dlr·kredit

Risk and Capital Management 2021

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Disclosure requirements and introduction

Disclosure requirements
This Risk and Capital Management Report report is being published in compliance with DLR's disclosure requirements under the CRR rules. Quantitative disclosures pursuant to the EBA guidelines etc. are set out in a separate Pillar III appendix (in Excel format), which is published on the DLR website at https://dlr.dk/en/investor/financial-statements/ together with this report.

All information will be regularly updated to the extent deemed necessary, but at least once a year in connection with the release of DLR's Annual Report. Certain disclosures in the Pillar III appendix are updated half-yearly.

In the opinion of DLR, the information stated complies with the Pillar III information requirements set out in the CRR regulation (CRR articles 431-455) and the European Commission's technical standards (implementing regulation 2021/637).

The Risk and Capital Management Report was published on 10 February 2022.

Introduction

DLR Kredit A/S ("DLR") is a Danish mortgage credit institution owned primarily by 46 local and national banks that collaborate with DLR.

DLR grants loans against mortgages on real property in Denmark for the financing of agricultural property – including residential farms – and other commercial properties and private cooperative housing. DLR also grants loans, on a limited scale, in Greenland and the Faroe Islands, primarily for owner-occupied homes and residential rental properties and, on a smaller scale, office and retail properties. At the end of 2021, DLR's loan portfolio in terms of nominal outstanding bond debt amounted to DKK 176.1bn, of which loans granted in Greenland and the Faroe Islands amounted to a total of DKK 4bn or 2.3% of the loan portfolio.

In 2021, DLR had on average 230 FTE employees and 23 fee-based agricultural valuation experts. DLR has no branch offices, as loans are distributed through the branch networks of DLR's shareholder banks.

DLR's loan portfolio grew by DKK 11.5bn in 2021. Lending for agricultural properties accounted for 52.7% of the portfolio, while lending for residential farms and owner-occupied homes made up 5.7% of the portfolio at end-2021. The remaining 41.6% represented loans for commercial property, mainly office and retail property, private residential rental property and cooperative housing.

DLR generated a satisfactory profit after tax of DKK 888m in 2021. With total own funds after deductions of DKK 15.9bn and a risk exposure amount of DKK 85.3bn, DLR's total capital ratio was 18.6% at year-end 2021.

DLR's overriding risk is credit risk, i.e. the risk that borrowers default on their loans with DLR. However, credit risk is to a wide extent limited by collateral in the form of DLR's mortgages on the properties and also by the guarantee and loss-mitigating agreements DLR has signed with its loan-distributing shareholder banks.

DLR aims to be a key player in financing the sustainable transition, and the longer-term goal is for this to be reflected in our portfolio composition, which should attain risk diversification also against more sustainable assets.

The framework for DLR's green financing initiatives is described in DLR's green framework at dlr.dk.

Management statements

The Risk and Capital Management Report was approved by the Board of Directors of DLR Kredit A/S on 10 February 2022.

In the opinion of the Board of Directors, DLR's risk management is adequate and ensures that the risk management systems implemented meet all requirements under DLR's profile and strategy.

Furthermore, the Board of Directors believes the below description of DLR's general risk profile gives a true and fair view of DLR's risk management and risk appetite.

The Board of Directors' assessment is based on the Board-approved business model and strategy and reports submitted to the Board of Directors by the Executive Board, Internal Audit, Risk Management and Compliance.

A review of the business model and policies shows that the general requirements of the business model for each risk area are fully and comprehensively reflected in the specific limits of the individual policies. A review of the Board of Directors' instructions to the Executive Board and the authorities delegated indicates that the limits stipulated in individual policies are fully and comprehensively reflected in the underlying instructions to the Executive Board and the authorities delegated, and that real risks are within the limits stipulated in individual policies and authorities. On this basis, the Board of Directors considers the business model, policies and instructions to be consistent with the real risks in the individual areas.

DLR's business strategy is based on its goal of being the preferred collaboration partner for the shareholders within its market area. DLR aims to achieve profitable operations based on product pricing that reflects its risks and capital tie-up together with an overall assessment of the scope of its business with customers and counterparties. DLR aims to have an adequate and robust capital base that supports its business model and bond ratings.

The maximum risk tolerance accepted by the Board of Directors is managed via defined limits in individual policies and guidelines, etc. These include the following areas of control:

- DLR has defined a target for its capital ratio for 2022 of 17.5%, while the targets for the tier 1 capital ratio and the common equity tier 1 capital ratio are 15.5% and 14.0%, respectively. At the end of 2021, DLR's common equity tier 1 capital ratio was 17.1%, the tier 1 capital ratio was 17.1% and its capital ratio was 18.6%.
- DLR's Board of Directors has defined a leverage ratio threshold of 5%, which is above the statutory requirement of 3%. DLR's leverage ratio was 7.4% at the end of 2021.
- With regard to activities in the financial markets, DLR aims for a maximum interest rate risk of 2.5%, which is below the statutory requirement of 8%. DLR's interest rate risk on the bond portfolio was 0.9% at the end of 2021.

- With respect to liquidity, DLR aims to maintain low liquidity risk given its business model as a mortgage credit institution applying the specific balance principle and an LCR of at least 110%. At end-201, DLR had an LCR of 143% including the floor requirement.

The Board of Directors also takes into account other statutory limits in laying down DLR's risk management policies.

Copenhagen, 10 February 2022

Executive Board

Jens Kr. A. Møller	Pernille Lohmann
Managing Director & CEO	Managing Director

Board of Directors

Vagn Hansen	Lars Møller
Chairman	Vice Chairman

Bjarne Larsen	Claus Andersen	Frank Mortensen
Jakob G. Hald	Lars Faber	Lars Petersson
Randi Franke		

Risk governance and management

DLR is exposed to various types of risk, notably credit risk. Other types of risk include market risk, liquidity risk, operational risk and IT risk, including cyber security risk, all of which are explained in greater detail in the following sections. DLR's business model and the types of risk to which DLR is exposed are closely linked.

Board of Directors and Board committees

DLR's Board of Directors has overall responsibility for defining and monitoring DLR's risk exposures. Based on DLR's business model and risk assessments, etc., the Board of Directors has defined policies and guidelines and, by extension, limits for the risks that DLR is prepared to assume. Delegation of responsibility throughout the organisation is based on these policies, guidelines and limits. DLR's organisation comprises a number of function heads who all report to the Executive Board.

The Board of Directors and the Executive Board have overall responsibility for DLR's risk management, internal controls, compliance with relevant legislation and other regulations in relation to DLR's choice of risk exposure. The Board of Directors and the Executive Board set and approve general policies, guidelines, procedures and controls in key risk management areas.

Pursuant to statutory requirements, the Board of Directors has also established an internal audit function that reports to the Board of Directors and which, in accordance with a Board-approved audit strategy, audits processes and internal controls in areas of importance and material risk. The company has also set up an audit committee, a risk committee, a remuneration committee and a nomination committee under the Board of Directors, as described below.

At the end of 2021, DLR's Board of Directors consisted of nine members, six of whom were elected at the Annual General Meeting. The shareholder-elected Board members, three were elected from among the members of the Association of Local Banks, Savings Banks and Cooperative Banks in Denmark, and three from among the members of National Banks in Denmark. In addition, DLR employees elected three employee representatives to the Board of Directors.

The composition of the Board of Directors at end-2021 and information about other directorships held by the members of the Board of Directors is set out in DLR's 2021 Annual Report.

Four committees have been set up under DLR's Board of Directors to monitor specific areas or prepare matters to be discussed by the Board as a whole.

- The **Audit Committee** is charged with supervising the financial reporting process and monitoring that DLR's internal control, security, internal audit and risk management systems function effectively. DLR's Audit Committee has three members – General Manager Claus Andersen (chairman), Deputy Group Chief Executive Bjarne Larsen and Head of Business Development and Communication Randi Franke. The Committee's regular meetings are attended by DLR's internal and external auditors and by DLR's Accounting and Finance Director. The Audit Committee held six meetings in 2021.

- The **Risk Committee** is charged with ensuring that DLR's Board of Directors is adequately equipped to address, manage, monitor and mitigate the risks that DLR is or may be exposed to. As such, the Risk Committee must maintain a comprehensive view of the risks associated with DLR's activities. All Risk Committee meetings are attended by DLR's Chief Risk Officer. The Risk Committee has three members: Managing Director Lars Møller (chairman), Managing Director & CEO Vagn Hansen and Agricultural Account Manager Jakob G. Hald. The Risk Committee held six meetings in 2021.

- The **Nomination Committee** is charged with ensuring that DLR's Board of Directors has the necessary level of knowledge and experience. The Committee nominates new board members and evaluates the competencies represented on the Board. The Nomination Committee consists of DLR's entire Board of Directors. The chairman is Managing Director & CEO Vagn Hansen, while Managing Director Lars Møller is vice chairman. The committee held one meeting in 2021

- The **Remuneration Committee** undertakes preparatory work in relation to the Board of Directors' decisions, knowledge and controls with respect to remuneration. In addition, the Committee maintains a list of DLR's material risk takers. The Remuneration Committee consists of three members – Managing Director & CEO Vagn Hansen (chairman), Managing Director Lars Møller and Agricultural Account Manager Jakob G. Hald. The committee held two meetings in 2021

Committee members are also members of DLR's Board of Directors, including the members elected at the Annual General Meeting and employee representatives. Information about the composition of board committees and their duties is also provided in DLR's 2021 Annual Report.

Members of DLR's Board of Directors are elected by the shareholders at the Annual General Meeting for one year at a time, while the employee-elected board members are elected for periods of four years. Auditors are eligible for re-appointment.

DLR will continually ensure that the members of DLR's Board of Directors have the collective knowledge, professional skills and experience required to execute DLR's

business model and strategy. The Nomination Committee set up under the Board of Directors prepares the full Board's review of issues associated with the knowledge and experience possessed by DLR's board members.

One of the responsibilities of the Nomination Committee is to nominate candidates for DLR's Board of Directors and to prepare a description of the functions and qualifications required to participate in the work of the Board of Directors.

When nominating candidates for the Board of Directors, the Nomination Committee takes into account considerations related to the underrepresented gender and diversity. Pursuant to section 70 of the Danish Financial Business Act, DLR's Board of Directors has adopted a policy on diversity and policy and targets for the underrepresented gender in the supreme governing body for the board of directors of DLR Kredit A/S, see section 80a of the Danish Financial Business Act. The Board of Directors' aim with the policy is to promote the diversity that is relevant and necessary for its Board of Directors. The composition of the Board should be based on a diversity of skills and backgrounds. Emphasis has been placed on the need for diversity with respect to factors such as professional skills, work experience, gender and age. DLR's reports on the underrepresented gender and its diversity policy are described in further detail in DLR's report on corporate social responsibility for 2021.

DLR's Board of Directors has adopted a remuneration policy for DLR Kredit A/S which has been approved at the Annual General Meeting. The remuneration policy is available at dlr.dk. Quantitative data on the remuneration of staff affecting the risk profile is provided in note 7 in DLR's 2021 Annual Report.

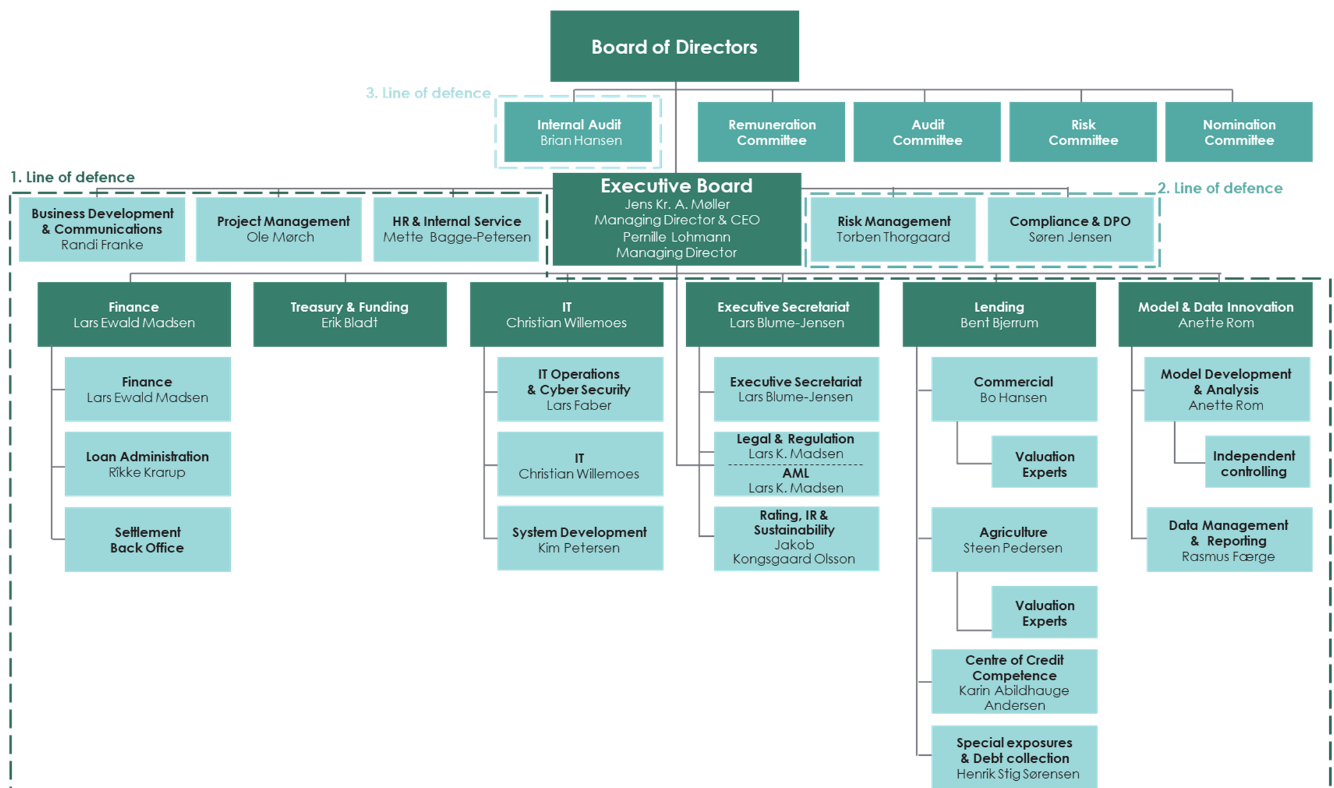
Risk management at DLR – the three lines of defence
DLR's Executive Board ensures that risks are managed and mitigated as directed by the Board of Directors. Risk management at DLR is shaped around the three lines of defence model:

- **First line of defence:** Functions that own and manage risks. Individual department heads at DLR are responsible for identifying, measuring, managing and reporting risks and for ensuring that adequate controls are in place. Department heads are also responsible for preparing/updating business procedures (including for compliance with new laws and industry regulations).

- **Second line of defence:** Risk Management and Compliance, which are independent advisory and control functions reporting directly to the Executive Board. The primary focus of the Compliance function is to oversee that the first line of defence complies with applicable regulation, policies and business procedures. The primary focus of the Risk Management function is to address future threats by defining how the first line of defence should identify, measure, manage and report risk.

- **Third line of defence:** Internal Audit, which is independent of the Executive Board and of the performance of tasks in the first and second lines of defence. Internal Audit reports directly to the Board of Directors and the Board's Audit Committee.

Figure 1. Risk management at DLR – the three lines of defence



Risk Management must maintain a comprehensive view of DLR and DLR's risks for purposes of assessing whether adequate risk management is in place. The Risk Management function is responsible for establishing the framework for appropriate identification, measurement, management and reporting of all material risks. Risk Management is an independent advisory, control and reporting function which does not own individual risks but owns the framework for managing risk across DLR. The Risk Management Officer reports directly to DLR's Executive Board.

DLR has also established a Compliance function, which reports to the Executive Board. The Chief Compliance Officer is in charge of assessing and checking whether DLR complies with relevant legislation, market standards and internal rules. The Chief Compliance Officer also serves as Data Protection Officer (DPO).

Internal risk committees

With a view to maintaining ongoing focus on proper risk management across the DLR organisation, the Executive Board has set up three internal risk committees:

- **The Credit Risk Committee** manages cross-organisational credit risks. This includes monitoring developments in credit portfolio risk exposures, monitoring IRB models and internal ratings, LTV monitoring, etc. The committee does not monitor individual credit grants.

- **The Liquidity and Market Risk Committee** manages DLR's liquidity and market risks. This includes monitoring interest rate risk, credit spread risk, investor distribution, market conditions for bonds, funding plans, refinancing auctions, etc.

- **IOC Risk Committee** (Committee for IT, operational and compliance risk): manages cross-organisational IT, operational and compliance risks (cross-organisational non-financial risks). Specific operational and compliance risks pertaining to the credit area or the securities area are managed by the Credit Risk Committee or the Liquidity and Market Risk Committee.

The Executive Board is represented on all three internal risk committees. Risk Management is also represented on all three internal risk committees as an observer, while Compliance is represented on the IOC Risk Committee as an observer.

Risk taxonomy

The following risk taxonomy is applied across the DLR organisation. The risk categories cover both financial and non-financial risks.

Risk type	Risk category	Definition
Financial risks	Credit risk	Loss arising as a result of borrowers defaulting on payment obligations (incl. counterparty risk)
	Market risk	Loss arising as a result of movements in financial markets, i.e. interest rate, share price and exchange rate risk (incl. credit spread and convexity risk)
	Liquidity risk	Loss arising as a result of inability to meet financial obligations falling due in the short or medium term (incl. funding risk)
Non-financial risks	Operational risk	Loss arising as a result of inappropriate or inadequate internal procedures, human or system error or error caused by external events (excl. compliance and IT risk) Model risk and outsourcing risk are considered and managed as operational risk.
	Compliance risk	Loss arising as a result of non-compliance with applicable regulations, market standards or internal rules
	IT risk	Loss arising as a result of system error or non-compliance with IT security protocols (incl. cyber security risk)

DLR's risk management processes within the above risk categories are described in more detail in the following sections.

Risk reporting

DLR has a comprehensive risk register covering all types of risk. Once annually, DLR performs a risk and control assessment, the result of which is documented in DLR's risk register. Significant risks in the risk register are updated at least quarterly. The risk register provides a basis for DLR's risk reporting process.

Once every quarter, three overviews of the most significant risks are prepared in the risk register:

- Risk overview – Lending at DLR (included in the quarterly lending report)
- Risk overview – Securities trading at DLR (included in the quarterly securities report)
- Risk overview – DLR's other areas (reported to the Board of Directors on a quarterly basis)

Furthermore, a comprehensive internal risk report is prepared annually for the Board of Directors, who determines whether risk levels are acceptable. In addition, a number of reports and overviews are prepared with respect to risk and regulatory requirements. The necessity and extent of reporting is regularly adjusted in line with regulations, etc. In addition, the Board of Directors is briefed on a more general level at board meetings, which are held at least four times a year in connection with the financial reporting process.

Table 1 provides an overview of the risk reports presented to the Executive Board and the Board of Directors on a regular basis.

Table 1. Risk reporting overview

Reporting	Recipient	Frequency
Credit risk reporting		
Monthly statistics (loan portfolio, market share and rating)	Board of Directors	Monthly
Lending report (incl. Risk overview of lending area)	Board of Directors	Quarterly
Distributed loans by bank	Board of Directors	Quarterly
Briefings – loan offers	Board of Directors	Quarterly
Credit rating and financial counterparty monitoring	Board of Directors	Semi-annually
Review of assets (S. 78)	Board of Directors	Annually
IRB validation report	Board of Directors	Annually
Validation of approaches to measuring expected losses (impairment)	Board of Directors	Annually
Market and liquidity risk reporting		
Market risk on securities portfolio	Executive Board	Every two weeks
Securities report (incl. Risk overview of the securities trading area)	Board of Directors	Quarterly
Liquidity report (ILAAP)	Board of Directors	Annually
Cross-organisational risk reporting (incl. non-financial risks)		
DLR's internal risk report	Board of Directors	Annually
Risk and capital management (Pillar III report)	Board of Directors	Annually
Compliance report	Board of Directors	Annually
DPO report (personal data compliance reporting)	Board of Directors	Annually
Money laundering and terrorist financing reporting	Board of Directors	Annually
Capital management reporting		
Capital position – individual solvency need (ICAAP)	Board of Directors	Quarterly
Quarterly capital requirements compliance report	Board of Directors	Quarterly
Quarterly recovery indicator report	Board of Directors	Quarterly
Quarterly cover pool report	Board of Directors	Quarterly
Recovery plan	Board of Directors	Annually
Capital position – contingency plan	Board of Directors	Annually

Capital position

DLR's capital management efforts are governed by the Danish Financial Business Act, the CRR regulation (Regulation (EU) no. 575/2013 of the European Parliament and of the Council of 26 June 2013 and the Danish Executive Order on Calculation of Risk Exposures, Own Funds and Solvency Need, etc. The Board of Directors and the Executive Board are responsible for ensuring that DLR's capital structure is appropriate and complies with regulatory requirements.

Capital management

DLR's capital structure should ensure capital adequacy and thus create a long-term foundation for running a sound mortgage credit business that can sell bonds on competitive terms. The capital structure should be based on a high level of equity. See the section about capital targets. DLR must also have adequate capital resources to ensure continual LTV compliance with respect to issued covered bond (SDO) loans, to meet rating agency OC requirements and to comply with debt buffer requirements and other regulatory requirements.

Capital targets

DLR is focused on both existing and potential future requirements. The purpose of DLR's capital targets is to ensure that DLR has adequate own funds to ensure a sound business operation, even during economic slowdowns. DLR's capital requirement is made up of the basic 8% requirement plus the combined capital buffer requirements and possible pillar 2 requirements. DLR aims to have additional excess coverage relative to the regulatory capital requirements.

DLR's 2022 target for the capital ratio, given the regulatory requirements currently known, is 17.5%. The targets for the tier 1 capital ratio and the common equity tier 1 capital ratio have been set at 15.5% and 14.0%.

Long-term capital plan

DLR's capital management is based on a long-term capital plan designed to meet regulatory requirements and ensure adequate capital for commercial initiatives. The capital plan is adjusted and updated on an ongoing basis to take into account factors such as lending growth, capital initiatives, earnings and regulatory changes.

DLR's capital plan for the next five years centres on the following:

- Use of the IRB approach for the calculation of risk exposure on the full-time agriculture property portfolio. DLR is working to expand the use of IRB models to

other parts of the portfolio, but any effects hereof are not reflected in the capital plan.
- Continual compliance with LTV requirements and OC requirements.
- Compliance with current debt buffer requirements.
- Inclusion of other potential operational factors, such as expected developments in losses and impairment charges, lending growth, etc.
- Impact analyses with respect to the impact of future regulatory measures.

DLR’s capital structure is regularly evaluated against the capital plan.

Own funds and capital ratio

DLR’s own funds consists primarily of equity and small proportion of tier 2 capital. The individual components of DLR’s own funds at 31 December 2021 are shown in tables 2 and 3.

DLR’s own funds increased by DKK 969m in 2021. Most of the increase was attributable to DLR's 2021 profit of DKK 888m after tax, while the rest of the change was due to adjustments in regulatory deductions. The risk exposure amount at end-2021 was DKK 85.2bn, against DKK 79.5bn at end-2020. The higher risk exposure amount was primarily driven by the positive development in lending experienced by DLR through 2021.

At year-end 2021, DLR’s own funds were composed entirely of common equity tier 1 and tier 2 capital. Tier 2 capital accounted for DKK 1.3bn of total own funds after deductions of DKK 15.9bn.

Table 2. DLR’s own funds

(DKKm)	2021	2020
Share capital	570	570
Share premium	0	0
Reserves (locked-up capital)	2,338	2,338
Retained earnings	11,275	10,526
Profit for the year after tax	888	749
Tier 1 primary deductions	-484	-564
Tier 1 capital less primary deductions (CET 1 capital)	14,587	13,618
Additional tier 1 capital	0	0
Other deductions	0	0
Tier 1 capital incl. additional tier 1 capital	14,587	13,618
Tier 2 capital	1,300	1,300
Included tier 2 capital	1,300	1,300
Own funds before deductions	15,887	14,918
Deductions from own funds	0	0
Own funds after deductions	15,887	14,918

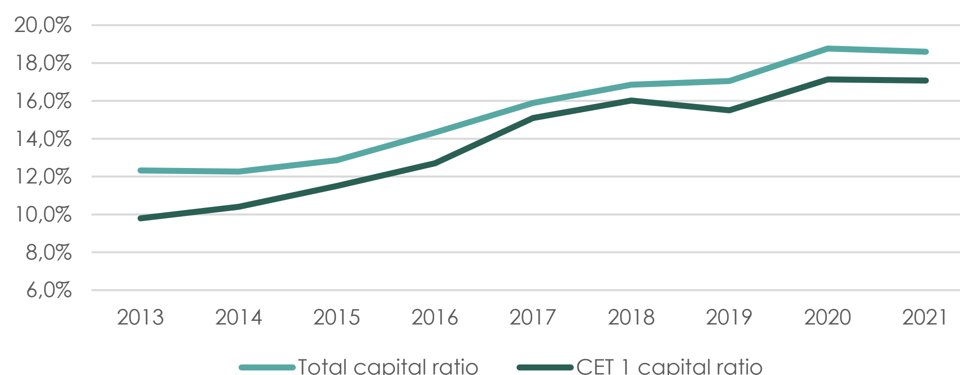
Table 3. DLR's capital ratio

(DKKm)	2021	2020
Equity:		
– Distributable reserves	12,733	11,845
– Non-distributable reserves	2,338	2,338
Total equity	15,071	14,183
Own funds after deductions	15,887	14,918
Weighted risk exposure	85,249	79,467
Adequate own funds	7,799	7,296
DLR's total capital ratio	18.6%	18.8%

Total capital ratio

DLR's total capital ratio at end-2021 was 18.6%, while the common equity tier 1 capital ratio was 17.1%. When calculating risk exposure for credit risk, DLR has applied the IRB approach for the portfolio of full-time farms, while the standard method was used for the rest of the portfolio.

Figure 2. DLR's total and CET 1 capital ratios



When disregarding a minor fall in 2021, DLR's total capital ratio has been trending higher for quite some time. The increase was driven partly by the already implemented regulation and increased requirements for the amount of capital. Based on its current level of own funds and expected earnings, DLR expects to be favourably positioned to comply with the expectedly increasing capital requirements.

Capital requirements

The statutory capital requirement for DLR was 12.7% at 31 December 2021. The regulatory requirement is based on the classic 8% requirement plus the SIFI requirement of 1.0%, a capital conservation buffer of 2.5% and a solvency requirement (pillar II requirement) of 1.15%. The countercyclical capital buffer was set at 0% at end-2021 but is expected to be raised to 2% during 2022, which will lead to a corresponding increase in DLR's regulatory requirement.

Solvency requirement, adequate own funds and solvency need
DLR's Board of Directors discusses and approves DLR's adequate own funds and solvency need at least once every quarter based on a recommendation from the Executive Board. DLR's Risk Committee reviews the calculation prior to submission to the Board of Directors. I In addition, at least once a year, the Board of Directors performs a more in-depth review of calculation methods, risk areas, stress tests and benchmarks etc. for calculating DLR's solvency need.

In this calculation, DLR follows the guidelines set out in the Executive Order on Risk Exposures, Own Funds and Solvency Need and the Danish FSA's guidelines, etc. DLR's calculation of the adequate own funds is made on the basis of the credit reservation approach ("8+ approach"), which is the official method of the Danish FSA (see FSA guidance). Using this approach, the individual risk areas are reviewed, and it is assessed whether special risks exist in individual areas. These are credit risks, market risks, operational risks and IT risks. The assessment is based on DLR's risk profile, capital position and any significant forward-looking factors, including the budget.

DLR's resilience is assessed by means of, among other things, stress tests. These stress test cover several different scenarios as defined in the Danish FSA's macroeconomic stress test and also scenarios developed by DLR. On the basis of these scenarios, an assessment is made of the adequacy of DLR's own funds and recurring earnings.

The calculation is further supported by management estimates. DLR's risks are assessed in the following main areas. Within each main area, relevant risks are assessed in a number of sub-areas. An estimation is also made as to whether other factors require an add-on to own funds. Such factors are described in the Danish FSA's solvency need guidance.

- Credit risk
- Earnings and growth
- Credit risk for large customers
- Model uncertainty
- Other credit risks
- Counterparty risk (financial counterparties)
- Credit risk concentration
- Market risk, including
    - Interest rate risk
    - Equity risk
    - Exchange rate risk
- Liquidity risk
- Operational risk
- Risks associated with information and communications technology (ICT)
- Leverage

Relevant departments are involved in determining DLR's adequate own funds and solvency need. This also applies for preliminary and subsequent discussions of stress tests etc. for the various business areas.

Credit risk is DLR's largest risk category. As most of the risk exposure relates to this area. it accounts for most of the solvency need. See table 4. DLR therefore has considerable focus on this area.

DLR applies the IRB approach for the calculation of the risk exposure of its full-time agriculture property portfolio. For the rest of the portfolio, DLR uses the standard method for the calculation of credit risk exposure. See the section Credit risk for further details.

Market risk is another important category for DLR. DLR sets aside capital equivalent to 8% of the risk exposure amount for market risk. Moreover, DLR also assesses whether it is exposed to additional risk that requires a capital allocation above the 8%. DLR's market risk is estimated to be limited due to the balance principle, just as DLR has set narrow limits for interest rate risk.

Operational risk is defined as the risk of direct or indirect loss caused by inadequate or faulty processes, systems etc. Given DLR's single-pronged business model, focus on internal processes, etc., this risk is estimated to be limited. DLR employs the Basic Indicator Approach (BIA) for the calculation of the capital requirement for operational risk.

ICT risk is defined by the guidelines on solvency needs as the risk of loss caused by system error or non-compliance with IT security protocols. A risk assessment is carried out on this basis.

As well as the above-mentioned factors, management regularly assesses if additional factors should be included in the calculation of adequate own funds and solvency need.

DLR's adequate own funds were calculated at DKK 7,799m at year-end 2021. See table 4. As DLR's total risk exposure amount (REA) was DKK 85,249m, this equates to a solvency need of 9.15%.

In accordance with CRR article 92, DLR has calculated its excess capital relative to the individual solvency need at 6.0 percentage points or DKK 5.1bn at year-end 2021. See table 5. DLR considers this to be a satisfactory level.

Table 4. DLR's adequate own funds and solvency need at 31 December 2021

Risk area	Adequate own funds (DKKm) (DKKm)	Solvency need
Credit risk	7,011	8.22%
Market risk	592	0.69%
Operational risk	196	0.23%
Other factors	0	0
Internally calculated solvency need	7,799	9.15%
Add-ons (special risks)	0	0
Total	**7,799**	**9.15%**

Source: Calculation of adequate own funds and solvency need at https://dlr.dk/en/investor/financial-statements/

Table 5. DLR's own funds and excess capital at 31 December 2021

Key figures and financial ratios	Amount (DKKm)
Own funds after deductions	15,887
Adequate own funds	7,799
SIFI buffer	852
Capital conservation buffer	2,131
Countercyclical capital buffer	0
Systemic add-on Faroe Islands	11
Excess capital	5,093
Total capital ratio	18.6%
Individual solvency need, %	9.1%
SIFI buffer	1.0%
Capital conservation buffer	2.5%
Countercyclical capital buffer	0.0%
Systemic add-on Faroe Islands*	0.0%
Excess capital, percentage points	6.0%

*Amounting to 0.01%, it is not included in the table.

Additional collateral, OC and debt buffer

DLR funds its lending by issuing covered bonds (SDOs). For loans based on the issuance of SDOs, DLR must provide additional collateral if the LTV is exceeded due to, for example, a fall in the value of the property provided as collateral. DLR continually monitors for compliance with this obligation. The need for additional collateral has declined in recent years.

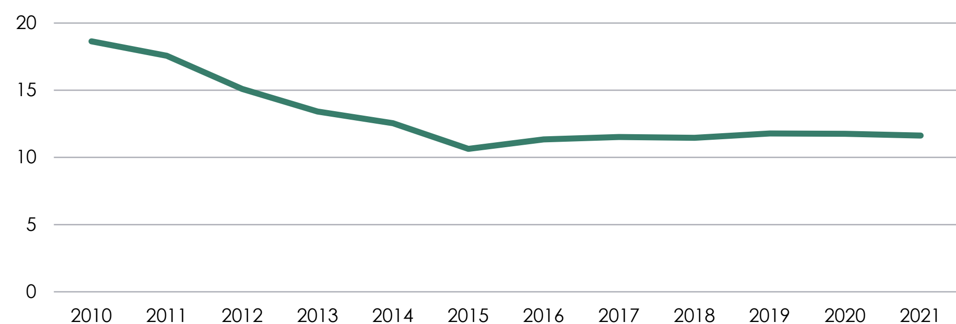
To cover an LTV overrun, DLR may use both own funds and any proceeds from other debt issues placed in Capital Centre B and, to a certain extent, claims against banks, for example by way of guarantees.

DLR has issued DKK 1bn in Senior Secured Bonds (SSB) that can be used both for LTV compliance and as overcollateralisation (OC) to support the bond rating. DLR has also issued DKK 3bn in Senior Non-Preferred Notes (SRN) and DKK1bn in Senior Resolution Notes (SRN) to comply with the debt buffer requirement. The proceeds from these issues can also be used as LTV cover and as supplementary collateral.

Leverage

In the course of the past ten years, DLR's leverage ratio (calculated as lending relative to equity) has dropped sharply from about 19 in 2010 to just under 12 at 31 December 2021. See figure 3. The slight increase in the leverage ratio since 2015 partly reflects a period marked by fair-sized lending growth, and in some years DLR has bought back equities from Finansiel Stabilitet, Danmarks Nationalbank and loan-distributing banks. The current low leverage ratio is positive for DLR's aggregate risk.

Figure 3. DLR's leverage ratio (ratio of lending to equity)



Applying the current CRR definition of leverage ratio, according to which leverage is calculated as the total risk exposure amount (REA) relative to tier 1 capital, DLR's leverage ratio was 7.4% at year-end 2021. See figure 4 and table 6.

DLR's Board of Directors has defined a leverage ratio threshold of 5%. DLR's current leverage ratio thus provides a significant excess coverage relative to both the 5% requirement defined by the Board of Directors and the regulatory requirement of 3%. Reference is made to the Pillar III appendix for further information on DLR's leverage ratio.

Figure 4. DLR's leverage ratio

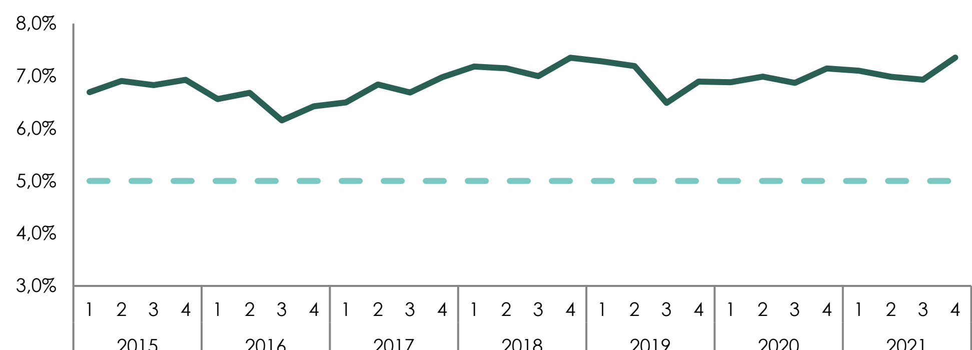


Table 6. DLR's leverage ratio under CRR, end-2021 (DKKm)

	2021	2020
Total assets according to financial statements	183,871	181,083
Total balance sheet exposures as per CRR	184,843	181,719
Off-balance sheet items, loan offers, etc.	13,644	9,490
Deductions from tier 1 capital	-484	-564
Adjustment for derivative financial instruments	0	2
Total exposure for leverage ratio calculation	198,003	190,647
Tier 1 capital	14,586	13,618
Leverage ratio	**7.4%**	**7.1%**

Debt buffer

Mortgage credit institutions must maintain a debt buffer, unlike the MREL requirement that applies to banks. In 2021, the debt buffer requirement was set to constitute

- at least 2% of an institution's total unweighted lending.

From the beginning of 2022, the requirement will be changed so that the debt buffer requirement will henceforth constitute two separate requirements consisting of the above-mentioned requirement and a new requirement:

- the sum of the institution's regulatory capital requirement plus the debt buffer requirement must constitute at least 8% of the institution's total liabilities.

The debt buffer requirement of at least 2% of DLR's lending equated to DKK 3.5bn at end-2021. The requirement that the debt buffer must constitute 8% of total liabilities will apply from the beginning of 2022 and will amount to approximately DKK 14.7bn.

The debt buffer may consist of equity, additional tier 1 capital, tier 2 capital and unsecured subordinated senior debt. All capital/debt should be issued from the General Capital Centre.

DLR has issued a total of DKK 4bn in Senior Non-Preferred Notes (SNPs) and Senior Resolution Notes (SRNs) in order to meet the debt buffer requirement. SNPs and SRNs are both unsecured debt that can be written down or converted into shares in case of resolution. SNPs and SRNs rank equally for payment in case of resolution. Both types of senior debt are eligible for inclusion in S&P's calculation of an institution's Additional Loss-Absorbing Capacity (ALAC) and can thus provide an uplift to the issuer rating.

Rating
DLR was first rated by S&P in May 2012. At that time, DLR was assigned an issuer rating of BBB+ (Long-Term Credit Rating) with a stable outlook.

Since May 2017, however, DLR has held an issuer rating (Issuer Credit Rating – "ICR") of A-. The rating is supported by an ALAC support uplift of +1, which is added to DLR's Stand-Alone Credit Profile (SACP) of bbb+. DLR's covered bonds (SDOs) and mortgage bonds (ROs) have been assigned the highest rating of AAA. Under S&P's Covered Bond rating method, it is possible to obtain a bond rating that is up to nine notches above the ICR. S&P deducts one notch for DLR not committing to a particular OC level (voluntary OC). With an ICR of A-, DLR only needs to advance by six of the eight remaining notches to achieve AAA rating and thus has two unused uplifts in its bond rating. This contributes to reducing the OC requirement on DLR's capital centres.

Table 7. DLR's S&P ratings, end-2021

Bond rating	
Capital Centre B (SDO)	AAA (stable)
General Capital Centre (RO)	AAA (stable)
General Capital Centre (SRN)	BBB (stable)
Other ratings	
Issuer (Long-Term)	A- (stable)
Issuer (Short-Term)	A-2 (stable)

Rating composition overview

SACP	bbb+		+	Support	+1	+	Additional Factors	0
Anchor	bbb+			ALAC Support	+1		Issuer Credit Rating	
Business Position	Moderate	-1						
Capital and Earnings	Strong	+1		GRE Support	0		A-/Stable/A-2	
Risk Position	Adequate	0						
Funding	Average	0		Group Support	0			
Liquidity	Adequate	0		Sovereign Support	0			

Table 8. DLR's covered bond rating with S&P

Issuer Credit Rating (ICR)	A-
Sovereign support	0
Adjusted ICR	A-
BRRD uplift	+2
Reference Rating Level (RRL)	**A+**
Jurisdiction support	+3
Jurisdiction Rating Level (JRL)	**AA+**
Collateral support	+4
Max achievable CB rating	AAA
Used collateral support notches	-1
Voluntary OC	-1
Unused uplift	**2**

S&P's OC requirements compatible with the AAA rating have most recently been set at 8.60% for Capital Centre B and 2.50% for the General Capital Centre. The OC requirements are met for the nominal bond amount in the capital centre and covered by surplus capital in the capital centres. This is achieved using assets acquired for own capital together with funds obtained by issuing senior debt.

While DLR has not made any commitment to S&P about maintaining a certain level of overcollateralisation in its capital centres, it has a clear ambition of maintaining its current AAA rating. As S&P's OC requirement is dynamic and changes with, for example, changes in asset levels, composition and quality, or due to a change in S&P's criteria or models, the need for additional collateral may change going forward. For this reason, DLR maintains a buffer of extra OC to accommodate any changes. In Q4 2021, the current OC was thus 12.6% in Capital Centre B and 12.1% in the General Capital Centre, which is 4.0 percentage points and 9.6 percentage points, respectively, higher than S&P's OC requirements.

Senior secured bonds (SSBs) are generally assigned a rating by S&P two notches above the issuer rating. DLR has decided not to have its current SSB issue rated. Both the SRN and the SNP issues from 2017 are rated BBB, which is one notch below DLR's SACP.

Credit risk

Due to the selected business model, DLR's credit risk is concentrated around agricultural and commercial property, and to a limited extent owner-occupied homes, including residential farms. DLR also grants loans for properties on the Faroe Islands and in Greenland based on bilateral agreements with individual banks. As a key element of its business model, DLR has made loss-mitigating agreements with its loan-distributing banks.

DLR's Board of Directors has defined DLR's credit policies and guidelines for the granting of credit – including limits for the Executive Board's lending authorities – in order to achieve the desired level of risk. Within these set limits, internal business procedures and instructions further delegate lending authorities to the various sections/persons in DLR's organisation.

Credit scoring

To identify credit risk, a detailed assessment is made of the mortgageable property and the borrower's finances.

The starting point for assessing the mortgageable property is determining its market value. This is done by DLR's own valuation experts, who have significant local knowledge. The condition and marketability of the property, etc. are also taken into account in the valuation, as are the status of the property and opportunities in respect of sustainable development, including ESG risks.

Credit scoring is the responsibility of DLR's loan department in Copenhagen. Assessing the customer's finances normally involves several years of financial statements. Credit scoring models are used for the most important customer segments. Whether additional or more detailed information about the borrower is required varies from case to case and depends on the borrower's financial circumstances. The more complex and risky the case, the more detailed the investigations to ensure an adequate basis for decision-making.

DLR's organisational set-up ensures a separation of functions between the property valuation and the credit assessment.

IRB models

The capital adequacy rules allow for the use of either the standard method or the internal ratings based approach (IRB approach) to calculate risk exposure for credit risk purposes.

DLR's lending to full-time farms uses the IRB method, while the rest of the portfolio follows the standard method. The full-time farm loan portfolio amounts to DKK 80bn, or 45% of DLR's total loan portfolio.

Similar, advanced statistical models are used for internal risk management for significant parts of the business portfolio, equal to an additional DKK65bn.

Credit risk models

The models DLR uses to estimate portfolio risk comprise PD (Probability of Default) and LGD (Loss Given Default). PD is calculated at customer level, while LGD is calculated for the all properties in the collateral pool. The same structure is involved in a loan application situation, though additional components relevant to the application situation are also included.

PD is defined as the probability of a customer defaulting on payments and being more than 45 days in arrears within the next 12 months or of an impairment provision being made against the customer's exposure. A high PD reflects a high risk of a customer defaulting, whereas a low PD reflects a low risk of default.

DLR regularly monitors the portfolio rating and the customer rating is re-calculated every month.

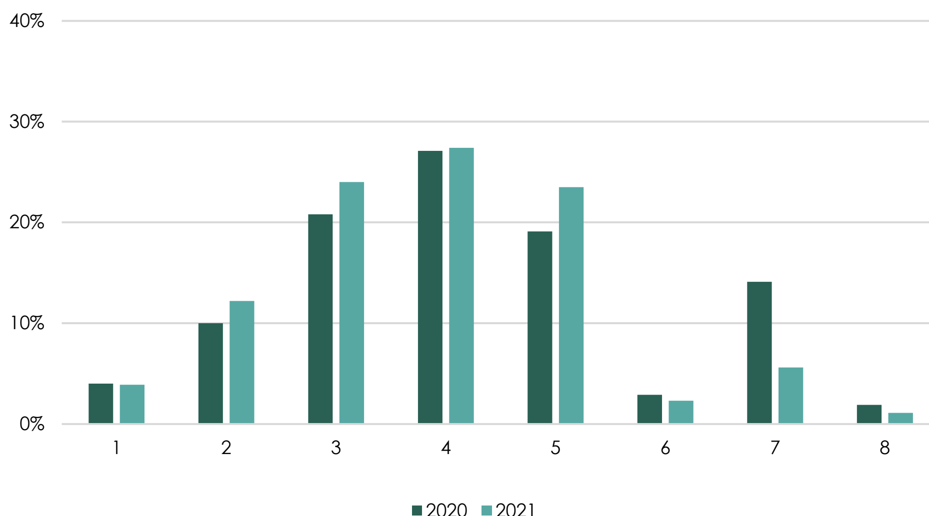
The distribution of DLR's rating classes by PD band is shown in table 9. Customers with OEI (objective evidence of impairment) where no impairment loss has been identified are always placed in rating class 7 irrespective of whether the model rating is better.

Table 9. DLR's PD rating classes

Rating class	Profile	PD band (%)
1	Extremely good	[0; 0.2]
2	Very good	]0.2; 0.4]
3	Good	]0.4; 0.8]
4	Acceptable	]0.8; 2]
5	Certain signs of weakness	]2; 9[
6	Poor	]9; 25]
7	Very poor	]25; 100[
8	Default	100

Figure 5 shows the distribution (in %) of DLR's full-time agriculture portfolio by PD rating class. At the end of 2021, 7% of the portfolio was placed in rating classes 7 and 8 compared to 16% one year earlier. The lower share was primarily due to a continued favourable financial development for customers with full-time farms. Around 85% of the customers in class 7 are only placed in class 7 because they have OEI (overrides).

Figure 5. Full-time agriculture portfolio by PD rating class



LGD indicates DLR's financial loss relative to exposure when a customer defaults. The model is based on DLR's experience of impairment and distressed properties.

The overall LGD model consists of a PR (probability of realisation) element, which indicates the likelihood that a default will lead to a realisation of the mortgage collateral, and an LGR element (loss given realisation), which indicates how great a loss realisation would result in for DLR.

The LGR model incorporates the value of the mortgage collateral and the size of the exposure. Defined haircuts (deductions) for a property's individual asset subcomponents provide an estimate of the value of the customer's property in the event of a realisation (forced sale or the like), while exposure is calculated as the loan's current position plus an estimate for interest, costs (such as sales costs), etc. for the period until the realisation is completed. The exposure includes selling costs etc.

A positive LGR equates to an expected loss for DLR, while a negative LGR means DLR has a safety margin and can expect to avoid a loss.

If DLR is aware of particular factors in individual cases that render the model's result misleading, an override (correction) is performed on the model's output.

Table 10 below shows that the observed rate of default at the end of 2021 was 0.7%. The observed rates of default were reduced relative to 2020, as shown in table 10.

The observed default rate level at end-2021 was thus considerably below the estimated PD level of 5.3% used for regulatory purposes.

Table 10. PD estimates for full-time farms (IRB portfolio)

	2021	2020
PD (excl. customers in default)	5.3%	7.2%
Observed default rate	0.7%	1.7%

Note: PD is re-calculated for regulatory purposes. Observed default rate is the observed level at end-2021. Figures are weighted for exposure.

Table 11 below shows expected losses for DLR's portfolio of full-time farm customers assuming the customer has defaulted (LGD). As can be seen from the table, the observed loss level was low.

Regulations require the use a conservative LGD value that reflects a loss level during an economic slump. At the end of 2021, DLR set its LGD for regulatory purposes at 11.9%.

Table 11. DLR's LGD estimates for full-time farms (IRB portfolio), end-2021

	2021	2020
LGD (excl. customers in default)	11.9%	10.6%
Observed loss ratio	0.9%	0.7%

Note: LGD is re-calculated for regulatory purposes.

Observed loss ratio is calculated for the most recent full year when most of the realised losses were recorded and calculated. If the observed loss ratio was calculated at a later date, some default cases would not have been finalised and the resulting figure would be too low.

Figures are weighted for exposure.

New EBA standards for IRB models

As a result of new international guidelines and technical standards from the European Banking Authority (EBA), DLR is in the process of changing its default definition and developing a new PD model within the framework of the new EBA requirements, while the LGD model has only been subject to recalibration. In 2021, DLR started an application procedure with the Danish FSA in order to obtain approval of its new default definition and new PD model. DLR expects to receive a decision from the Danish FSA during the first half of 2022. With respect to the LGD model, work has begun to develop a new model that will enable DLR to comply with the new EBA requirements.

Validation of IRB models

Risk Management in DLR carries out the task as an independent validation unit and prepares a comprehensive validation report. In addition, the unit also prepares shorter quarterly validation reports. Reviews of the validation reports are carried out by DLR's internal Credit Risk Committee, which consists of representatives from the Executive Board, model development and credit. Validation reports are subsequently sent to the Risk Committee, the Board of Directors and internal audit.

Business use of the IRB approach at DLR

DLR uses models when calculating risk exposures. The models have also been used for some time in connection with loan approvals, monitoring and risk management.

Models and ratings systems are fully implemented components of DLR's standard loan application and loan approval process. Both behavioural score models and application score models are actively employed in loan application processing. The use of ratings in the loan approval process has for many years been an important element in assessing the risk on both loans to new customers and when extending existing exposures. A customer's rating also influences the organisational processing of the loan application.

The models are also used to identify risk exposures in connection with the calculation of impairment. The rating system is also used for portfolio monitoring and in several management reports.

Monitoring credit risk

DLR's loan portfolio is screened every quarter and based on established risk signals – such as arrears, registration in RKI-Experian (credit information register) and financial reports – customers are selected for a check to ascertain whether there is any objective evidence of impairment (OEI). For customers with OEI, a calculation is made of whether DLR can expect to incur a loss if the asset has to be realised. Based on this, an impairment provision may be made. DLR's loan portfolio is divided into impairment stages (Stage 1, 2 and 3), in accordance with the requirements of the Danish Executive Order on the Presentation of Financial Statements.

Individual impairment charges (Stage 3) are made for customers with weak credit quality and where DLR at the same time estimates that its exposure is not fully secured by the mortgaged property or the guarantees provided, etc.

In addition, DLR calculates the need for model-based impairment for stages 1, 2 and 3, respectively, based on the use of scenario calculations. If it is found that the model-based impairment charges and the individual impairment charges do not adequately reflect the overall risk, they will be supplemented by a management-estimated add-on.

Regular reports are prepared on DLR's lending, including lending developments by sector/property type, loan type, etc. These reports are sent to employees in the credit area, the Executive Board and the Board of Directors, depending on the relevance of the report for the particular recipient group.

Guarantee schemes

On top of collateral in the mortgaged property and a detailed credit assessment, DLR has reduced its credit risk on individual loans and its risk at portfolio level through various guarantee agreements made with DLR's loan-distributing banks (DLR's shareholders).

DLR has applied a uniform guarantee concept since the start of 2015, covering loans granted on agricultural property, commercial property and cooperative housing. Under the uniform guarantee concept, the risk on each individual bank's loan portfolio at DLR is borne in the following order.

1. Risk cover – 6% guarantee provision

The loan-distributing bank generally provides a direct individual guarantee on disbursement that covers the individual loan for its entire term and covers the least secure part of the loan. The guarantee covers 6% of the loan's outstanding debt. In some cases, DLR will require a supplementary guarantee to be posted. The guarantee is reduced proportionally as the loan is paid down.

2. Risk cover – Loss-offset scheme

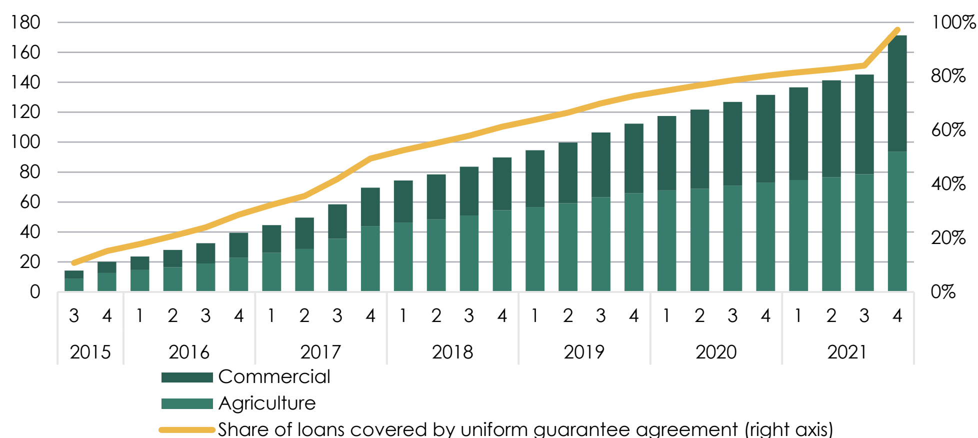
DLR's uniform guarantee concept also encompasses the possibility of offsetting losses in the commission payments made to the bank for up to ten years, whereby all losses incurred by DLR beyond those covered by the 6% guarantee provided at the loan level are offset. Only losses on loans distributed by the particular bank are offset in commission payments.

3. Risk cover – portfolio level

If losses to be offset exceed the current year's and the following nine years' commissions, such losses can be covered by drawing on all the direct 6% guarantees provided by the bank in question.

At the end of 2021, 97.3% of DLR's portfolio was covered by the uniform guarantee concept. Lending under previous concepts amounted to 0.8% of DLR's portfolio, while the remaining 1.9% was not comprised by guarantee schemes. The high coverage ratio under the uniform guarantee concept is explained by the fact that all loan-distributing shareholder banks in July 2021 were offered to move their outstanding loan portfolio under the previous schemes to the uniform guarantee concept. The vast majority of the banks wanted to carry out the shift, which was completed on 1 October 2021.

Figure 6. DLR lending covered by the uniform guarantee concept



Loans granted up to 31 December 2014

Until 2014, DLR's loan portfolio was covered by two different guarantee concepts for agricultural and commercial customers, respectively. As described above, guarantees provided under these concepts now only cover a modest percentage of all loans. The percentage will be further reduced as the loans in questions are redeemed or paid down, etc.

Table 12. Overview of DLR's guarantee concepts

	Outstanding bond debt covered by guarantee concept (DKKbn), year-end	
	2021	**2020**
Cooperation agreement – agriculture (until end-2014)	0.8	17.6
Corporate guarantee (until end-2014)	0.6	10.8
Uniform guarantee concept – agriculture (from start-2015)	93.5	73.0
Uniform guarantee concept – commercial (from start 2015)	77.7	58.6
Government guarantee – YJ loan	0.1	0.2
Covered by guarantee schemes	172.7	160.2
Total outstanding bond debt	176.1	164.3
Covered by guarantee schemes	**98.1%**	**97.5%**

Credit risk developments

As DLR continues to experience growth in lending to urban trade, especially for private residential rental properties, its share of agricultural loans continues to decline. See the loan portfolio composition descriptions below. However, DLR maintains a large concentration of loans to agricultural customers and is the largest lender for full-time agricultural properties.

Exposures of up to DKK 15m account for more than 50% of DLR's lending volume, and DLR's portfolio primarily consists of a large proportion of small and medium-sized exposures.

Full-time farms

DLR's total lending to actual full-time farms encompasses loans for nearly DKK 80bn. For the portfolio, the past few years have seen a migration towards the better rating categories, reflecting the relatively good cyclical trends in the main production areas and a reduction of loans with the highest LTV ratios through ordinary mortgage payments.

A little more than 82% of loans for full-time farms are placed within an LTV ratio of 50, and only a little more than 1% above the 70% lending limit. DLR's loan portfolio is thus generally well covered by the value of the mortgage.

Other customers

DLR's total lending for urban commercial customers, for which a significant part of the earnings is linked to the operation or letting of the mortgaged properties, amounts to just under DKK 60bn.

The remaining part of DLR's lending is principally to customers with small exposures for which the commercial utilisation of the mortgaged property is not of decisive importance to the financial circumstances, as well as loans in Greenland and the Faroe Islands and for horticultural properties.

For total lending to the group of other customers, around 81% of the loans are placed within an LTV of 50%, and only about 0.5% have an LTV of more than 80%. Also for this portfolio, DLR's loans are generally well covered by the value of the mortgage.

Arrears and impairment charges

The arrears ratio 15 days after the due payment date on the December 2021 mortgage payment has fallen by 0.7 of a percentage point relative to the year before, and considering the COVID-19 pandemic this is considered highly satisfactory. DLR has therefore not recorded any adverse credit quality impact from the COVID-19 pandemic, as we had otherwise feared. However, as a precaution, DLR has retained COVID-19-related management add-ons to the impairment charges, primarily in relation to urban trade.

Because of reversals of impairment charges, including on the agricultural portfolio owing to the favourable trends within the main production areas, DLR's total impairment account at end-2021 has fallen by DKK 106m (22%) compared with the end of 2020.

Loan portfolio developments

Strong lending growth

In 2021, DLR achieved the highest-ever nominal lending growth, with zero negative impact from the COVID-19 pandemic. The stronger growth was driven partly by the increased competitive strength of the loan-distributing banks for all property types, and partly by persistently high demand in the market for urban commercial property.

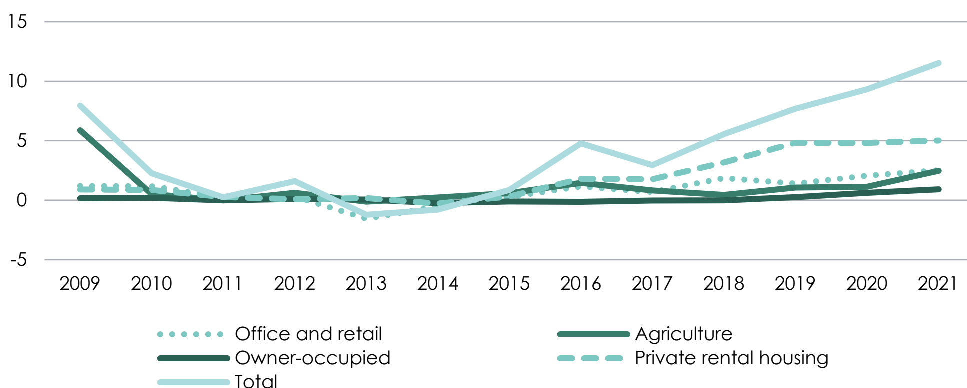
Total lending increased by DKK 11.5bn in 2021 – in cash value – against DKK 9.3bn in 2020, as shown in the figure below.

Most of the lending growth remains driven by private residential rental property, although other property segments account for an increasing share of growth. Agricultural lending increased during the past year, accounting for 21.5% of lending growth in 2021, against 12.1% in 2020. Lending growth for owner-occupied homes (incl. residential farms) rose from 6.2% in 2020 to 8.0% in 2021. The increase was driven by lending growth in Greenland and the Faroe Islands.

Private residential rental property accounted for 43.6% of DLR's lending growth in 2021, which was a lower share than in 2020, when the segment accounted for more than half of the lending growth. Office and retail property accounted for 21.9% of the lending growth in 2021, which is on a level with 2020.

Growth in loans for commercial property, in particular private residential rental property, resulted in added risk diversification in the loan portfolio in several lending segments, which bond investors and rating agencies also consider to be an advantage.

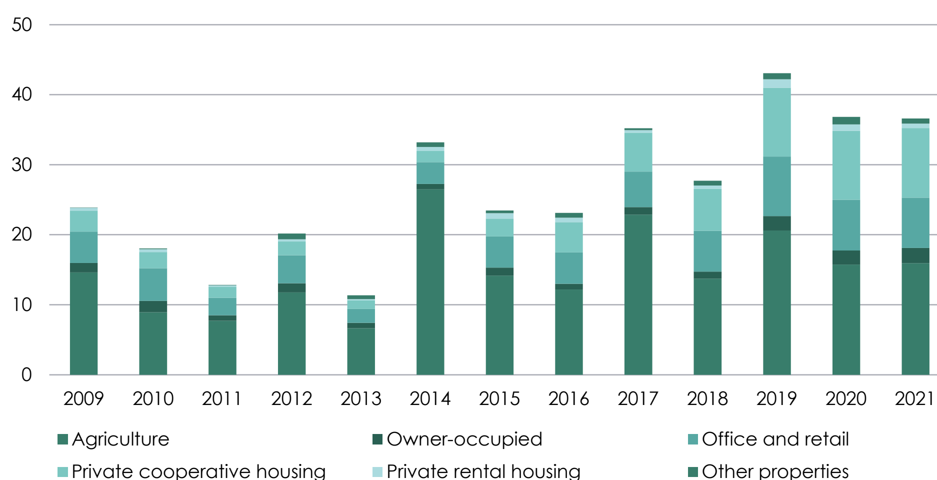
Figure 7. Development in DLR's net lending (DKKbn)



Loans disbursed

In 2021, DLR disbursed more top-up loans, often for the repayment of loans with other institutions and more loans for property purchases than in 2020. On the other hand, DLR disbursed fewer loans for remortgaging of existing DLR loans, which was not as attractive in 2021 due to interest rate developments. Overall, the increase in new loans and a reduced level of remortgaging resulted in a largely unchanged volume of disbursed loans compared with 2020. DLR's loan disbursements (gross lending) totalled DKK 36.6bn in 2021, which was largely unchanged from the year before, and the distribution by property category was more or less the same as in 2020. In 2019, a high level of remortgaging resulted in gross lending of DKK 43.1bn.

Figure 8. Gross lending by property category (DKKbn)



Composition of loan portfolio

Property categories

At the end of 2021, DLR's loan portfolio (measured as outstanding bond debt) amounted to DKK 176.1bn. Loans on agricultural properties accounted for 52.7% and loans on owner-occupied homes, including residential farms, for 5.7% of the portfolio, while loans on commercial property and private cooperative housing properties etc. accounted for 41.6%. See figure 9.

Figure 9. DLR's loan portfolio by property category

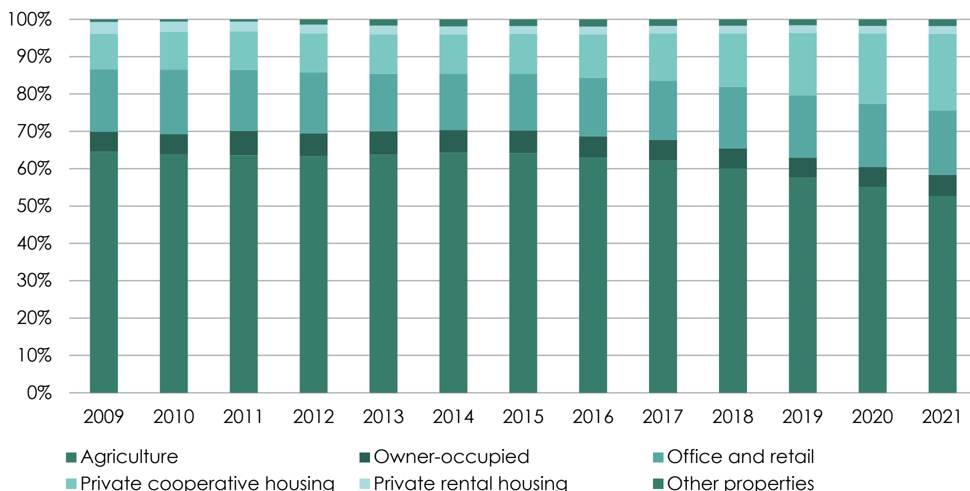
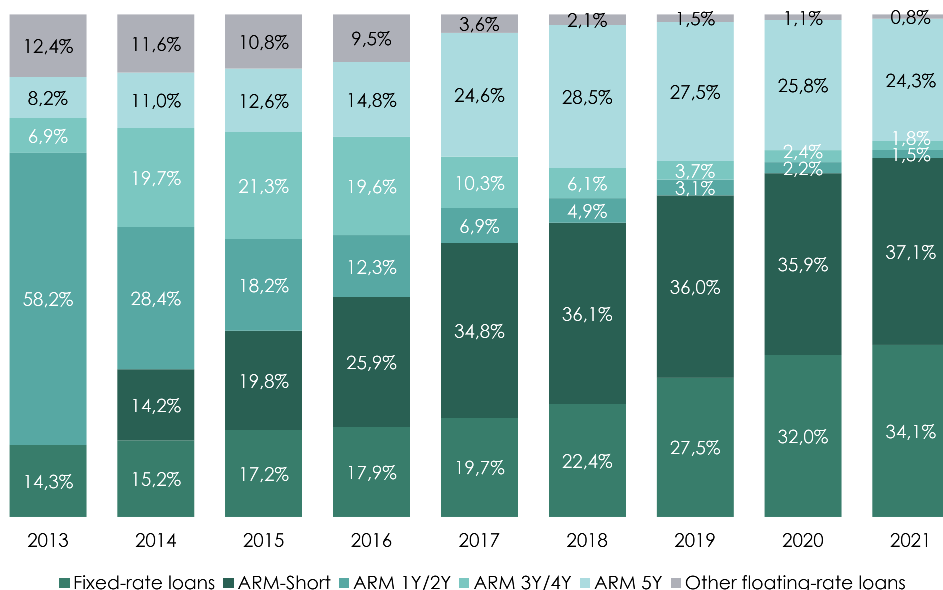


Figure 10. DLR's loan portfolio by property type



Loan types

The composition of lending by loan type has become more diversified since 2014. See figure 10. 1Y ARM (F1) loan were previously the most popular loan type among DLR's customers. However, 1-year ARM loans have gradually been replaced by fixed-rate loans, ARM loans with a longer refinancing interval and ARM Short loans (variable rate loans), which are now the most common loan type.

During 2021, the share of ARM Short loans increased by 1.1 percentage point to 37.1% of lending by the end of 2021. 1Y ARM and ARM Short loans together thus accounted for 38.6% of DLR's total lending at end-2021, whereas 1Y ARMs accounted for almost 60% of total lending at the end of 2013. Moreover, 87% of DLR's ARM loans now have a refinancing interval of five years, while the term of the new bonds behind ARM Short loans is five years.

Fixed-rate loans, which were the most common loan type at the end of 2021, has grown from a share of 13.4% of DLR's loan portfolio in 2013 to 34.1%.

Repayment profile

In 2021, the share of total gross lending with an initial interest-only period was 37.8% compared to 36.6% at the end of 2020.

Interest-only loans are particularly popular in the agricultural area, as 61.62% of gross lending to the agricultural sector had an initial interest-only period in 2021. The share of gross lending with initial interest-only periods for other property segments is shown in table 13

Table 13. Share of gross lending with an initial interest-only period

	2020	2021	Changes (percentage point)
Agriculture	57.2%	61.6%	4.0%
Residential farms	16.2%	17.8%	1.6%
Office and retail	9.4%	7.2%	-2.2%
Residential rental	33.1%	29.5%	-3.6%
Cooperative housing	24.6%	27.4%	2.8%
Other	0.2%	4.2%	4.0%
Total	**36.6%**	**37.8%**	**1.2%**

Of DLR's total loan portfolio, the share of loans with an initial interest-only period was 35.9% at the end of 2021, which was slightly lower than in 2020, when the share was 36.8%. Interest-only loans accounted for 50.7% of lending to the agricultural sector at year-end 2021, against 50% the year before. The share of outstanding loans with an interest-only period in the other segments fell in 2021, especially for residential rental properties and cooperative housing, as shown in table 14.

Table 14. Share of outstanding loans with interest-only payments, year-end

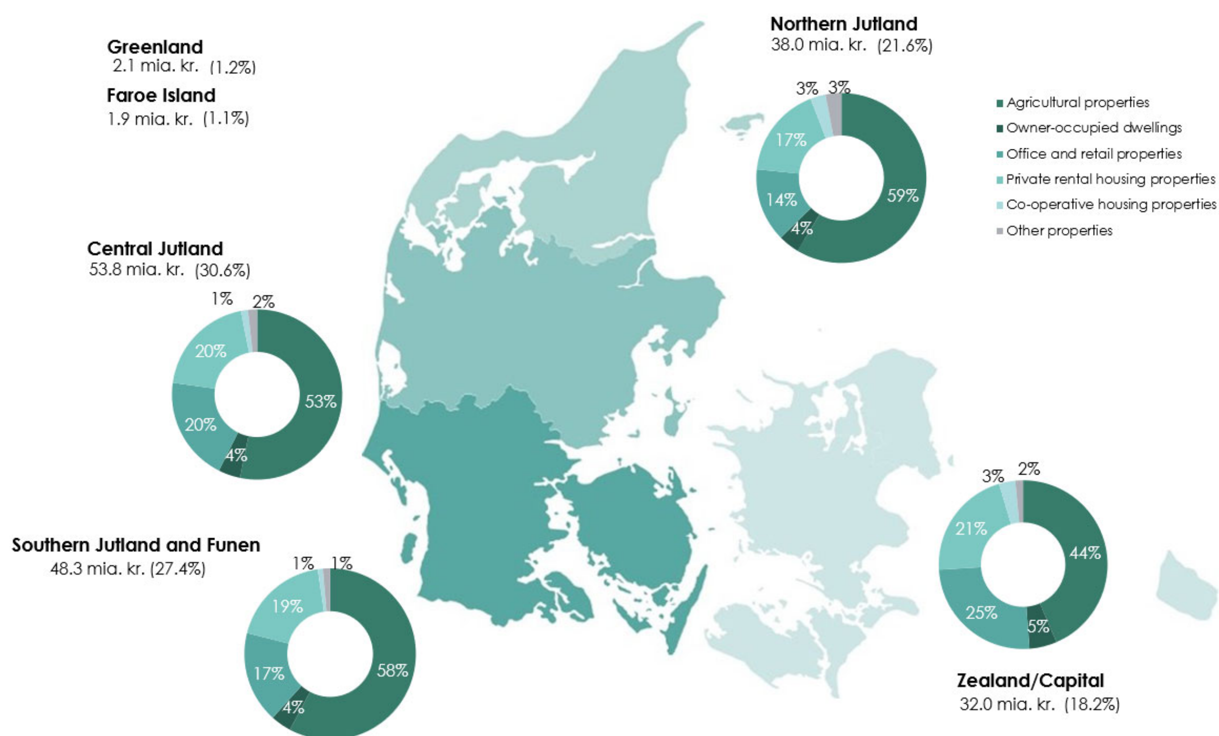
	2020	2021	Changes (percentage point)
Agriculture	50.0%	50.7%	0.6%
Residential farms	13.8%	13.4%	-0.4%
Office and retail	10.0%	8.6%	-1.4%
Residential rental	32.3%	30.4%	-1.8%
Cooperative housing	36.7%	34.3%	-2.3%
Other	1.5%	2.3%	0.8%
Total	**36.8%**	**35.9%**	**-0.9%**

Geographical distribution

As a result of its business model, DLR's loan portfolio is limited to agricultural, residential farm, commercial and cooperative housing properties.

Geographically, DLR's lending is spread across Denmark and reflects the coverage of the loan distributing shareholder banks' branch networks. DLR also has lending in Greenland and on the Faroe Islands totalling DKK 4.0bn, corresponding to 2.3% of the loan portfolio, of which a large part is for owner-occupied housing.

Figure 10. Geographical distribution

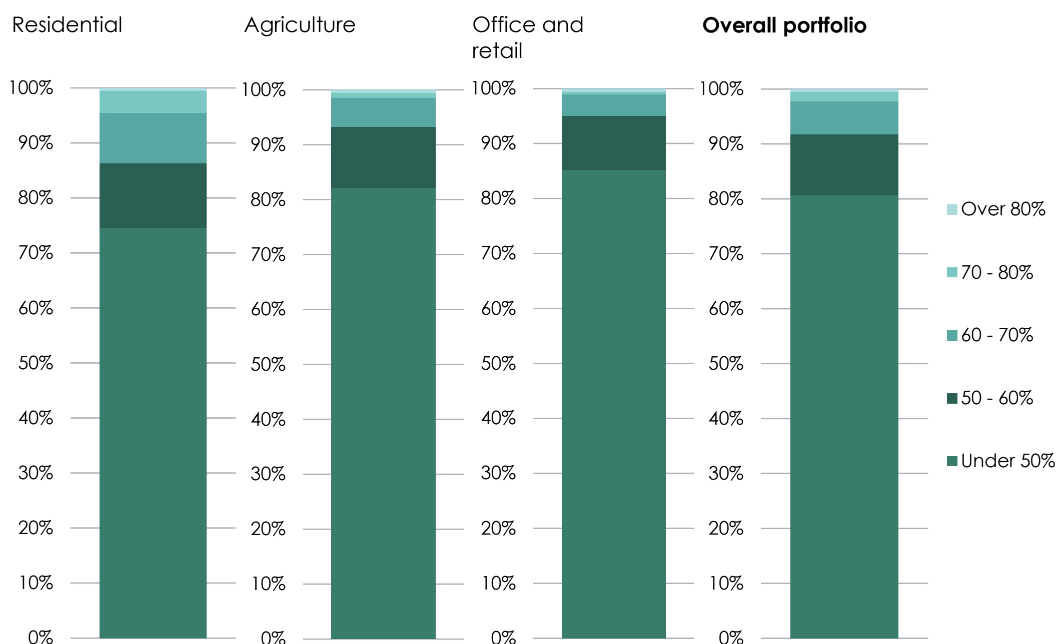


Loan portfolio LTV

DLR grants loans against a mortgage on real property within the statutory lending limits for the various property categories. To determine DLR's position in the order of mortgage priorities and whether this constitutes a significant risk, DLR continually calculates LTV (Loan-To-Value) values for the individual loans across all property categories. The average LTV on DLR loans was 51.4% at end-2021.

At the end of 2021, 93.39% of loans granted on agricultural properties were in the <60% LTV band based on DLR's latest valuations, including valuations made in connection with continual covered bond (SDO) monitoring, while 89.9% of the lending on commercial properties was in the <60% LTV band – not taking into account the guarantees provided. Residential properties, including residential rental property and cooperative housing properties, have an LTV limit of 80%, which is why the proportion placed under 60% is naturally lower for these property categories.

Figure 12. DLR's lending by LTV band



To ensure the statutory overcollateralisation (OC) of DLR's Capital Centre B (cover pool), a valuation is carried out at least annually on commercial property and every three years on residential property. This can be done without a physical inspection (market valuation), but if a physical inspection has been carried out, this valuation is prioritised.

The continual monitoring of LTV values is partly based on these current market valuations and is a permanent feature of DLR's management reporting. DLR has currently provided DKK 8.6bn in supplementary collateral and has, in addition, an overcollateralisation of DKK 20.1bn consisting of collateral in particularly secure assets plus the option of applying claims against banks (bank guarantees) in case of falling property prices. Overall, it is estimated that the current overcollateralisation enables DLR to withstand a general property price fall of about 15-20% without having to provide further collateral.

Unweighted exposure for credit risk

DLR adheres to the Danish Executive Order on Financial Reports for Credit Institutions and Investment Firms, etc. Please refer to this and to the significant accounting policies in DLR's Annual Report (note 50) for definitions of non-performing and impaired loans for accounting purposes as well as a description of methods used to determine value adjustments and impairment charges.

The total value of DLR's unweighted exposure for credit risk was DKK 167.1bn at 31 December 2021, calculated after guarantees and conversion factor.

Arrears, impairment and losses

Arrears

The number of borrowers unable to meet their payment obligations towards DLR continued to show a declining tendency in 2021, and at mid-January 2022 the number was at a lower level than the year before.

Overall, the arrears ratio – measured as the percentage of mortgage payments in arrears 3½ months after the due date – was 0.28% in mid-January 2022, against 0.38% in January 2021. The arrears ratios were 0.12% for dairy farmers and 0.39% for pig farmers, respectively, in mid-January 2022. The arrears ratios are much lower for dairy farmers than they were at the same time the year before. For pig farmers, the ratios are only slightly lower. In the second half of 2021, there was an increase in arrears for pig farmers, although the level remains subdued in a historical context.

The increase should be viewed in light of the fact that pig farmers from the middle of 2021 experienced plunging prices of pork and further price falls for weaners. The lower prices are due to continuing challenges in the European market because of African swine fever in Germany and Poland and the fact that China has reduced its imports of pork quite considerably.

The major agricultural production areas, with the exception of pig farmers, generally experienced satisfactory earnings in 2021 owing to favourable developments in settlement prices. Prices of milk and corn were favoured by rising prices of raw materials in 2021.

Figure 13. 3½ months' arrears by property category

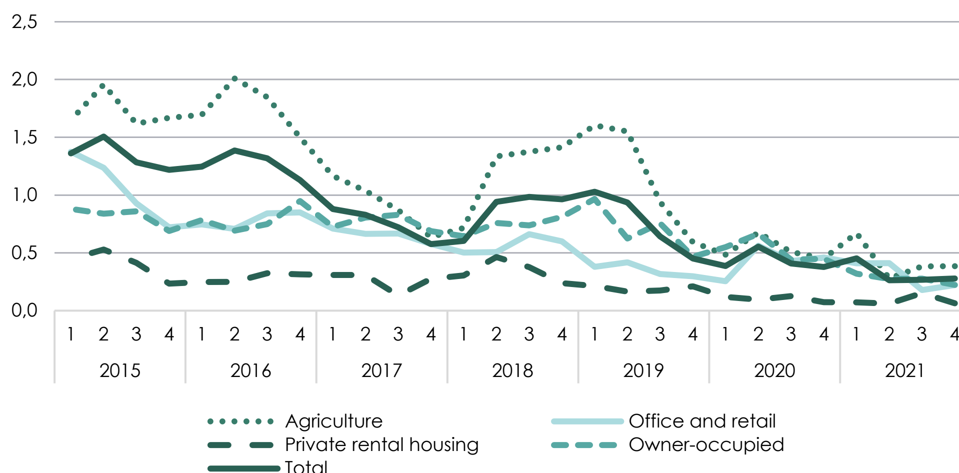
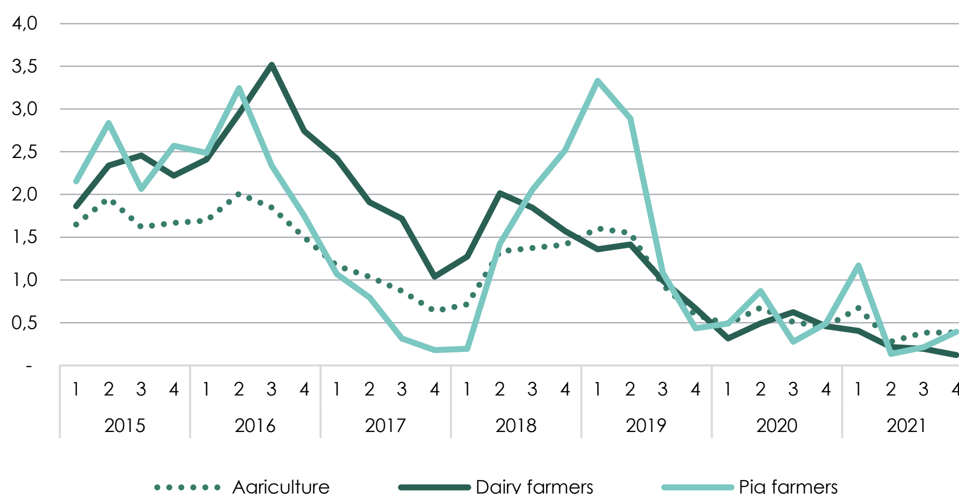


Figure 14. 3½ months' arrears – agriculture



Loan impairment charges and credit losses

As mentioned, DLR regularly monitors its loan portfolio to identify potential loan impairment. An individual assessment is also made of a number of large exposures and certain exposures showing signs of financial distress, etc. All loans showing objective evidence of credit impairment (OEI) are reviewed for impairment on an individual basis, and an impairment loss is recognised based on a sales scenario in which the underlying collateral is realised. All loans which do not show OEI or which do show OECI but are found not to be impaired based on the sales scenario are assessed based on a model calculation.

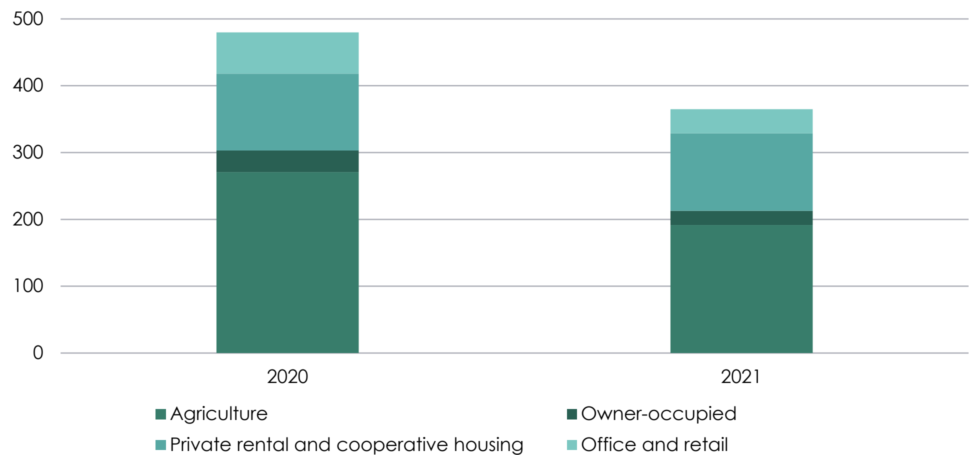
Total individual impairment losses (stage 3) amounted to DKK 128m at the end of 2021 compared to DKK 180m at the end of 2020. On top of this comes stage 1, 2 and 3 modelled impairment losses of DKK 145m and a management estimate of DKK 112m, which equated to total impairment losses of DKK 385m at the end of

2021. The management-estimated impairment losses at end-2021 includes DKK 75m attributable to the COVID-19 pandemic.

The management-estimated add-on is set to cover potential excess risk on high lending growth to residential rental properties and to additional impairment to cover risk relating to model uncertainty.

The figure below shows DLR's accumulated impairment losses by property segment. Impairment losses on loans to agricultural customers and for owner-occupied dwellings, including residential farms, accounted for 55% of accumulated impairment losses at end-2021.

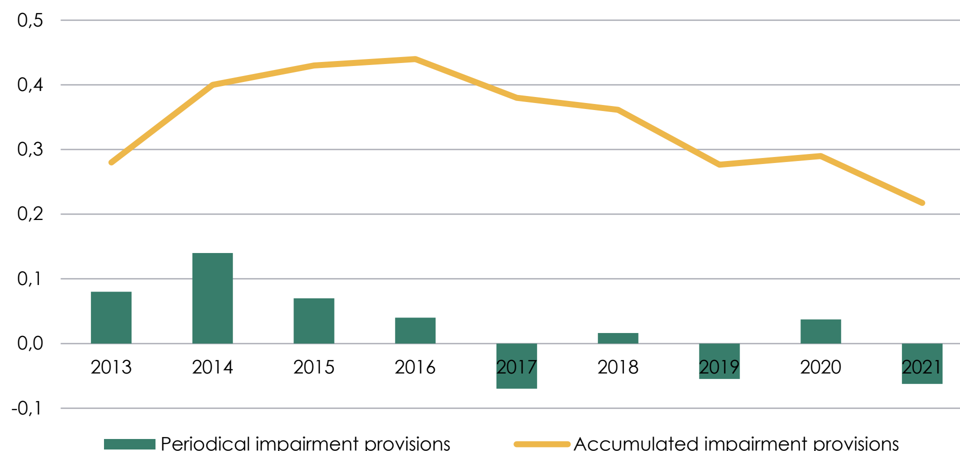
Figure 15. Accumulated impairment losses by property segment (DKKm)



The impairment percentage, denoting accumulated impairment losses in percent of total lending, represented 0.22% – calculated using the Danish FSA's guidelines – at end-2021, against 0.29% at end-2020.

Losses and impairment had a DKK 109m positive impact on the financial statements for 2021, equal to 0.06% of the loan portfolio.

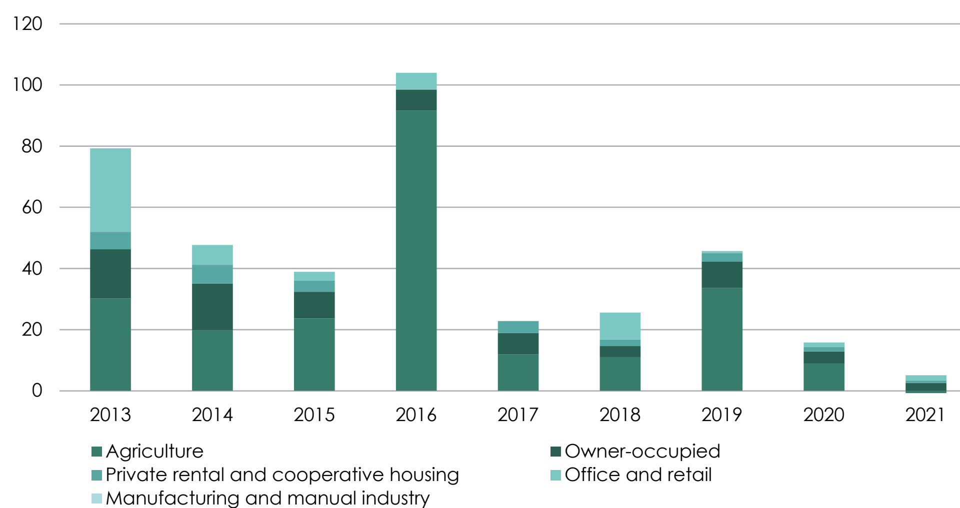
Figure 16. Impairment as % of loan portfolio



Note: Negative impairment percentage = reversal

For 2021, realised losses on loans calculated after payments under guarantee agreements but before offsetting losses and after prior-year adjustments and recovered debts previously written off, amounted to DKK 0.7m, which is a decrease relative to 2020, when realised losses were DKK 12.7m. Relative to the total loan portfolio, DLR's loss ratio was still very low at 0.0004%.

Figure 17. Realised losses before loss-offsetting (DKKm)



Note: The calculation shows realised losses prior to loss offsetting and prior to the offsetting of recovered debts previously written off

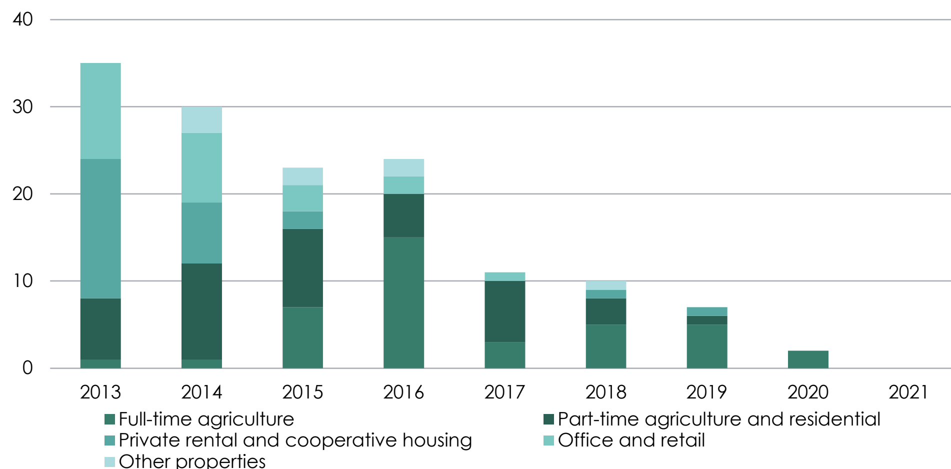
Owner-occupied homes incl. residential farms, office and retail property and private residential rental properties realised losses of DKK 2.7m, DKK 1.7m and DKK 0.8m, respectively. For agriculture, credit losses of DKK 1.8m were reversed in 2021.

With respect to the previously described loss-offsetting schemes, DLR set off losses of about DKK 3.7m in 2021 against commissions paid to the banks.

Portfolio of repossessed properties and forced sales

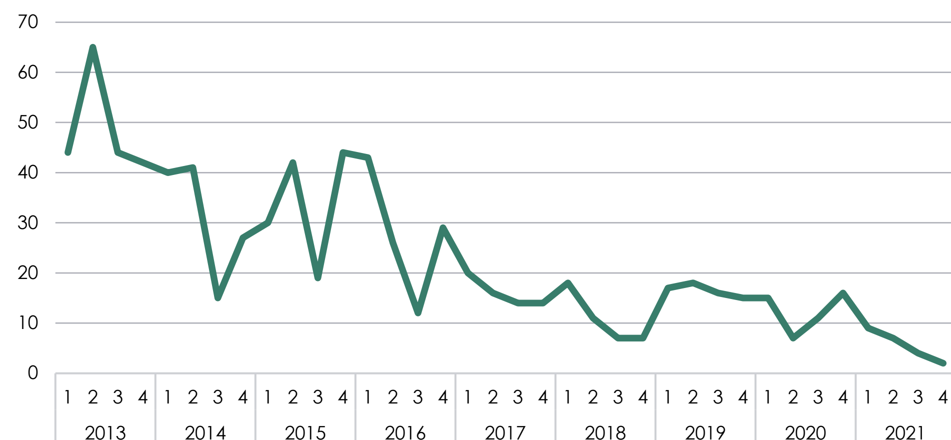
DLR had no repossessed properties at the end of 2021.

Figure 18. Portfolio of repossessed properties, year-end



The number of completed forced sales of properties in which DLR held a mortgage was 22 in 2021, which was notably fewer than the 49 forced sales in 2020.

Figure 19. Forced sales of properties in which DLR holds a mortgage



Encumbered assets

DLR's business model is based on match-funded mortgage loans offered against mortgages on real property. DLR issues covered bonds to fund mortgage loans to its customers. The loans are recognised in DLR's balance sheet until maturity and are reserved to ensure timely payment to the bond investors if DLR should become distressed. The reservation of certain assets for creditors/investors is referred to as asset

encumbrance. Hence, asset encumbrance is a natural part of DLR's business model.

Assets used to comply with requirements for supplementary collateral (LTV requirements) and "balancing funds" (i.e. prepaid funds from repayment, fixed-price agreements, etc.) are also considered to be encumbered as the bondholders have a preferential claim in case of a bankruptcy.

DLR's securities portfolio consists primarily of DLR's equity and issued senior loans. Only the parts of DLR's securities portfolio relating to meeting requirements for supplementary collateral or balancing funds are encumbered. The remaining part of DLR's securities portfolio is considered unencumbered and available in terms of DLR's LCR calculation.

DLR publishes asset encumbrance data in the Pillar III appendix.

Use of external credit assessment institutions

Article 138 of CRR allows a credit institution to appoint one or more External Credit Assessment Institutions (ECAI) to determine credit quality steps and risk weightings for financial assets.

DLR has appointed S&P Global Ratings for the purpose of credit assessment/risk weighting of exposures to credit institutions, including guarantees. S&P was a natural choice given that S&P is the only ratings agency that provides both issuer and bond ratings on DLR.

The credit quality step is based on the counterparty's rating. If the counterparty is not rated by the appointed rating agency, the country rating is used for the country the counterparty is domiciled in.

Table 15 shows the conversion of S&P's rating classes to credit quality steps for exposures to corporates, institutions, sovereigns and central banks.

Table 15. Rating classes and credit quality steps

Credit quality step	S&P's rating classes	Exposure to corporates	Exposure to sovereigns or central banks
1	AAA to AA-	20 %	0 %
2	A+ to A-	50 %	20 %
3	BBB+ to BBB-	100 %	50 %
4	BB+ to BB-	100 %	100 %
5	B+ to B-	150 %	100 %
6	CCC+ and under	150 %	150 %

The CRR Delegated Act, article 129(1)(c), states that exposures to credit institutions (for example, guarantees) that qualify for quality step 1 can comprise up to 15% of the collateral for an institution's outstanding (mortgage) covered bonds (SDRO/SDO). Due to concentration in the Danish mortgage credit system, Denmark has also been permitted to use exposures to counterparties on credit quality step 2 for up to 10% of the collateral, though the aggregate exposure to credit institutions may not exceed 15% of the collateral.

Market and liquidity risk

Market risk is the risk that the value of financial instruments and derivative financial instruments fluctuate due to changes in market prices. DLR includes the following types of risk under the market risk area: interest rate risk, including credit spread risk, exchange rate risk, equity market risk and other price risks. DLR's interest rate risk comprises interest rate risk on all financial instruments, both on- and off-balance sheet, including lending and issued bonds.

As DLR adheres to the specific balance principle, the market risk deriving from funding in mortgage (RO) and covered bonds (SDO) will reflect the terms and conditions of the mortgage debtors. The market risk DLR assumes should be viewed in relation to DLR's business model and is solely attributable to an investment need for DLR's own funds, proceeds from issued senior debt, Senior Secured Bonds, additional tier 1 capital and tier 2 capital, etc., profits/earnings and prepaid funds.

DLR actively manages its interest rate risk. In addition to the statutory framework, DLR has determined a policy for investing its securities portfolio and specific limits for the extent and volatility of each type of risk.

Essentially, DLR's overall market risk should be low, which specifically means that:

- Interest rate risk calculated in accordance with the Executive Order on the Issue of Bonds, the Balance Principle and Risk Management should lie within the range 0-2.5% of the own funds. The interest rate risk on DLR's trading book (securities portfolio/assets) should be in the 0-2.5% range of the own funds, and the securities portfolio should mainly consist of bonds with a remaining term to maturity of up to five years. Interest rate risk on issued debt instruments (liabilities) should be in the 0-2.5% range of the own funds.
- Exchange rate risk on DLR's assets, liabilities and off-balance sheet items must be at most 0.1% of the own funds as calculated according to exchange rate indicator 2; see the rules in the Executive Order on the Issue of Bonds, the Balance Principle and Risk Management.
- DLR does not assume equity market risk except in connection with policy/strategic positions deemed necessary for DLR's operations (for example, equities in sector-owned companies)
- Other price risks should be avoided. Hence, DLR does not wish to take positions in foreign currencies apart from EUR, or in equities, commodities, options or

derivative financial instruments unless these positions are for risk hedging or liquidity management purposes.

The stipulated risk levels are specified in the Board of Director's instructions to the Executive Board and in its delegated authorities.

Regular risk reports on the securities portfolio ensure DLR's management can track prevailing risk levels and decide on which measures to take, if appropriate.

Interest rate risk

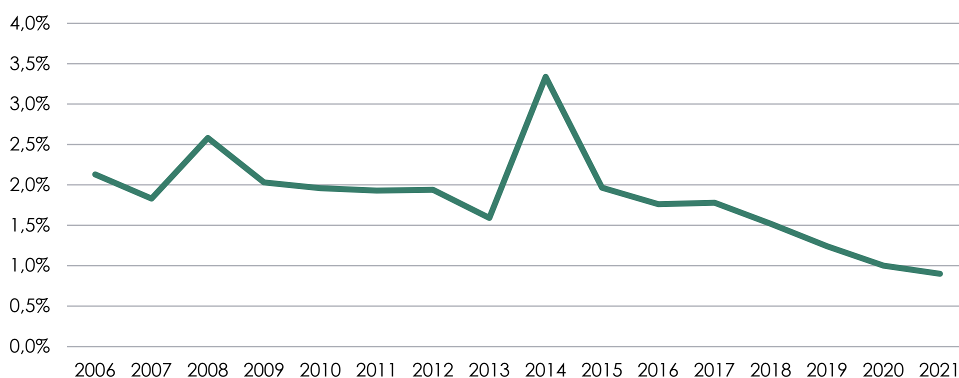
Interest rate risk is defined as the amount of the loss caused by a positive or negative parallel shift in the interest rate structure of one percentage point, i.e. the value adjustments triggered by a change in the market rate of one percentage point. DLR's financial risk attaches particularly to the interest rate risk on the securities portfolio and the interest rate risk on issued debt instruments, which (typically) correlates negatively with the interest rate risk on the securities portfolio. Moreover, DLR is exposed to e.g. credit spread risk.

DLR has set limits for interest rate exposure to keep interest rate risk at a low level overall.

DLR's interest rate risk complies with the Board of Directors' guidelines for overall market risk, whereby the interest rate risk on the securities portfolio should be in the range 0-2.5% of DLR's own funds, which equates to between DKK 0 and 397m.

At the end of 2021, DLR's relative interest rate risk on its securities portfolio was 0.9%, see the figure below. This equates to a value adjustment of the securities portfolio of DKK 142m in case of a one percentage point change in the market interest rate. In addition, the convexity impact on DLR's bond portfolio is DKK -0.2m. In this way, DLR complies with the guidelines that the interest rate risk incl. the convexity impact must be within 2.5%.

Figure 20. Relative interest rate risk on DLR's securities portfolio



As mentioned above, the interest rate risk on issued debt instruments "correlates negatively" with the interest rate risk on the securities portfolio. The issued debt instruments represent a loan raised outside the specific balance principle in connection with lending activities. The interest rate risk on these debt instruments is DKK 18m.

DLR holds a significant portfolio of bonds. The portfolio mainly consists of AAA-rated Danish listed mortgage bonds (mortgage credit bonds/RO, covered bonds/SDO and mortgage covered bonds/SDRO), plus a small volume of government bonds.

The interest rate risk on the bond holdings with a duration of up to one year accounts for 79% of the total interest rate risk, up to two years the interest rate risk accounts for 85%, and up to five years the interest rate risk accounts for 96% of the total interest rate risk. The interest rate risk on bond holdings with a duration of more than five years accounts for 2% of the total interest rate risk.

Credit spread risk

Credit spread risk is defined as the risk of price losses due to lower creditworthiness of a counterparty or on exposures to the institution itself. Lower counterparty creditworthiness may occur due to higher risk of default, for example. The credit spread is calculated as the spread to a risk-free yield curve.

DLR's Board of Directors has determined a maximum credit spread risk for DLR of 2.5% of its own funds, corresponding to DKK 397m at end-2021. At end-2021, the credit spread risk on DLR's bond portfolio was DKK 233.6m., equivalent to 1.5% of the own bunds.

Exchange rate risk

Exchange rate risk is the risk of loss from fluctuations in foreign exchange rates. Due to the specific balance principle, DLR assumes no actual exchange rate risk.

According to Danish law, exchange rate risk calculated according to the Danish FSA's indicator 2 may not exceed 0.1% of own funds.

DLR's exchange rate risk amounted to 0.001% of the own funds at the end of 2021.

Equity risk

DLR generally does not place funds in equities apart from "sector equities". At the end of 2021, DLR's equity holdings consisted of unlisted shares in e-nettet and Landbrugets Finansieringsinstitut.

As equity risk is defined as 10% of the market value, and DLR's equity portfolio amounted to DKK 44.5m at year-end 2021, the equity risk after tax was DKK 3.5m at end-2021.

Equities are also entered at fair value. Where the fair value cannot be measured reliably, unlisted shares are measured at cost less any impairment.

Table 16. DLR's exposures in equities in the investment portfolio (e-nettet and LFI)

Type (DKKm)	Exposure, 31.12.2021	Operational impact in 2021
e-nettet	40.3	1.9
Landbrugets Finansieringsinstitut	4.2	4.2
Total	**44.5**	**6.1**

Counterparty risk

To manage and mitigate DLR's risk of loss due to counterparties failing to meet their payment obligations to DLR, financial counterparties' ability to pay is monitored quarterly pursuant to a policy and guidelines for DLR's exposure to banks, which are defined by DLR's Board of Directors.

DLR's risk of loss on financial counterparties is limited, as counterparty risk essentially comprises the borrower guarantees provided. These guarantees are secondary to the borrower's personal debt obligations and the mortgage on the property.

Moreover, other than a limited threshold of DKK 50m, DLR only places liquidity in banks which hold a minimum rating of BBB/A-2 by S&P, and the maximum duration for term deposits is 30 days. In Denmark, only four banks hold such a rating: Nordea, Danske Bank, Jyske Bank and Nykredit Bank.

Exposure calculations are regularly made for the individual banks to estimate DLR's financial counterparty risk, in accordance with the Board of Directors' guidelines.

Liquidity risk

Liquidity risk at DLR includes the risk that DLR may not be able to meet its payment obligations and the risk of insufficient funding or compliance with applicable statuary requirements. DLR's liquidity policy and associated guidelines laying down the specific limits for liquidity management are determined by DLR's Board of Directors. Based on this, DLR's Executive Board has communicated the framework for managing liquidity in DLR's organisation. The policy makes clear that DLR's risk profile in the liquidity area should be low, which should be seen against DLR's compliance with the balance principle.

The risk of loss due to current liquid assets being insufficient to cover current payment obligations is extremely limited for DLR. This is because DLR adheres to the specific balance principle whereby loan payments match the payments on issued bonds (match funding). Hence, there is a 1:1 correlation between the loan granted to the borrower and the bonds issued by DLR to fund the loan. In general, the

balance principle means DLR essentially only assumes a credit risk in connection with its lending activities.

In accordance with DLR's guidelines in the liquidity area, the Board of Directors has defined the framework for liquidity management. The guidelines state, for example, that the vast bulk of DLR's securities holding should be placed in Danish government or mortgage bonds, and that the holding should be diversified across issuers and ISIN codes. Furthermore, DLR should have sufficient credit facilities at banks and be a monetary policy counterparty in Danmarks Nationalbank. In addition, DLR's Board of Directors has determined that liquid funds must be placed in financial institutions that are subject to Danish law.

DLR may place funds in each financial institution up to a maximum exposure to the financial institution of 25% of DLR's own funds, calculated in accordance with CRR regarding large exposures, provided the financial institution has a minimum rating of BBB/A-2 with S&P. As part of the quarterly forward transactions, the above-mentioned limit may be exceeded on a day-to-day basis up to a total of 50% of DLR's own funds.

DLR's liquidity and liquidity requirements are continually monitored, and given DLR's special business model as a mortgage credit institution are primarily concentrated around the end of each quarter, when a separate report is prepared. DLR also prepares an annual ILAAP report (Internal Liquidity Adequacy Assessment Process). The ILAAP is approved by DLR's Board of Directors prior to submission to the Danish FSA.

More specifically, DLR's liquidity risk primarily concerns the risk that DLR cannot provide liquidity to cover the business's ongoing liquidity needs, such as the payment of interest and redemptions to bond owners, the disbursement of loans and the operational running of DLR.

DLR has determined a number of indicators for a potential liquidity crisis situation:

- Diminished selling opportunities for DLR's bonds
- Large increases in arrears
- Large increases in losses and impairment charges

LCR

The LCR requirement entails that DLR should have a sufficient liquidity buffer to cover its net liquidity requirement for the coming 30 days. The LCR requirement is defined in a delegated act (the LCR Delegated Act), which was issued in accordance with Article 460 of CRR.

Like other Danish mortgage credit institutions, DLR has been granted permission pursuant to Article 26 of the LCR regulation (exemption provision). The permission allows mortgage credit institutions to leave out certain mortgage bond-related cash flows

from the LCR calculation. In order to apply the exemption, however, the mortgage credit institution must meet an LCR floor requirement. The floor requirement entails that DLR must at all times hold liquid assets equivalent to 2.5% of total mortgage lending.

This means DLR must on a daily basis calculate and on a monthly basis report LCR by using the two methods described below:

- Calculation without the floor requirement in which DLR's holding of eligible liquid assets (HQLA) are set in relation to DLR's net liquidity outflow (next 30 days)
- Calculation with the floor requirement in which DLR's holding of eligible liquid assets (HQLA) are set in relation to 2.5% of DLR's mortgage loans.

The calculations show that DLR throughout 2021 complied with the internally defined 110% minimum requirement for LCR both without and with the floor requirement.

At end-2021, DLR's LCR without and with the floor requirement was calculated at 500% and 143%, respectively.

Having engaged with the EBA, the Danish FSA has announced that permissions granted pursuant to Article 26 of the LCR (exemption provision) to Danish mortgage credit institutions cannot be expected to continue under the existing interpretation. A change to the Article 26 exemption possibility could entail that the current LCR floor requirement will cease to apply and that the current model for calculating the Pillar II liquidity requirement will be revised and be changed from a reporting requirement to an applicable requirement in the LCR calculation. The Pillar II liquidity add-on has been reported to the Danish FSA since December 2019.

Due to new EU rules on covered bonds, mortgage credit institutions will going forward also have to have assets to cover the overcollateralisation (OC) requirement. The OC requirement will come into force in mid-2022. The Danish FSA will also include this factor in its revision of the model to calculate the Pillar II liquidity requirement.

The amendment to the Article 26 exemption provision, discontinuation of the floor requirement and determination of the final Pillar II liquidity requirement are expected to apply from mid-2022, concurrently with the new EU rules on covered bonds, including the OC requirement. In this context, DLR will in Q2 2022 adapt its LCR calculation to the amended exemption possibilities and revise its calculation model to reflect the Pillar II liquidity requirement.

NSFR

The EU Commission's proposal for an NSFR requirement (Net Stable Funding Ratio) as one of several elements in the CRDV/CRR2 package was finally approved in May 2019. The NSFR requirement came into force in mid-2021.

NSFR requires that so-called available stable funding must be equal to or higher than (minimum 100%) the required stable funding. Available Stable Funding ("ASF") is calculated on the basis of an institution's liabilities. The shorter the term to maturity of a liability, the less ASF value it is considered to contribute. Required Stable Funding ("ASF") is calculated on the basis of an institution's assets. The more liquid an asset, the less stable funding an institute is required to have to fund it and the lower the RSF factor.

The NSFR requirement includes a possible exception for mutually dependent assets and liabilities that meet a number of specific conditions, including having the same maturity, such as, say, Danish mortgage loans and underlying mortgage bonds with the same maturity. This implies that mortgage bonds and mortgage loans are accorded an ASF factor and an RSF factor, respectively, of 0%, and in practice that exempts mortgage loans and issued mortgage bonds from an NSFR calculation. In addition, NSFR recognises Danish refinancing legislation (section 6 of the Danish Mortgage Credit Loans and Mortgage Credit Bonds, etc. Act), to the effect that exemption also applies to short-term mortgage bonds used to fund longer-term loans and meeting the requirements of Danish refinancing legislation.

DLR regularly calculates NSFR, where the requirement for available stable funding is at least 100% of the required stable funding. DLR has set an internal minimum requirement of complying 110% with NSFR. At year-end 2021, DLR had an NSFR of 172%.

Non-financial risks

In a policy and guidelines for non-financial risks, DLR's Board of Directors has defined the following risk taxonomy for non-financial risks:

- **Operational risk:** Loss arising as a result of inappropriate or inadequate internal procedures, human or system error or error caused by external events (excl. compliance and IT risk) Model risk and outsourcing risk are considered and managed as operational risk.
- **Compliance risk:** Loss arising as a result of non-compliance with applicable regulations, market standards or internal rules
- **IT risk:** Loss arising as a result of system error or non-compliance with IT security protocols, incl. cyber security risk.

Operational risk

DLR constantly strives to minimise operational risk by, for example, establishing control procedures, authorisations, emergency procedures, back-ups, business procedures, automatic updates, contingency plans, etc. Moreover, process descriptions have been produced in relevant areas to provide instructions for procedures and to define an area's allocated responsibilities. These measures help ensure DLR complies with both external and internal requirements.

As DLR is considered a relatively "simple" business with few products and business areas, DLR's operational risk is estimated to be limited overall.

DLR calculates its capital requirement with respect to operational risk using the basic indicator method. The risk exposure in connection with operational risks has been calculated at DKK 2.4bn, equal to an 8% capital requirement of DKK 196m at 31 December 2021.

DLR has established business procedures to ensure regular follow-up and handling of operational incidents. All operational incidents that have or could have entailed costs exceeding a pre-defined limit are reported to DLR's Executive Board and the Risk Monitor, and DLR's Risk Committee is informed hereof. Any major losses are reported to DLR's Board of Directors at the next meeting. Overall, DLR experiences a relatively low number of operational incidents taking into account for example the number of loan cases handled each year.

Another focus area in terms of managing operational risk, etc. is the options for insuring DLR against events that might threaten the company's independence in connection with claims, actual damage, or actions or omissions that could be liable

to compensation. DLR prefers to assume responsibility for minor loss risks itself. Minor loss risks are risks where the insurance premium and administration costs are assumed not to be commensurate with the potential loss.

Model and outsourcing risk

DLR employs statistical models for risk management purposes and for the calculation of model-calculated impairment. The use of statistical models involves risk because of potential model weakness. For example, this may be due to a weak data basis, errors in the statistical modelling process or errors in the use of the models. DLR's use of statistical models mainly concerns the IRB models, for which the company has established procedures for monitoring, change and approval of the models. To mitigate model risk, DLR has reserved capital in Pillar II and in its impairment calculations.

DLR uses outsourcing in connection with IT operations. Outsourcing is carefully supervised in accordance with the Danish FSA's specific executive order, while separate guidelines have been established for outsourcing. DLR currently has two agreements regarding IT outsourcing which, according to the Danish Executive Order on Outsourcing Significant Areas of Activity, are assessed to be significant or critical outsourcing. Both agreements support the operation of DLR's central IT systems. Ongoing deliverables from the various suppliers are monitored and controlled in a risk-based approach. The risk attaching to IT outsourcing is considered limited.

Compliance – increasing regulatory requirements

DLR is strongly committed to complying with rules and standards applicable to DLR as a financial business. For a number of years, sector regulation has been increasing, and DLR dedicates substantial resources to implementing and maintaining new regulations and practice. This applies to actual financial rules deriving from EU rules and the Danish Financial Business Act, but compliance with the rules on combating money laundering and terrorist financing and GDPR compliance is also important to DLR.

The growing volume of new regulations means higher requirements for effective controls, and DLR's management emphasises the continual roll-out of effective control systems to ensure compliance with the rules applicable to DLR's business.

IT and cyber security risk

DLR's business is heavily dependent on IT systems, including both DLR's own IT systems and interfaces with other external systems, such as the electronic land registry, e-nettet, VP Securities (securities registration and administration) and bank payment systems.

DLR's IT strategy

The Executive Board determines DLR's IT strategy, which is approved at least once a year by the Board of Directors. DLR's business model assumes that necessary adjustments can be regularly made to DLR's IT systems.

DLR's IT strategy is based on the use of well-known and proven digital solutions. DLR develops strategic systems for mortgage lending in-house, while peripheral systems are based on acquired standard systems running on a Windows-based platform. DLR has outsourced its mainframe operations to DXC.

IT risks

DLR draws up an annual risk assessment of the IT area that identifies and assesses a number of IT risks. A number of protective measures have been established to prevent operational disruptions, various disaster situations and cyber threats.

Operational disruptions are addressed through preventative measures, including procedures for quality assurance, change management and document maintenance together with fault management and procedures for damage repair, switchover, etc. Furthermore, DLR has twin operational centres so that a serious incident at the one centre of operations does not have a knock-on effect on the other.

Disaster situations caused by fire or water damage, for example, are mainly sought to be avoided through well-planned physical safety measures and the surveillance of DLR's buildings, technical installations and IT equipment.

Disasters caused by digital incidents are sought to be avoided through system and data protection via access controls, protection from virus and other malware, the monitoring of network traffic and other control procedures related to user ID and user behaviour.

DLR has also prepared contingency plans and procedures for emergency situations that comprise damage-limitation measures, work-arounds and the re-establishment of permanent solutions.

Hence, contingency plans are in place should DLR's IT systems experience a serious incident that results in the digital systems being unavailable for shorter or longer periods of time. The goal of DLR's contingency planning is that key business functions can be re-established and run from alternative centres of operations within 24 hours of deciding to put the IT contingency plan into action. Business contingency plans have also been established.

Overall, DLR's IT security and contingency plans contribute to a level of risk for DLR's business applications of IT that may be characterised as low, while the risk of loss due to IT risk may be estimated as limited.

Cyber security threats

The annual IT risk assessment addresses and evaluates prevailing threats from various types of cyber attack, where criminals use IT equipment to cause disruptions or to destroy or gain unauthorised access to data, systems, digital networks or digital services. DLR gathers information on cyber threats from, among other sources, the Centre for Cyber Security, Nordic Financial CERT, Danmarks Nationalbank's annual

"Generic Threat Landscape report" as well as information from Europol communicated through Finance Denmark.

The threat from cyber crime against the Danish financial sector is generally assessed to be high. Although DLR has registered no specific incidents that had an impact on the accessibility of IT systems or data confidentiality, DLR generally believes that cyber attacks must be considered likely and are a risk that should be given proper attention and continually mitigated through necessary security measures and resources. DLR takes the threat of cyber attacks seriously and continually enhances security measures in this area using a risk-based approach.

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