are exceeded, a report is promptly sent to the Board of Directors, together with an action plan. A quarterly risk report for the Group is distributed to the Board of Directors, giving an extensive description of the risk appetite status and other developments in the risk situation. In addition, changes to credit risk are analysed and reported monthly to the business areas and Group Credit Management. The reporting is done in multiple dimensions, such as industry segment, customer segment and geography. This reporting is handled by a unit in Group Risk Management that is independent of the business areas. In the internal monitoring of credit risk, all portfolios are measured and reported by means of internal models, irrespective of whether or not the portfolio is scored in IRB models that have been approved for use in capital adequacy calculations.

CREDIT REGULATIONS

If the customer has not proven a satisfactory debt servicing capacity, credit should not normally be granted even if the collateral is adequate. The customer's debt-servicing capacity is determined on the basis of future cash flows. The main sources of these cash flows are income from business operations for corporate customers and income for personal customers. In addition, the extent to which realisation of the collateral will cover the bank's exposure in the event of default, and any reductions in future cash flows, are taken into account.

Risk classifications are done on all corporate customers on which DNB has credit exposure whenever sizeable credits are considered and, unless otherwise decided, at

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Watchlist

DNB has a list of exposures that need to be monitored particularly carefully. The objective is to identify customers who require close monitoring so as to:

- convince the customer to carry out the necessary improvement measures or phase out the customer relationship while the customer still has financial steering
- take the necessary measures to prevent or reduce losses

If a material breach of financial covenants or a loss event occurs, the exposure will be put on a watchlist for special monitoring. Loss events include serious financial problems, the approval of interest-only periods due to the debtor's financial problems or a material breach of contract.

In addition, exposures with the following characteristics are considered as candidates for the watchlist:

- exposures that are classified as high risk
- forborne exposures
- exposures on borrowers whose financial situation has deteriorated, for instance due to major negative budget variances, the loss of important business areas, significant changes to operating parameters, the loss of key personnel or similar events

When a customer is placed on a watchlist, a new risk assessment is done, the collateral is reviewed, and an action plan is prepared for the customer relationship. When a loss event occurs, an assessment is done to determine whether this calls for impairment of the exposure. Please see the section on impairment and default earlier in this chapter.

least once a year. The risk classification should reflect the long-term risk on the customer and the exposure.

Management of the risk classification system is organisationally independent of operational activity and is handled by Group Risk Management. The risk classification models are designed to cover portfolios of exposures. If the model assigns a manifestly incorrect risk classification, the model-generated classification can be overridden manually. Any such overrides must be well founded and are only permitted in exceptional cases after a thorough assessment by a unit outside the relevant business unit. Risk classifications of exposure on private individuals are never overridden. For more information, see the description of the classification system in the section on Credit Models and Risk Classification.

COLLATERAL AND OTHER RISK-MITIGATING MEASURES

In addition to assessments of debt-servicing capacity, the Group uses collateral to reduce credit risk. Collateral can be in the form of physical assets such as homes, commercial property or vessels (mortgages), or in the form of guarantees, cash deposits, netting agreements or credit insurance. As a rule, physical assets must be insured. In addition, loan agreements may contain a negative pledge clause prohibiting the customer from pledging assets to other lenders.

The guarantors are largely private individuals, businesses, the government, municipalities, guarantee institutes and banks. The value of a guarantee depends on the guarantor's debt-servicing capacity and financial wealth and is assessed individually. In cases where the bank is given a guarantee by a company, its value will fluctuate along with the company's financial performance and financial strength. A guarantee provided by a limited company could be subject to the restrictions on the pledging of collateral by a limited company stipulated in the Limited Liability Companies Acts.

The main principle for valuing collateral is to use the expected realisation value at the time of a possible future default when the bank might have to realise the collateral. Valuations of collateral must be done in connection with all new credit applications, and at a minimum once a year, and are part of the basis for credit decisions. Applications for mortgages on real estate are considered on the basis of the property's market value, external appraisals or internal value estimates.

In addition to assessments of the customer's debt servicing capacity, the future realisation value of collateral, provided guarantees and netting rights are financial covenants included in most credit agreements for corporates. These clauses are a supplement intended to reduce risk and ensure good monitoring and management of the exposures. Examples of financial clauses are requirements for minimum net cash flow and equity.

STRESS TESTING

DNB's credit portfolios are subjected to a variety of stress tests, both at the overall level and for specific portfolios. The stress tests are used to gauge vulnerability to losses resulting from both loss of income and customer default in a business area or specific portfolio. Stress tests are also used to identify critical drivers of changes in credit risk and capital adequacy. Overall stress testing of the total credit portfolio is done at least once a year in connection with the internal capital adequacy assessment process (ICAAP). Stress tests required by the authorities are also conducted.

Stress testing is a second-line function and is managed by units that are independent of the business areas. The CRO has the primary responsibility for all stress testing. Stress tests of specific portfolios are normally performed in the line organisation, based on the principles laid down by the CRO. The central specialist unit for stress testing is responsible for quality control and for approving the assumptions and methodology used for the stress tests. The results of the stress tests are summed up in a report that is presented to the Group Advisory Credit Committee and approved by the CRO.

When portfolio stress tests are conducted in the line organisation, the management of the business area must determine the need for risk-mitigating measures and measures that can be implemented if problems arise. The CRO does independent assessments and recommends measures based on the conclusions of the stress tests.

Various methods are used to estimate credit losses in connection with stress testing. If there is a need to show detailed results, for instance in connection with stress testing of specific portfolios, the internal credit models

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for probability of default (PD) and loss given defaults (LGD) are used. Using a macroeconomic scenario as the point of departure, for example, as described in the chapter on capital management and ICAAP, the PD and LGD for each individual borrower are recalculated on the basis of stress factors that are input in the models. The new PD and LGD values are used to do new estimates of expected loss (EL).

DNB uses specially developed scenarios for stress testing subsidiaries, business areas and specific portfolios. These may consist of fewer macroeconomic variables and/or involve more direct changes of various risk parameters in the model, depending on the needs of the different portfolios and business areas.

INVESTMENT IN SECURITISATION

As at 1 January 2018, the hold-to-maturity portfolio In DNB was reclassified as available for sale, and it was sold in the first quarter.

The international bond portfolio is also part of DNB's liquidity portfolio and is discussed in the chapter on liquidity risk and asset and liability management.

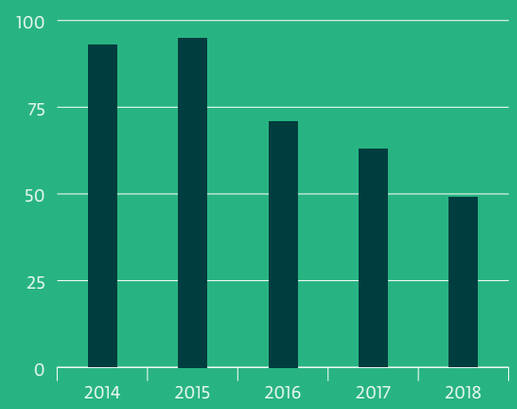
6
Counterparty credit risk

Counterparty credit risk is sensitive to market changes in interest rates or exchange rates amongst others. However, DNB has several measures to limit counterparty credit risk and there have been only moderate changes regarding counterparty credit risk. Counterparty credit risk in the DNB Bank Group was reduced during the year. Credit derivatives were not purchased or sold in 2018 and DNB had no outstanding credit derivatives at year-end.

DEFINITION

Counterparty credit risk is a form of credit risk that arises in connection with trades in financial instruments, such as derivatives. Derivatives are most often traded Over the Counter (OTC), i.e. by individual contracts between two counterparties. Counterparty credit risk is the risk that the counterparty will fail to perform its contractual obligations in a transaction. It differs from other credit risks in that the exposure usually depends on market risk factors, such as interest rates or exchange rates.

Counterparty credit risk, EAD, DNB Bank Group
NOK billion



DEVELOPMENTS IN COUNTERPARTY CREDIT RISK IN 2018

DNB enters into derivative contracts on the basis of customer demand and to hedge positions resulting from such activity. In addition, derivatives are used to hedge positions in the trading portfolio, take positions in the interest rate, currency, commodities and equity markets, and to hedge foreign exchange and interest rate risks that arise in connection with funding and lending.

The DNB Bank Group's counterparty credit risk was reduced by 22 per cent in 2018 and amounted to NOK 49.2 billion, measured in EAD, at the end of the year. The decline is partly due to a change in capital requirement calculation and partly due to a combination of exposures reaching maturity or expiring and an increased use of risk-mitigating agreements. The counterparty credit risk measurement is sensitive to changes in interest rates and currency exchange rates, and these risk factors also contributed to reducing the EAD.

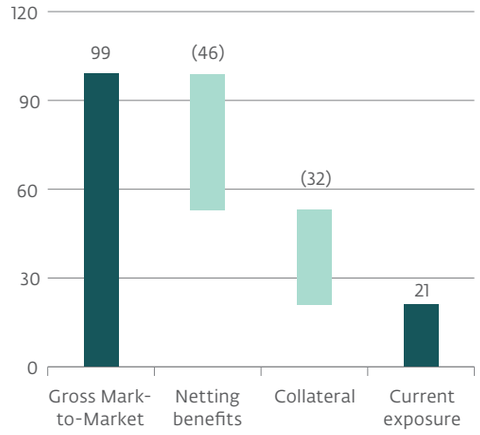
Credit derivatives were not purchased or sold in 2018 and DNB had no outstanding credit derivatives at year-end.

The top figure shows the distribution of counterparty credit risk split by different sectors at the end of 2018.

The bottom figure shows how DNB has reduced the risk in derivative trading by using netting agreements and collateral. Netting agreements and collateral arrangements with major counterparties imply that, on the whole, counterparty credit risk represents a moderate risk in DNB. Counterparty credit risk arising in subsidiaries and affiliates is not included in the figures. Such exposure is limited and mainly related to Eksportfinans.

Counterparty credit risk spit by sectors, EAD, DNB Bank Group, 31 December 2018
Per cent

Mitigation of derivatives, DNB Bank Group, 31 December 2018
NOK billion



CAPITAL REQUIREMENTS FOR COUNTERPARTY CREDIT RISK

When the capital requirements for counterparty credit risk are calculated, the risk exposure is determined by means of the Current Exposure Method (CEM). EAD is the sum of Mark-to-Market and an addition for potential future exposure. Both the IRB- and standardised approach are used to establish risk weights for counterparty credit risk depending on the methodology approved for the counterparty. For more information, see the chapter on credit risk.

Risk-weighted assets for counterparty credit risk in the DNB Bank Group were just below NOK 30 billion at the end of the year. This is about NOK 6 billion lower than at the end of 2017. The capital requirement was NOK 2.4 billion at the end of 2018 compared to NOK 2.9 billion the previous year.

In December 2017, DNB applied to Finanstilsynet (the Financial Supervisory Authority of Norway) for permission to use the IMM (Internal Model Method) to calculate capital requirements for counterparty credit risk. IMM is the method for calculating capital requirements that best reflects risk sensitivity and provides the full effect of all risk-mitigating agreements. IMM is already used to monitor and report the risk level internally. The basis for calculating counterparty credit risk comprises approximately 3.5 per cent of DNB's total RWA, and a transition to IMM would not change the total RWA significantly.

RISK MITIGATION MEASURES

In order to minimise counterparty credit risk against individual counterparties, netting agreements may be entered into. These agreements make it possible to net the positive and negative market values linked to contracts with individual counterparties.

Bilateral security agreements have been established with the largest financial counterparties, in addition to an increasing number of non-financial counterparties. These agreements are called Credit Support Annex (CSA) agreements. Under these agreements, the market value of all derivative contracts between DNB and the counterparty is settled either daily or occasionally weekly, which largely eliminates counterparty credit risk. These transactions are mostly settled in cash, though government bonds and covered bonds are used as well. The agreements are not normally dependent on the credit quality of the counterparty, but some of them stipulate that the maximum exposure level before collateral is required (the threshold value) will be reduced if either of the counterparties are downgraded.

In line with market practices and regulations following the financial crisis, an increasing proportion of derivative contracts are being offset via so-called clearing houses, or central counterparties. In the EU and Norway, the European Market Infrastructure Regulation, EMIR, requires that a number of standard derivative agreements between financial counterparties shall be cleared. By clearing derivatives, counterparty credit risk is moved from several individual counterparties to one central counterpart with full offsetting of all agreements. Central counterparties are regulated and have procedures for reducing risk. Among other things, the financial requirements for the members require initial- and ongoing collateral, as well as contributions to the default fund, and they have thorough procedures for dealing with any default. The central counterparties hold several layers of capital to absorb any losses resulting from defaults among the members. The principle shall be that the defaulting party shall cover losses in the first instance via deposited funds, and thereafter part of the capital of the central counterparty shall be used before the other members' default funds.

DNB is a member of several key counterparties and clears interest rate, equity and commodity derivatives, and repurchase agreements. The largest exposure is against LCH and stems from interest rates derivatives. As at year-end 2018, approximately 80 per cent of DNB's outstanding volume in the standard interest derivatives is cleared. Capital is set aside for exposure to central counterparties in accordance with the capital adequacy regulation.

Counterparty credit risk in equity derivatives, securities financing and currency trading for private customers is reduced by daily settlement.

SETTLEMENT RISK

Settlement risk is linked to the settlement of transactions where the bank has met its obligation to deliver the agreed security or sum without knowing whether the counterparty has met its obligation to deliver the agreed security or sum to the bank. One example is a currency exchange where the bank sends the agreed amount in one currency before receiving the agreed amount in the other currency. DNB has established various measures for reducing and controlling settlement risk. One important measure is the balance check on the account. This means that the bank does not make a payment to the counterparty until coverage is established for the obligation on the counterparty's account. Moreover, in connection with settlements of securities transactions, one of the conditions attached to the securities account is that securities cannot be delivered before the bank has received payment. The normal procedure in the banking market is that the main currencies are settled through CLS (Continuous Linked Settlement). CLS ensures payment versus payment, which means that the final transfer of the bank's payment is not executed before the counterparty's payment takes place. In addition, settlement risk limits have been established, which entail a ceiling on the total settlement amounts for a single counterparty that fall due on the same day.

MANAGEMENT AND CONTROL OF COUNTERPARTY CREDIT RISK

Counterparty credit risk is defined as a sub-category of credit risk, but as counterparty credit risk exposure is significantly dependent on market risk factors, it is also treated in the context of market risk. Management of counterparty credit risk in DNB is elaborated on and concretised in both the Group Standard for Market Risk and the Group Standard for Credit Risk. The standard for market risk has underlying instructions that determine definitions, calculation methods, and the reporting of counterparty credit risk. The standard for credit risk is elaborated in the credit regulations. The credit process, frameworks and credit management for counterparty credit risk are governed by the credit regulations. Counterparty credit risk is included in the risk appetite for credit risk and limits are delegated on the different authorisation levels specified in the credit guidelines, which are described in more detail in the section on credit risk.

The Financial Markets Risk Committee (FMRC) is headed by the Chief Market Risk Officer (CMRO) and is responsible for approving and following up principles and procedures for market and counterparty risk. In connection with the IMM application, FMRC has received a special responsibility for assessing and approving models and measurement methods in the IMM system.

DNB uses internal simulation models to calculate risk exposure in connection with the monitoring and measurement of counterparty credit risk. A combination of historic time series and the market's expectations with respect to future trends for various risk factors, are used to calibrate the simulation models. The simulation models are continuously monitored and upgraded so DNB can ensure that they are suitable for the area of application at all times. Among other things, weekly automated backtests are performed whereby the models' predictive ability is tested.

The internal models (IMM) that are used to calculate counterparty credit risk exposures are validated annually by the validation unit in Group Risk Management. The validation unit is organisationally independent from the units where the models are developed. The models and their use are also reviewed annually by the internal auditors.

STRESS TESTING

A special programme for stress testing counterparty credit risk has been established. The stress testing programme is designed to identify undesired future outcomes of the total counterparty credit risk exposure both in isolation and together with the bank's total credit risk exposure. Central to the stress tests is the design of various scenarios. In addition to uncovering potential losses in the counterparty credit risk exposure, stress tests shall also identify specific and general correlation risk between credit risk and market risk factors, so-called Wrong Way Risk (WWR). WWR is the additional risk that arises through an adverse correlation between counterparty's exposures and the credit quality of the counterparty. In other words there is a correlation between credit risk and market risk. Stress testing is done on a monthly basis. In addition, counterparty credit risk was included in the stress test of European banks coordinated by the European Banking Authority (EBA) in 2018 and as described in the chapter on risk management and control in DNB.

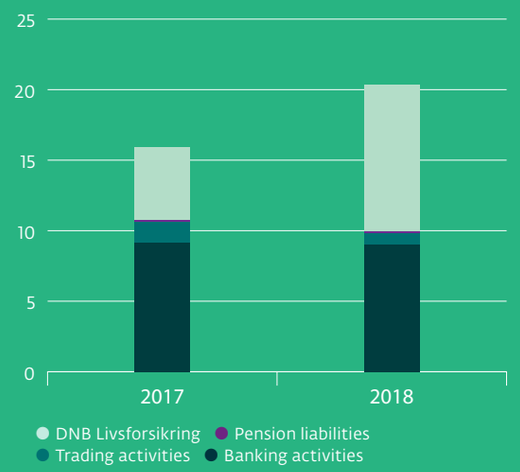
7
Market risk

There were major fluctuations in the financial markets in 2018, with high volatility in share prices, NOK exchange rate, oil prices and interest rates. Norwegian interest rates are the most important underlying driver of market risk in the DNB Group, especially through the liabilities in the life insurance operations. Other significant drivers of market risk include foreign interest rates and currencies, in addition to basis swap risk which arises because a significant proportion of the Group's NOK-based lending is funded in foreign currencies.

DEFINITION

Market risk is the risk of losses due to unhedged positions in the foreign exchange, interest rate, commodity and equity markets. The risk reflects potential fluctuations in profits due to volatility in market prices or exchange rates. Market risk occurs in several segments of the DNB Group and includes both risk that arises through ordinary trading activities, and risks that arise as parts of banking activities and other business operations.

Market risk as a share of economic capital, DNB Group
Per cent



Capital requirements for market risk, DNB Group
NOK billion

1.3 (1.6)

Market value of equity and real estate investments in the banking portfolio, DNB Group
NOK billion

11.7 (1.8)

MARKET RISK DEVELOPMENT IN 2018

2018 was a turbulent year in the financial markets with high volatility in share prices, exchange rates, oil prices and interest rates. There were many reasons for this. Brexit, weaker growth in Europe, fear of a trade war, the US central bank's interest rate hikes and the reversal of quantitative easing have all had a negative impact on the markets.

Oil prices fell from 86 US dollar per barrel in early October to 55 US dollar per barrel towards the end of the year. On the other hand, there was steady growth in the Norwegian economy, and Norges Bank (the Central Bank of Norway) increased the key interest rate to 0.75 per cent in September 2018. DNB Markets expects two interest rate hikes in 2019, in line with Norges Bank. At the same time, the 3-month money market rate (NIBOR) rose by 45 basis points, and the last time NIBOR was at this level was in the summer of 2015. Oslo Børs' main index rose by 15 per cent from January to October, but the entire recovery had been reversed by the end of the year.

In September 2018, Nordea and DNB signed an agreement to sell part of their shareholdings in Luminor to a consortium led by Blackstone. Following this transaction, DNB and Nordea will own approximately 20 per cent each, while the consortium will own approximately 60 per cent. The sale is scheduled to take place during the first half of 2019.

The insurance companies of DNB and SpareBank 1 were merged effective from 1 January 2019. DNB's insurance operations were transferred to an associated company, Fremtind, with a 35 per cent ownership interest. As of this date, the risk was reclassified as market risk.

Measured in terms of economic capital, total market risk exposure in the DNB Group came to NOK 13.9 billion at the end of 2018, as compared to NOK 10.6 billion in 2017. The increase was primarily due to increased market risk in DNB Livsforsikring. The company increased its shareholding as a result of a new strategy, and in addition, the last quarter's fall in the stock market reduced the buffers. Market risk exposure amounted to 20.3 per cent of total economic capital at the end of 2018, which was within the limit of risk appetite. The limit applies to the total market risk exposure in the DNB Group. Approximately half of the market risk is related to life insurance operations as shown on the previous page.

The definition of the trading portfolio is given in the capital adequacy regulations. The trading portfolio consists of positions in financial instruments, as well as commodities and credit derivatives, for the purpose of resale or to take advantage of price or interest rate fluctuations in the short term, as well as hedging such positions. For example, the instruments in the trading portfolio are related to customer transactions through DNB Markets and include "market making" and facilitating company financing. In addition to the trading portfolio, DNB has a portfolio referred to as the banking portfolio. This consists of instruments derived from the Group's financing activities, from equity investments, or as a result of different fixed-rate periods for liabilities and assets.

CAPITAL REQUIREMENTS FOR MARKET RISK

Capital requirements are calculated according to the capital adequacy regulations and the CRD IV/CRR regulations. As described earlier in this report, this means that the Group's insurance operations are held outside of the capital adequacy calculation. For details regarding the capital adequacy calculation for DNB Livsforsikring AS and DNB Forsikring AS, please refer to their own reports "Solvency and Financial Condition Report", released on 23 April at dnb.no.

Regulatory capital for market risk can be calculated either by using internal models or according to the standardised approach. DNB reports according to the standardised approach. According to the capital adequacy regulations, capital requirements should be calculated for interest and share price risks associated with the trading portfolio. In addition, capital requirements are calculated for currency risk and commodities risk for the overall operations. The market value principle is used as the accounting principle for trading activities and the portfolios are valued daily. In the table, position risks for debt instruments include both general and specific risks and additional requirements for options. The capital requirement for currency risk is zero as the total net currency position does not exceed 2 per cent of the primary capital (own funds). The total capital requirement for market risk was reduced by NOK 357 million during the year.

Credit Value Adjustment (CVA) is an adjustment of the market value of Over the Counter (OTC) derivatives in order to account for impaired creditworthiness of the counterparty. The market value of derivative contracts depends on the counterparty's creditworthiness and other market risk factors. Thus, fluctuations in results arise through the CVA. DNB calculates capital adequacy requirements for CVA risk according to the standardised approach. The capital adequacy requirement for CVA risk declined in 2018 and was about 33 per cent lower at the end of 2017. The decline is partly due to a change in capital requirement calculation and partly due to a combination of exposures reaching maturity or expiring and an increased use of risk-mitigating agreements. Developments in the calculation basis of the capital adequacy requirement (RWA) for CVA risk in the DNB Group are shown in the figure.

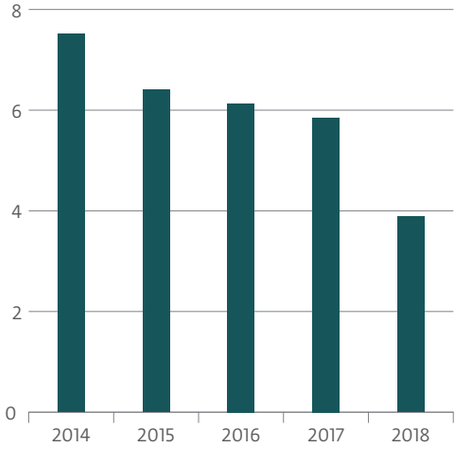
Capital requirements for market risk, DNB Group

NOK million	31 Dec. 2018	31 Dec. 2017
Position risk, debt instruments	927	1 120
Position risk, equity instruments	16	21
Currency risk	0	0
Commodity risk	1	2
Credit value adjustment risk (CVA)[1)]	311	468
Total market risk	1 254	1 611

1) In the in CRD IV reporting (Corep) the CVA risk is not included in market risk

Development in RWA for CVA risk, DNB Group

NOK billion



MARKET RISK EXPOSURE

MARKET RISK LIMITS

The risk appetite framework for market risk is operationalised in the form of limits for each type of risk. The limits for significant market risk exposures are determined by the Board of Directors of DNB ASA. Limits are set annually, and will automatically expire if they are not renewed. The limits are delegated by the Board of Directors to the CEO, who delegates them further to risk-taking units that make investment- or trading decisions. If limits are exceeded, it must be reported immediately both to whoever delegated the limits and to Group Risk Management.

Administrative limits are set for exposures that are defined as less significant. Such limits are used when there is a need for operational scope of action.

Administrative limits are determined by the CFO, and the CRO should be informed of changes to the limits. The table gives an overview of the most important administrative limits set by the Board that applied at the end of 2018. In addition to these, smaller limits are set for options.

Counterparty credit risk is an element of the risk appetite for credit risk, and limits are delegated on the various authorisation levels specified in the credit guidelines. For more information, see the chapters on credit risk and counterparty credit risk.

INTEREST RATE RISK

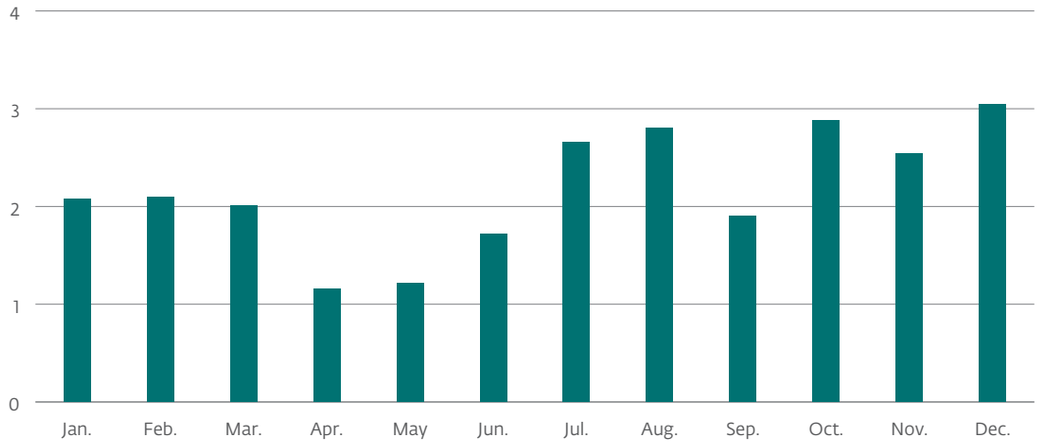
Interest rate risk occurs when financial instruments change value as a result of interest rate fluctuations and occur in both the banking- and the trading portfolio.

Market risk limits, DNB Group, 31 December 2018

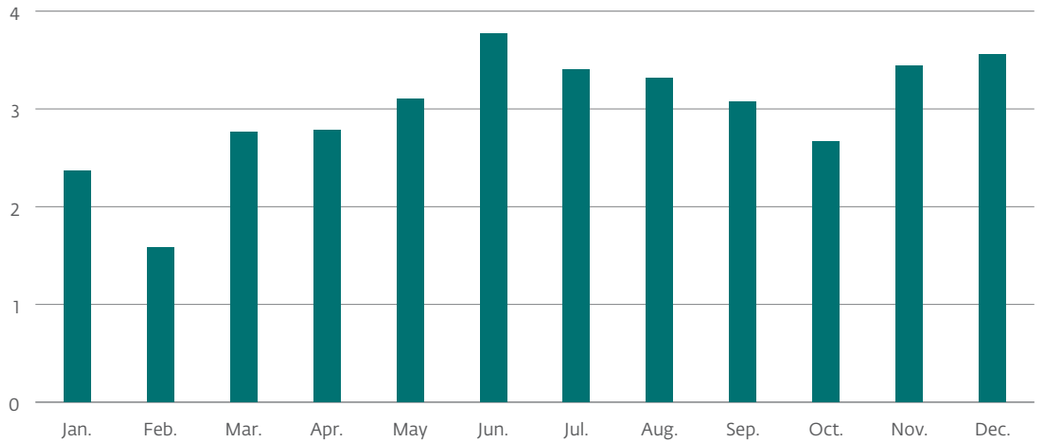
NOK million		Limit, trading activities	Limit, non-trading activities	Total	Description
Limits set by the Board of Directors	Interest rate risk[1)]	4	10	14	Sensitivity limit
	Currency risk	3 000		3 000	Market value limit
	Equity risk	2 300	3 000	5 300	Market value limit
	Commodities risk	300		300	Market value limit
	Basis swap risik[1)]	15/(30)		15/(30)	Sensitivity limit
Administrative limits	Real estate risk	2 750	4 185	6 935	Market value limit
	Physical asset risk[2)]		16 050	16 050	Market value limit
	Strategic investments[3)]		11 300	11 300	Market value limit
	Basiscurve risk[1)]	52		52	Sensitivity limit
	Credit spread risk[1)]	31	25	56	Sensitivity limit

1) Basis point value
2) Includes residual value of vehicles associated with leasing operations
3) Includes investments in Luminor Group AB and Vipps

Interest rate exposure in the trading activities, BPV, 2018
NOK million



Interest rate exposure in the banking activities, BPV, 2018
NOK million



Interest rate risk occurs when there are different fixed-rate periods for assets and liabilities, and is expressed at the basis point value (BPV). The basis point value represents the change in net present value of the positions in the event of a one basis point change of the underlying interest rate. This is thus a measure of the sensitivity of the portfolios with regard to changes in interest rate levels.

DNB's total interest rate risk limit at the end of 2018 amounted to NOK 14.4 billion per basis point change, distributed between NOK 4.0 million in trading activity and NOK 10.4 million for other exposures. Separate limits are set for each currency and the different intervals on the yield curve. Interest rate risk in banking activities is measured and reported daily by DNB Markets and Group Treasury. The limits were not exceeded in 2018.

To obtain a broader picture of interest rate risk, changes in net interest income (delta net interest income, delta NII) are calculated and the change in the value of interest-sensitive assets and liabilities as a result of a interest rate shock (delta economic value, delta EV). According to the Basel Committee's standard "Interest rate risk in the banking book", changes in net interest rates for interest-sensitive products in Norwegian kroner in the banking book are calculated as a result of an instantaneous parallel shift in the yield curve of 200 basis points, with a time horizon of 12 months. The effect on the present value of the exposure in Norwegian kroner is calculated in six scenarios for the yield curve, and the scenario that yields the greatest impairment defines delta EV. Delta NII and delta EV are reported regularly to the management of Group Treasury, ALCO, group management and the Board of Directors of DNB ASA. Average interest rate risk for 2018 was NOK 3.0 million per BPV in the banking activities and NOK 2.2 million per BPV for the trading activities. The exposures were within the limits.

The figure shows interest rate exposure distributed among maturity bands for banking activity, measured by basis point value. The following instruments are included: forward contracts, bonds and commercial papers, deposits, interest swaps and basis swaps. The exposure is considered to be positive if the bank would suffer losses in the event of a decline in interest rates. The net interest rate exposure at the end of 2018 was positioned for rising interest rates as shown in the figure.

The table shows the impact on profits for banking activities of different interest rate changes. An interest rate increase of 100 basis points will result in a gain of about NOK 90 million for exposures in NOK, and a similar interest rate decrease will result in a loss of about NOK 90 million. Interest rate risk connected to banking activities is almost linear, so that change in the interest rate multiplied by the interest rate sensitivity provides a comprehensive picture of the interest rate risk.

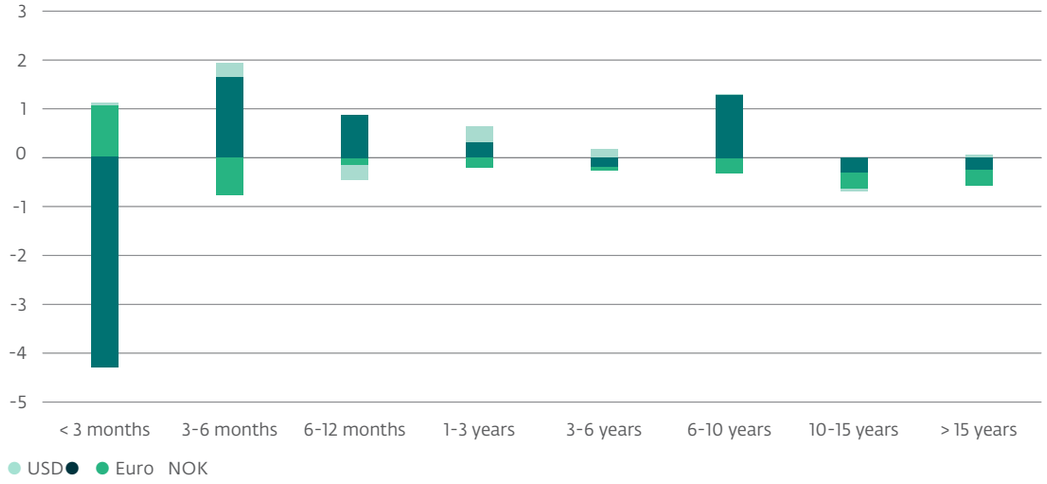
BASIS SWAP SPREAD RISK

A basis swap is a combined interest rate and currency swap where the parties exchange future cash flows and also agree to pay and receive interest. A substantial portion of DNB's assets in NOK is funded with foreign currency through covered bonds issued by DNB Boligkreditt. The currency is switched to NOK through a basis swap with the same or shorter term. Basis swaps are normally kept to maturity and valued daily. This entails that the recorded value of a swap fluctuates during the term of the swap. There are no limits on basis swaps that are used as hedging instruments.

Basis swap risk is measured in BPV in the same way as interest rate risk. A major portion of DNB's long-term foreign currency funding is in euro. Euros are exchanged to Norwegian kroner via US dollars. Reversal of quantitative easing in the US has made short-term financing in dollars more expensive, and the activity of deposits placed in the Federal Reserve (FED) with a

Interest rate sensitivity distributed among maturity bands, banking activities, BPV, 31 December 2018

NOK million

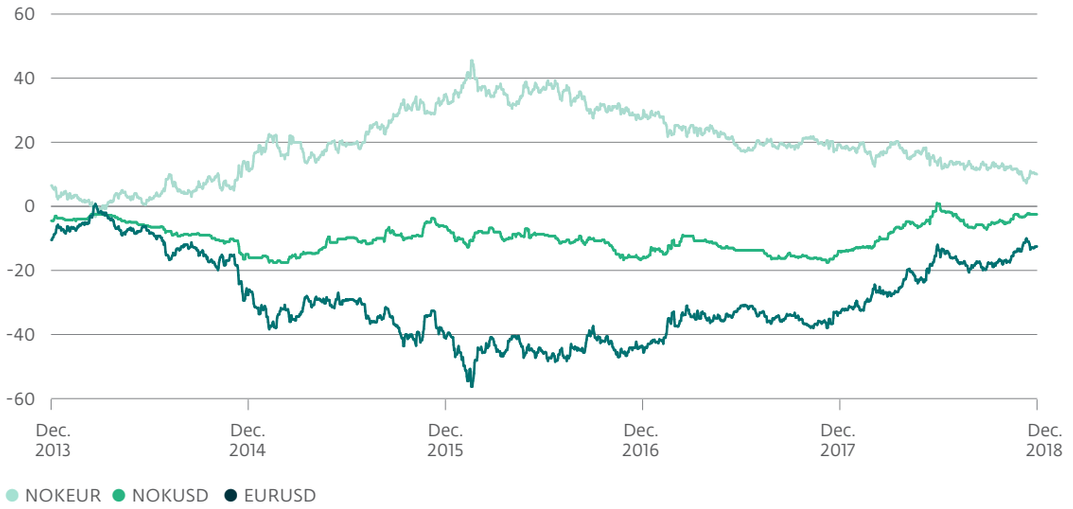


The effect of interest rate shocks on the rate sensitive instruments in banking activities, 31 December 2018

NOK million	+ 200 bp	+150 bp	+ 100 bp	+50 bp	- 50 bp	-100 bp	-150 bp	-200 bp
Exposure in NOK	(181)	(136)	(90)	(45)	45	90	136	181
Exposure in EUR	(227)	(170)	(113)	(57)	57	113	170	227
Exposure in USD	115	86	58	29	(29)	(58)	(86)	(115)
Total	(293)	(220)	(146)	(73)	73	146	220	293

Five year basis swap spread

Basis point



Equity and real estate investments in the banking portfolio, DNB Group, 31 December 2018

NOK million	Book value	Market value
Direct investments	214	282
Private equity fund including loan portfolios	191	211
Credit portfolio	585	426
Strategic investments	10 106	10 136
Total equity investments	11 096	11 056
Real estate portfolio, Group Investments	407	518
Real estate portfolio, Poland	166	166
Total equity and real estate investments	11 668	11 740

positive margin has virtually ceased. Reversal of quantitative easing also affects the liquidity prices in US dollars. At higher liquidity prices, market participants are paid more to sell dollars with longer maturities in the currency and basis swaps markets. This is believed to be one of the reasons for the price movements in the basis swap market through 2018.

During the fourth quarter, the basis swap spreads for both Norwegian kroner and euros tightened relative to US dollars. The negative market capitalisation effect for DNB from the euro was greater than the positive effect from the Norwegian kroner, and contributed to a negative trend in market value of the bank's basis swaps.

EQUITY INVESTMENTS

Equity investments are grouped into a credit portfolio, real estate investments, strategic financial investments, strategic subsidiaries, direct investments and investments in Private Equity funds. As a shareholder, DNB actively exercises ownership through the companies' Boards of Directors. The risk attached to the bank's financial investments is moderate. Exposure relative to market risk limits is measured on the basis of the investments' market value, including any future commitments in Private Equity funds. Guarantees for share issues and secondary investments in the equity market are fully recognised in the framework utilisation. Shares in subsidiaries and associated companies are not included, as they are fully or partially consolidated in the accounts. In accordance with IFRS, shares are valued at fair value in the accounts.

The purpose of the credit portfolio is to secure or recover the value of credit exposures through ownership and subsequent realisation. On the basis of business-related and long-term assessments, the bank may decide to sell equities pledged as collateral or convert defaulted debt into equity and ownership.

Real estate exposures are either strategic real estate investments or properties repossessed as a result of customer default. The real estate exposure is measured as the market value of the underlying properties, regardless of the financing structure.

Strategic financial investments are investments in the financial sector with strategic anchoring. The ownership of Luminor Group AB and Vipps are the largest investments. DNBs insurance operation, Fremtind, was incorporated as an associated company as of 1 January 2019.

Direct investments consists of an investment portfolio containing unlisted companies rooted in the customer environment. Through DNB Venture, DNB will invest in Nordic start-ups with considerable innovation capabilities and value development potential.

The PE portfolio consists of shares in unlisted Private Equity funds. The portfolio consists mainly of acquisition funds that invest in mature enterprises and a smaller proportion in venture funds investing in companies in the start-up phase.

OTHER EXPOSURES

Currency risk in the Group is hedged against DNB Markets, which is the only unit that is directly exposed to currency risk. The exposure is moderate and is predominantly linked to business operations and, to some extent, to supporting customer trades.

Asset risk (other physical assets) is exposure to direct ownership of physical assets that are not standardised. Examples of such assets are industrial equipment, construction machinery, factories, mines, ships and infrastructure. The limit for this risk also covers exposure to the residual value of vehicles associated with leasing operations.

Credit spread risk mostly arises as a result of the bank's liquidity risk management through the management of bonds in the liquidity portfolio. The credit spread is the add-on to the reference interest rate in a bond coupon. Credit spread risk is the risk of changes in market assessments of the credit spread.

In addition, there are limits for commodities risk and basis curve risk. Commodities exposure is small and the risk associated with the exposure is marginal. Basis curve risk occurs when interest rate instruments denominated in the same currency are not valued with the same yield curve.

MANAGEMENT AND CONTROL OF MARKET RISK

The Group Policy for Risk Management covers all types of risk in the DNB Group. For market and counterparty credit risks, the Group Policy is elaborated and concretised in the Group standard for market risk that establishes definitions, principles for delegation of frameworks and requirements for the management of market and counterparty credit risks. The Group standard for market risk is reviewed annually and substantial changes are approved by the Board of Directors of DNB ASA. Local guidelines have been implemented for business areas with substantial market risk exposure. The local instructions operationalise the Group standard in the individual business area.

DNB uses various risk measures in the management and control of market risk:

- Economic capital is used to measure the overall market risk, and in the internal risk and capitalisation assessments.
- Value at Risk (VaR) is used to compare risk across asset classes and to monitor the level of risk for each risk type. VaR is calculated for interest rate, equity and currency risk attached to both banking and trading activities. Limits are not set for VaR.
- Sensitivity measures are used to report and follow up exposures against specific limits, e.g. yield curve intervals. Sensitivity measures in the market risk measurement reflect how much the bank risks losing at a given change in the underlying risk type. The sensitivity measures are important for the qualitative risk assessment and are also used as a basis for quantitative risk modelling.
- Stress testing is used to identify exposures and losses that could arise under extreme, but at the same time credible market conditions.

DNB observes the principle of three lines of defence in the monitoring of market risk. First line responsibility is performed where the risk is taken. Local control units track and control the activity. Barriers are established between units that take risks and the control units. The local internal control units report risks directly to Group Risk Management in addition to reporting to their own line management. The CRO and Group Risk Management establish the principles for management of market risk, and constitute the second line of defence. The second line of defence supports, monitors, and challenges the first line of defence for risk management and can delegate second line tasks to local control units.

The Financial Markets Risk Committee (FMRC) is headed by the Chief Market Officer (CMRO). The committee follows up and approves the framework for managing market risk related to the bank's activity in financial markets, including methodology and control procedures. FMRC has members from Group Risk Management, DNB Markets and Group Treasury.

Market risk exposure, risk appetite and framework utilisation are reported quarterly to the Boards of Directors of DNB ASA and DNB Bank ASA. In addition, it is reported monthly to group management and the Asset and Liability Committee (ALCO).

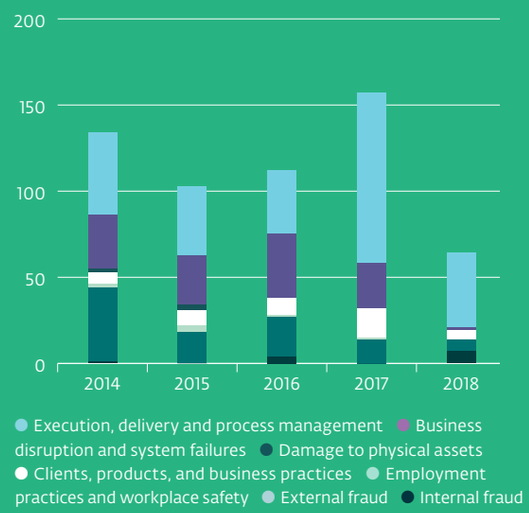
8
Operational risk

There have been relatively small operational losses in 2018, since there were no individual events with large actual losses during the year. Information security and IT operations were assessed as the greatest operational risk areas in DNB in 2018. The development and implementation of risk-mitigation measures in these areas has therefore had particularly high priority..

DEFINITION

Operational risk is the risk of losses due to deficiencies or errors in internal processes or systems, human errors or external events. Operational risk includes, among other things, compliance risks, legal risks and IT risks including information security. Operational risk applies to the entire organisation and an operational risk event can impact different parts of the organisation in different ways.

Operational losses
NOK million



Capital requirements
NOK million

7 040 (7 077)

Operational events
Number

2 880 (847)

DEVELOPMENTS IN OPERATIONAL RISK IN 2018

There were 2 880 operational events recorded in 2018. Process- and routine failures, internal fraud and external fraud represent the greatest losses. The same categories are also the greatest measured in number of events, in addition to business disruption and system error, as well as product and business practices.

As part of the work of managing operational risk, DNB uses an integrated risk management tool for governance, risk and compliance, which includes, among other things, a new loss and event database for registration of operational events. When the new database was implemented, DNB removed the lower amount limit for registering events. In May 2018, a separate process for reporting and tracking compliance violations related to the GDPR was also established in this database. There has been a large increase in the number of recorded events in 2018 compared with previous years, and this is considered to be a result of an internal cultural change seen in the context of the implementation of the new reporting system. Despite the increase in the number of events in 2018, there was an overall reduction in operational losses as there were no single events with large actual losses. Net loss was NOK 63 million and was well within the limit of risk appetite.

DNB has a major focus on the operational risks in the company's products, and during 2018 completed a review of all the Group's products and services. Regular assessments are made of the products, based on developments in the industry and society.

DNB has assessed information security and IT operations as particularly significant areas of operational risk. Information security measures implemented in 2018 include reinforced protection of the IT infrastructure, improved user- and access management, stronger defence against digital fraud and more comprehensive training in IT security for IT specialists. There has also been a focus on continuous communication work and information security training for all employees in the Group.

There is still a special focus on cyber security based on a persistent demanding threat scenario within this area, both globally and for DNB. Further measures have been implemented in 2018 to ensure that cyber security risks are managed within acceptable tolerance limits. In 2019, DNB will integrate risk management more fully into IT governance. Furthermore, the connection will be clarified between IT and the remaining risk scenario in DNB's business areas. The work on security solutions and a sharp focus on strengthening the defence against cyberattacks and digital fraud will also be continued.

Efforts to strengthen operational stability related to critical IT services continued in 2018. A number of operational-stabilising measures have been managed and implemented through a central IT programme and DNB experienced a positive development in IT operations. Continuous measurement of operational quality is carried out.

A major objective of the operational risk management is to uncover the most serious operational risks. In 2018 new methods have been established to assess the greatest risks, and these are undergoing implementation and testing.

Capital requirements for operational risk, DNB Group

NOK million	Factors	31. Dec 2018	31. Dec 2017
Corporate finance	18 %	239	187
Trading and sales	18 %	674	939
Retail brokerage	12 %	21	49
Commercial banking	15 %	4 030	3 383
Retail banking	12 %	1 661	1 907
Payment and settlements	18 %	208	170
Agency services	15 %	129	150
Asset management	12 %	79	49
Total standardised approach		7 040	6 834
Total basic indicator approach	15 %		272
Total capital requirements		7 040	7 106

CAPITAL REQUIREMENTS FOR OPERATIONAL RISK

During the last quarter of 2018, the DNB Group has changed the calculation of operational risk in the capital adequacy to a standardised approach only, where it previously used a combination of basic and standardised approach. Capital requirements for operational risk decreased by NOK 65 million in 2018. The reduction is mainly due to the change in method for reporting on the consolidated level.

MANAGEMENT AND CONTROL OF OPERATIONAL RISK

Management of operational risk shall ensure efficient and successful operations. DNB shall have low operational risk, and low annual losses. The Group shall be characterised by a sound risk culture which involves identifying and assessing risk, establishing, implementing and evaluating measures as well as ensuring pertinent, effective reporting to relevant stakeholders. All identified losses and events shall be recorded in a loss- and event database.

The Group Policy for Risk Management is the basis for the Standard for Operational Risk. The standard is also based on Finanstilsynet's (Financial Supervisory Authority of Norway) Module for Operational Risk Management and the Basel Committee's document, Principles for the Sound Management of Operational Risk. The standard focuses on responsibility for operational risk management and ensures that DNB's operational risk management is developed on the basis of recognised best practise solutions.

DNB's standard for products and services applies to all the products and services that DNB offers. It defines what a product is, what it means to the customer, what is the target group and who in DNB is responsible for the product. The standard describes the assessments required in connection with approval and follow-up.

It covers the establishment of new products and services, changes to existing products and services as well as monitoring or retirement of existing products and services. In addition, the standard elucidates and formalises responsibility and ownership throughout the value chain. All products and services should follow a template when they are established. The template will document the decision-making basis for the product or service, and is owned by the group executive vice president in charge of the customer segment to which the product or service will be offered. Risk assessments and ethical assessments must always be conducted, and must be documented and verifiable.

Laws and regulations provide the external framework for DNB's operational risk management. The figure shows how the governing documents set the premises for the management and measurement of operational risk. Risk appetite sets limits for the loss DNB can incur within different categories. Operational risk management shall contribute to building an internal risk culture which helps ensure that the ambition of low operational losses is achieved. Risk identification and assessment, together with registration and follow-up of operational events, shall provide an overall picture of the operational risk.

Operational risk management in DNB

The Board of Directors has the primary responsibility for operational risk management in DNB. This entails establishing a sound risk culture and clearly delegate responsibility for ongoing monitoring and control of operational risk.

All managers in DNB are required to be cognizant of and manage operational risk. This is to be achieved through asset quality procedures and risk assessments of operations, major changes and crucial processes. Comprehensive contingency and business continuity plans have been drawn up in order to limit the consequences of serious events like operational disruptions. The plans are constantly updated, and regular drills are carried out.

The annual status reporting is a key element of the Group's internal control and operational risk management. The result is summarized by Group Risk Management in a memo to the group management and the Board of Directors. In 2018, all areas of the Group conducted a self-attestation where managers confirmed that:

- they have identified their main processes and risks
- risk-mitigating measures and controls are established for each risk
- the controls are tested
- they know the strengths and weaknesses of the controls
- action is taken to close up any gaps

Throughout the year, corporate areas have assessed their greatest risks and reported measures to Group Risk Management quarterly. Developments in risks that are considered significant across areas, such as cyber risk, are reported to the Board of Directors quarterly by Group Risk Management. Developments in operational risk are reported monthly to group management, and quarterly to the Board of Directors as part of the Group's risk reporting. The development is measured against the operational risk statements in the risk appetite framework. There are fixed frameworks for operational losses and stability in IT operations. In addition, predicted risk assessments of information security and other operational risks are included in reporting risk appetite.

The Group's insurance programme is an element of its operational risk management and is intended to help limit the financial consequences of undesirable events which occur in spite of established security procedures and other risk-mitigating measures. The insurance policies basically cover DNB ASA and its subsidiaries. The insurance policies cover fire and other disasters, criminal activities, embezzlement, cyber attacks, professional liability, and directors' and officers liability in the Group's operations worldwide. Losses incurred in connection with lending and market operations are not normally covered, unless they are attributable to operational errors or omissions.

9
Compliance

Compliance risk is the risk of regulatory sanctions, financial loss or loss of reputation as a result of unethical conduct, non-conformance with good business practice or violations of prevailing rules and regulations.

DNB's Compliance Policy defines principles for compliance with applicable regulations. The Compliance Policy is approved by the Board, and states that compliance risk in DNB shall be low.

A strong compliance culture in banks is a prerequisite for the trust of customers, employees and shareholders, and for the ability of financial markets to contribute to an appropriate allocation of society's resources in both the short and long term. Banks are subject to many rules and regulatory requirements. This due to banks having an exclusive right to accept deposits from the public and engage in business that requires a licence. Banks are also subject to supervision.

DNB's managers have operative responsibility for practical implementation and compliance with legislation and regulations in their area, and to ensure that compliance risk is low. Management and control shall be adapted to the nature, scope and complexity of the business operations and in a systematic way so that risks can be identified and assessed on a regular basis. Measures shall be established and implemented to correct or reduce identified weaknesses. A Group AML Manager has been appointed in the first line of defence in line with new AML-regulation, with a specific responsibility to follow up the Group's procedures for implementing the new Norwegian Money Laundering Act.

Managers shall focus on compliance risk and clearly communicate their expectations and requirements for a strong compliance and risk culture. In addition, employees have an independent responsibility to help the Group comply with applicable regulations and should familiarize themselves with the regulations relevant to their own work and be responsible for their own learning. Managers shall ensure adequate reporting of compliance risk. Employees have the right and duty to report non-compliance with regulations, and other aspects that could affect compliance risk, to their immediate superior or via DNB's whistleblowing channel.

10

Risk categories, explanation of terms and abbreviations

RISK CATEGORIES

In DNB, risk is divided into six main categories which are subject to special measurement and monitoring.

Credit risk is the risk of financial losses due to failure on the part of the Group's customers (counterparties) to meet their payment obligations towards DNB. Credit risk refers to all claims against customers, counterparties, primarily loans, but also liabilities in the form of other extended credits, guarantees, interest-bearing securities, approved, undrawn credits and interbank deposits. Credit risk also includes residual value risk and concentration risk. Residual value risk is the risk that the value of collateral securing exposure is lower than expected. Concentration risk is the risk associated with large exposures to a single customer and clusters of commitments in geographical areas or industries, or with homogeneous customer groups.

Counterparty credit risk is a form of credit risk that arises in connection with trades in financial instruments, such as derivatives. Counterparty credit risk is the risk that the counterparty will fail to perform its contractual obligations in a transaction.

Market risk is the risk of losses due to unhedged positions in the foreign exchange, interest rate, commodity and equity markets. The risk reflects potential fluctuations in profits due to volatility in market prices and exchange rates. Market risk includes both risk which arises through ordinary trading activities and risk which arises as part of banking activities and other business operations. In addition, market risk arises in DNB Livsforsikring ASA through the risk that the return on financial assets will not be sufficient to meet the obligations specified in agreements with customers.

Operational risk is the risk of losses due to deficiencies or errors in processes and systems, human errors or external events. Operational risk also includes compliance risk, legal risk and IT risk, including information security. Operational risk includes the entire business and an operational event may affect different parts of the business differently.
Compliance risk is the risk of regulatory sanctions, financial loss or loss of reputation as a result of unethical conduct, non-conformance with good business practice or violations of prevailing rules and regulations.

Insurance risk is risk associated with operations in DNB Livsforsikring ASA and DNB Forsikring AS and refers to changes in insurance obligations due, inter alia, to changes in life expectancy and disability rates within life insurance. Within non-life insurance, insurance risk relates to the frequency and size of claims payments the company is obliged to make.

Liquidity risk is the risk that the Group will be unable to meet its obligations as they fall due, and the risk that the Group will be unable to meet its liquidity obligations without a substantial rise in appurtenant costs. Sound liquidity is a prerequisite for financial operations, but this risk category will often be of a conditional nature, as it will not become obvious until other events give reason to worry about the Group's ability to meet its obligations.

In addition to the above risk categories, the Group is exposed to:

Strategic risk, which can be defined as the risk of a decline in income if the Group fails to exploit the strategic opportunities which are offered. The Group's strategic risk is not measured or reported, but is on the agenda in discussions concerning annual strategy processes.

Business risk is the risk of profit fluctuations due to changes in external factors such as the market situation, government regulations or the loss of income due to a weakened reputation. Reputational risk is often a consequence of other risk categories. The Group's business risk is generally handled through the strategy process and through on- going work to safeguard and improve the Group's reputation. When determining and following up the Group's risk appetite, reputational risk is treated separately.

Basis risk is a part of market risk. Basis risk is the risk that changes in the value of a hedge is not correlated with the changes in value of the underlying position being hedged. The most pronounced form of basis risk in DNB, which arises in connection with currency hedging of future cash flows in foreign currencies, so-called basis swap risk.

Credit spread risk is the risk of changes in the market value of securities and derivatives as a result of changes in credit spreads. Credit spread is a type of risk factor that measures market sensitivity, in terms of basis point value, to credit and liquidity risk.

EXPLANATION OF TERMS

BASEL III

Basel III is a global, voluntary regulatory standard on bank capital adequacy, stress testing and market liquidity risk issued by the Basel Committee for Banking Supervision. The final elements of this framework were added in December 2017 and will be implemented by 1 January 2022 at the latest. The capital adequacy regulations are part of the Basel III regulatory framework in Norway. Basel III has been implemented in EU and EEA by means of CRD IV and CRR.

- CRD IV, the Capital Requirements Directive, is the legal framework for the supervision of credit institutions and investment firms in the EU. In accordance with the EEA agreement, Norway is required to transpose the directive into Norwegian legislation,
- CRR is a regulation and applies throughout the EU independent of national legislation. Through the EEA agreement, Norway is required to comply with the regulation.

For more information, see capital requirements calculations used in DNB.

BASIS SWAP

In this context we use the term basis swap for a type of swap in which two parties exchange variable interest and principal payments in different currencies. This is usually done to hedge future cash flows in foreign currencies.

BUFFER REQUIREMENTS

Banks are required to hold considerably more capital than the minimum requirement in the form of different buffer requirements. This will be buffers that the banks, under particularly adverse conditions, should be able to disregard, but which the banks in normal / good times must have in addition to the minimum requirement. The buffer requirements must be met with CET 1 capital. Financial institutions must fulfill a combined buffer requirement consisting of four separate requirements:

- The capital conservation buffer is a buffer imposed on all banks to provide time and space for correcting measures if the bank were to get into a crisis situation
- The systemic risk buffer is a buffer that reflects especially high, non-cyclical risk factors in the economy.
- The buffer for systemically important financial institutions is a buffer to mitigate the likelihood that systemically important financial institutions come into a crisis situation.
- The countercyclical capital buffer is a buffer that takes into account that credit risk may increase during periods of strong credit growth. The buffer shall reduce the effect of cyclical variations. During recessions the buffer requirement can be waived to make it easier for banks to provide credit.

According to Section 2-9e of the Financial Contracts Act, financial institutions that do not fulfil the above buffer requirements must prepare a plan for increasing its common equity Tier 1 capital ratio, and it cannot pay dividends to shareholders and bonuses to employees without Finanstilsynet's consent.

CAPITAL REQUIREMENT CALCULATIONS USED IN DNB

- **IRB approach, Internal Ratings-Based approach**
  An approach to measure risk-weighted assets (RWA) for credit risk using internal risk models. The advanced IRB (AIRB) is a method of calculating credit risk using internal PD, LGD and EAD models. Finanstilsynet gives permission to use internal models.
- **Standardised approach, credit risk**
  Method for calculating risk-weighted assets using supervisory risk weights or rates. The rates are determined by the authorities.
- **Standardised approach, market risk**
  The risk is divided into four asset classes in the standardised approach for market risk (interest, equity, currency, and commodity positions) in addition the CVA risk for derivatives is calculated. There are various calculation methods for each of these.
- **Standardised approach, operational risk**
  Income should be allocated to eight different business areas, where Finanstilsynet defines which service categories are included in each area. When calculating the minimum requirement, average gross income over the past three years is multiplied by fixed percentages ranging between 12 and 18 per cent, depending on which business area has generated the income.

The calculation methods are described in the Capital Requirements Regulations. Also see Basel III.

CCF (CREDIT CONVERSION FACTOR)

CCFs are used in determining the EAD in relation to credit risk exposures. The CCF is an estimate of the proportion of undrawn commitments expected to have been drawn at the time of default.

COVERED BONDS

Provide DNB coverage for their claims on an underlying cover pool if the issuer defaults on his obligations. Norwegian covered bonds can only be issued by mortgage institutions, while foreign covered bonds may be issued by both banks and mortgage institutions.

EAD (EXPOSURE AT DEFAULT)

EAD is the share of the approved credit that is expected to be drawn at the time of any future default at the same time as there is downturn in the market. EAD = drawn amount + undrawn amount x CCF. See CCF (credit conversion factor).

ECL (EXPECTED CREDIT LOSS)

DNB has a model for calculating ECL, where all exposure is divided into three groups. Calculation of write-downs for stages 1 and 2 is done in models which estimate future losses based on prognoses for future economic development.

- Stage 1: includes performing loans. It corresponds to what was previously defined as group write-downs.
- Stage 2: includes commitments with substantial increase in PD compared to PD at the time of approval. In addition, it includes loans with PD between 5 and 40 per cent, forbearance, and for personal customers loans overdue that are between 30-60 days overdue.
- Stage 3: Includes defaulted exposures. There is no change to the previous routine for the calculation of individual write-downs.

ECONOMIC CAPITAL (RISK-ADJUSTED CAPITAL (RAC))

DNB calculates economic capital for all of the main risk categories. The simulation model used in the calculation, the Total Risk Model, calculates unanticipated losses for different types of risk and for the Group as a whole. DNB has stipulated that economic capital should cover 99.9 per cent of potential unexpected losses within a one-year horizon.

EL (EXPECTED LOSS)

EL indicates the average annual expected losses over an economic cycle. EL = PD x LGD x EAD. In good, normal times, EL should be higher than actual losses because the calculation takes both higher probability of default (the PD element) and higher losses (the LGD element) during a recession into account.

ICAAP (INTERNAL CAPITAL ADEQUACY ASSESSMENT PROCESS)

Financial institutions are required to have an ongoing internal assessment of risk and capital needs. The process is outlined in Pillar 2 of the capital adequacy regulations. The bank must assess all risks inherent in operations. The process is documented annually through the ICAAP report to Finanstilsynet. Based on this report and other information that Finanstilsynet has about the bank, an overall assessment of the bank's risk and capital situation (SREP, Supervisory Review and Evaluation Process) is carried out. In connection with the assessment, a

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separate add-on to the other capital requirements, the Pillar 2 capital add-on, is also set.

LEVERAGE RATIO

The leverage ratio is defined as Tier 1 capital as a percentage of total exposure calculated according to the CRR. The leverage ratio does not take into account that various activities on credit institutions' balance sheets may have differing degrees of risk.

LGD (LOSS GIVEN DEFAULT)

LGD represents the percentage of the Exposure at Default (EAD) which the Group expects to lose if the customer fails to meet his obligations.

LIQUIDITY INDICATORS

- LCR (Liquidity Coverage Ratio): measures short- term liquidity risk. The LCR requires banks to hold risk-free assets that may be easily liquidated in order to meet required payments during a thirty-day crisis period without central bank support.
- NSFR (Net Stable Funding Ratio): measures long-term liquidity risk, aiming to create additional incentives for banks to fund their activities with more stable sources of funding.

MREL (MINIMUM REQUIREMENT FOR OWN FUNDS AND ELIGIBLE LIABILITIES)

The MREL is a requirement that banks must have a minimum amount of own funds and eligible liabilities that can be written down or converted into equity (bail-in) when a bank is close to liquidation.

PD (PROBABILITY OF DEFAULT)

The probability of default is the probability that a given customer will go into default during the next twelve months. PD is calculated on the basis of financial and non-financial factors and forms the basis for internal credit risk classification. Defaulted exposures are automatically assigned a PD of 100 per cent.

PENSIONS

In a **defined-benefit pension** scheme, the employer commits to a specified monthly payment upon retirement. These are life-long payments and are calculated as a percentage of salary less expected payments from the National Insurance Scheme. The employee's salary at retirement age forms the basis for the calculation.
In a **defined-contribution pension** scheme, the employer pays a specific contribution into the employee's pension account. The employer has no further obligations under the scheme and carries no risk.

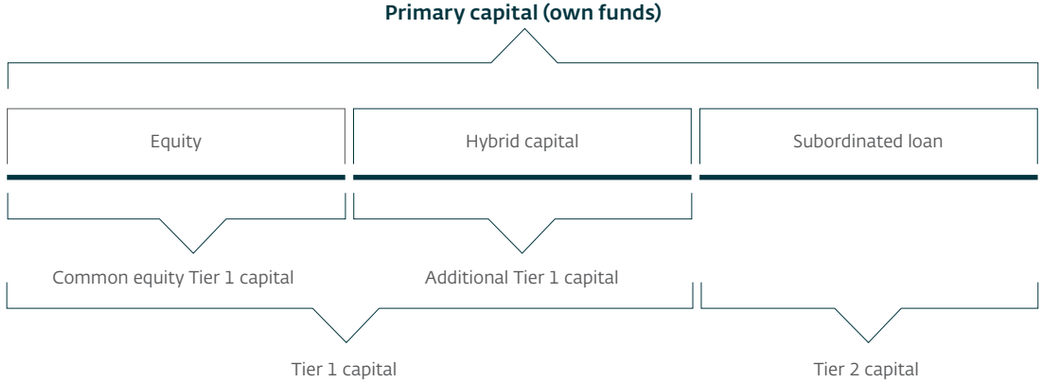
REGULATORY CAPITAL

Regulatory capital is capital that can be used to cover capital requirements. Regulatory capital includes Tier 1 capital and supplementary capital (Tier 2). Common equity Tier 1 capital consists of paid-in capital and retained earnings. Hybrid securities are also included in Tier 1 capital. Hybrid securities are borrowing instruments that in special cases may be converted into equity. Tier 2 capital consists of subordinated debt. Subordinated debt can be either perpetual or time-limited. It is interest-bearing and repayment may be demanded, but it is ranked below other debt and above Tier 1 capital.

Subordinated debt cannot represent more than 2 percentage points of the minimum capital adequacy requirement of 8 per cent. Hybrid capital (perpetual subordinated loan capital securities) has traits of both debt and equity, and is part of the Tier 1 capital. However, it cannot exceed 1.5 percentage points of the minimum Tier 1 capital requirement of 6 per cent. Hybrid capital is perpetual and can be written down or converted to equity when the common equity Tier 1 capital ratio falls below 5.125 per cent.

RWA (RISK-WEIGHTED ASSETS)

Risk-weighted assets are the basis for calculating capital requirements and is used for assessing the bank's solvency. Capital adequacy that constitutes at least 8 per cent of the calculation basis for credit risk, counterparty credit risk, market risk and operational risk. The same basis of calculation applies to the calculation of conservation buffer, system risk buffer, buffer for systemically important financial institutions and countercyclical capital buffer. DNB has methods for calculating RWA for credit risk, market risk and operational risk.



The capital requirement calculations are described in the Capital Requirements Regulations.

SOLVENVCY II

The Solvency II Directive is an EU Directive that describes capital requirements for insurance companies. Solvency II entered into force on 1 January 2016 and is based on a three-pillar structure:

- Pillar 1 consists of the quantitative requirements MCR (minimum capital requirement) and SCR (solvency capital requirement).
- Pillar 2 sets out requirements for supervisory review and evaluation, including the ORSA (own risk and solvency assessment) process.
- Pillar 3 encompasses rules on market discipline, including public disclosure requirements.

SYSTEMICALLY IMPORTANT FINANCIAL INSTITUTION (G-SII AND O-SII)

Financial institutions characterized by having a size and operations that would make them difficult to replace. Distress or disorderly failure in the institutions would cause significant disruption to the wider financial system and economic activity. These are defined as global systemically important institutions (G-SII) or other systemically important institutions (O-SII). In Norway, this applies for DNB ASA and Kommunalbanken AS, which are defined as O-SII.

VAR (VALUE AT RISK)

For a given portfolio, the value-at-risk is an estimate of the potential future loss (in terms of market value) that, under normal market conditions, will not be exceeded in a defined period of time and with a defined confidence level.

WRONG-WAY RISK (WWR)

WWR is the additional risk that arises through an adverse correlation between counterparty exposures and the credit quality of the counterparties, and is therefore a correlation between credit risk and market risk.

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ABBREVIATIONS

AIRB
Advanced IRB
AGOR
Advisory Group Operational Risk
ALCO
Asset Liability Committee
AML
Anti-Money Laundering
BCBS
The Basel Committee on Banking Supervision
BICRA
Banking Industry Country Risk Assessment
BRRD
Bank Recovery and Resolution Directive
CCR
Counterparty Credit Risk
CCF
Credit Conversion Factor
CEM
Current Exposure Method
CEO
Chief Executive Officer
CET1
Common Equity Tier 1
CFO
Chief Financial Officer
CLS
Continuous Link Settlement
CRD IV
Capital Requirements Directive
CRO
Chief Risk Officer
CRR
Capital Requirements Regulation
CRS
Common Reporting Standard
CSA
Credit Support Annex
CVA
Credit Value Adjustment
DGS
Deposit Guarantee Schemes
DVP
Delivery versus Payment
EAD
Exposure at Default
EBA
European Banking Authority
ECB
European Central Bank
EL
Expected Loss
FIRB
Foundation IRB
FMRC
Financial Market Risk Committee
FRA
Forward Rate Agreement
GCCO
Group Chief Compliance Officer
GCD
Global Credit Data
GCORO
Group Chief Operational Risk Officer
GDPR
General Data Protection Regulation
G-SII
Global Systemically Important Institutions
ICAAP
Internal Capital Adequacy Assessment Process
IFRS
International Financial Reporting Standards
ILAAP
Internal Liquidity Adequacy Assessment Process
IMM
Internal Model Method
IRB
Internal Ratings-Based Approach
LCR
Liquidity Coverage Ratio
LGD
Loss Given Default
LR
Leverage Ratio
LTV
Loan to Value
MIR
Model Input Review
MREL
Minimum Requirement for Own Funds and Eligible Liabilities
MTM
Mark-to-market
NSFR
Net Stable Funding Ratio
O-SII
Other Systemically Important Institutions
ORO
Operational Risk Officer
OTC
Over the Counter
PD
Probability of default
PE
Private Equity
RWA
Risk-weighted Assets
SCR
Solvency Capital Requirement
SIFI
Systemically Important Financial Institution
SREP
Supervisory Review and Evaluation Process
S&P
Standard and Poor's
VaR
Value at Risk
WWR
Wrong Way Risk

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