dlr·kredit

Risk and Capital Management 2022

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Disclosure requirements and introduction

Disclosure requirements

This Risk and Capital Management 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 www.dlr.dk/investor together with this report dlr.dk/en/investor/financial-statements/#pillar-III-disclosure.

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 assessment of DLR, the information stated complies with the Pillar III information requirements set out in the CRR regulation (CRR articles 431455) and the European Commission's technical standards.

The Risk and Capital Management Report was published on 10 February 2023.

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 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 2022, DLR's loan portfolio in terms of nominal outstanding bond debt amounted to DKK 181.9bn, of which loans granted in Greenland and the Faroe Islands amounted to a total of DKK 4.4bn or 2.4% of the loan portfolio.

In 2022, DLR had on average 229 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 lending increased by DKK 5.8bn in 2022. Lending for agricultural properties accounted for 51.5% of the portfolio, while lending for residential farms and owner-occupied homes made up 5.7% of the portfolio at end-2022. The remaining 42.8% 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 720m in 2022. With total own funds after deductions of DKK 17.0bn and a total risk exposure of DKK 69.8bn, DLR's total capital ratio was 24.3% at year-end 2022.

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 sustainability initiatives is described in DLR's sustainability report at dlr.dk and can be downloaded here dlr.dk/en/investor/financial-statements/#sustainability.

Management statements
The Risk and Capital Management Report was approved by the Board of Directors of DLR Kredit A/S on 10 February 2023.

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 2023 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 2022, DLR's common equity tier 1 capital ratio was 22.5%, the tier 1 capital ratio was 22.5% and its capital ratio was 24.3%.
- 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 8.6% at the end of 2022.
- 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 1.2% relative to own funds at end-2022.

- 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 the end of 2022, DLR calculated its LCR at 201% and the Pillar II liquidity add-on at 110%.

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

Copenhagen, 10 February 2023

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's business model as a mortgage credit institution and the types of risk to which DLR is exposed are closely linked. On the basis of the adopted business model, DLR is exposed to different types of risk, notably credit risk. The different types of risk are described in more detail in the sections below.

Board of Directors and Board committees

DLR's Board of Directors has overall responsibility for defining and monitoring DLR's risk exposures and for DLR's risk management, internal controls and for ensuring compliance with applicable legislation. Based on the adopted 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.

In addition, the Board of Directors and the Executive Board set and approve general policies, guidelines, procedures and controls in key risk management areas.

The Board of Directors has also established an internal audit function that reports to the Board of Directors and which – in accordance with an audit strategy approved by the Board – audits processes and internal control procedures in significant and material risk areas. The company has also set up an audit committee, a risk committee, a remuneration committee and a nomination committee, as described below.

At the end of 2022, DLR's Board of Directors consisted of nine members. Six members were elected at the Annual General Meeting, while three members were elected from among DLR's employees. Of 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. Shareholder-elected board members 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.

The composition of the Board of Directors at end-2022 and information about other directorships held by the members of the Board of Directors is set out in DLR's 2022 Annual Report.

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

- The **Audit Committee** is charged with supervising the financial reporting process as well as other accounting and auditing matters including monitoring whether DLR's internal control, systems as well as internal audit and risk management systems in relation to accounting matters function effectively. DLR's Audit Committee has three members – General Manager Claus Andersen (chairman), Deputy Director & CFO Frank Mortensen and Head of Business Development and Communications 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 met five times in 2022.

- 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), Deputy Group Chief Executive Bjarne Larsen and Agricultural Account Manager Jakob G. Hald. The Risk Committee held six meetings in 2022.

- 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 two meetings in 2022.

- 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 2022.

Committee members are also members of DLR's Board of Directors, including the members elected at the Annual General Meeting as well as employee representatives. Information about the composition of board committees and their duties is also provided in DLR's 2022 Annual Report.

Members of DLR's Board of Directors are elected by the shareholders at the Annual General Meeting or from among DLR's employees. 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, which review is conducted at least once annually among 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.

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 2022 Annual Report.

Risk management at DLR – the three lines of defence

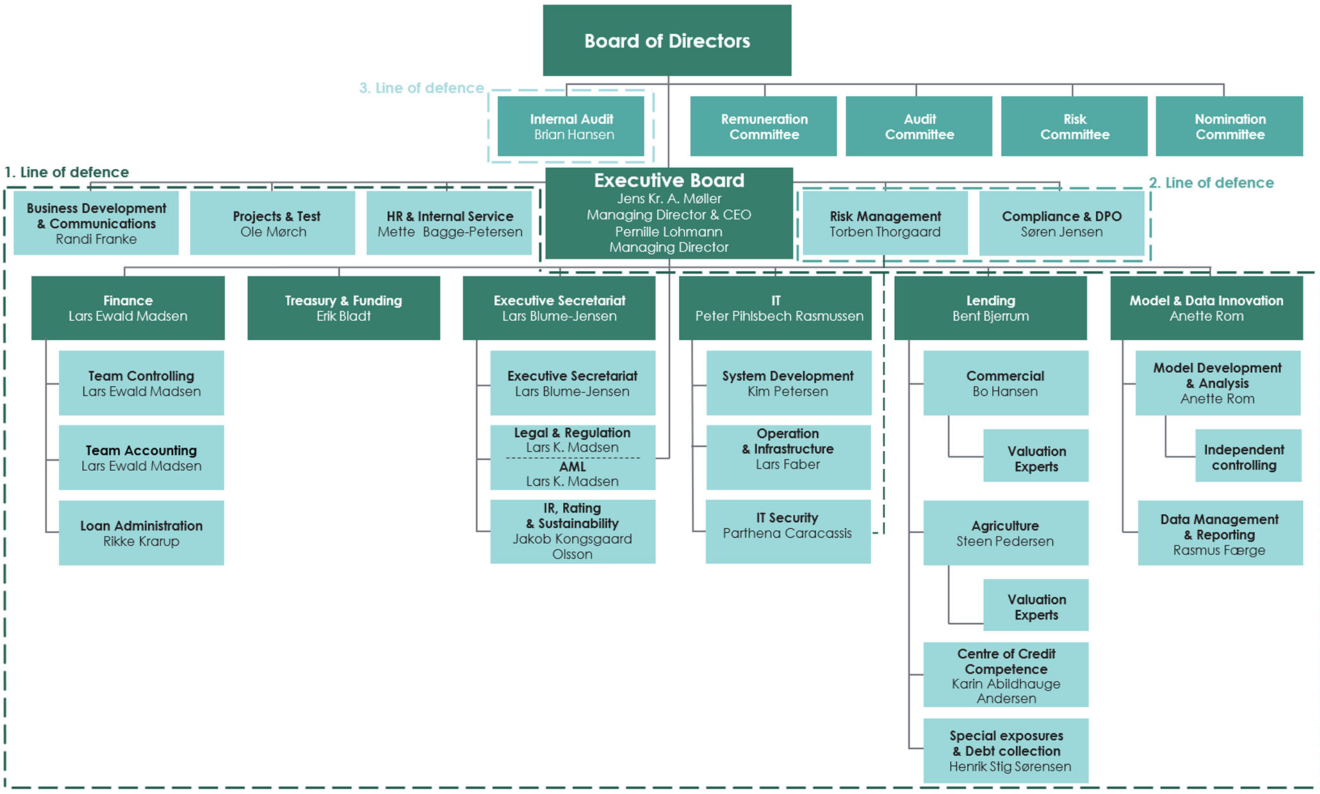
DLR's Executive Board ensures that risks are managed and mitigated as directed by the Board of Directors. Risk management at DLR is shaped around the three lines of defence model:

- **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.

As the Chief Information Security Officer (CISO) is placed in the IT department (first line of defence), DLR has identified a need to take some compensatory measures in terms of ensuring adequate segregation of functions in the area of IT security. As a compensatory measure, the CISO therefore has a secondary reporting duty to the head of Risk Management.

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. DLR's CSR Committee is responsible for managing ISG risks across DLR.

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

Risk type	Risk category	Definition
	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 to the Board of Directors)
- Risk overview – Securities trading at DLR (included in the quarterly securities report to the Board of Directors)
- 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

Reporting	Recipient	Frequency
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 monitoring by Risk Management	Executive Board	Monthly
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
DLR's IT risk assessment (separate appendix to DLR's internal risk report)	Board of Directors	Annually
Outsourcing risk at DLR (separate appendix to 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
Long-term capital plan	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. Pursuant to DLR's capital targets, the capital structure should be based on a high level of equity. DLR must also have adequate own funds to ensure compliance with other requirements such as the debt buffer requirement, ensuring LTV compliance with respect to issued covered bond (SDO) loans and rating agency OC requirements.

Capital targets

The purpose of DLR's capital targets is to ensure that DLR has sufficient capital and, even during economic slowdowns, maintains adequate own funds to ensure a sound business operation.

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 2023 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%. Moreover, a minimum target of 5% has been defined for the leverage ratio.

Long-term capital plan

In connection with its capital management, DLR prepares a long-term capital plan designed to meet regulatory requirements and ensure adequate capital for commercial activities. The plan is updated and adjusted 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:

- Compliance with applicable and known regulatory capital requirements and continual compliance with LTV requirements for issued bonds and OC requirements etc.
- Use of the IRB approach for the calculation of risk exposure on the full-time agriculture property portfolio and the standard approach for the remaining portfolio.
- Inclusion of other potential operational factors, such as expected developments in losses and impairment losses, 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 of DKK 17.0bn consists primarily of equity and a small proportion of tier 2 capital. At the end of 2022, DLR's common equity tier 1 capital was DKK 15.7bn, while the tier 2 capital amounted to DKK 1.3bn.

DLR's own funds increased by DKK 1,107m in 2022. The increase was partly attributable to DLR's 2022 profit of DKK 720m after tax, while the rest of the change was due to adjustments in regulatory deductions. The risk exposure amount at end-2022 was DKK 69.8bn, against DKK 85.2bn at end-2021.

DLR's own funds at 31 December 2022 are shown in tables 2 and 3.

Table 2. DLR's own funds

(DKKm)	2022	2021
Share capital	570	570
Share premium	0	0
Reserves (locked-up capital)	2,338	2,338
Retained earnings	12,163	11,275
Profit for the year after tax	720	888
Tier 1 primary deductions	-85	-484
Tier 1 capital less primary deductions (CET 1 capital)	15,706	14,587
Additional tier 1 capital	0	0
Other deductions	0	0
Tier 1 capital incl. additional tier 1 capital	15,706	14,587
Tier 2 capital	1,298	1,300
Included tier 2 capital	1,298	1,300
Own funds before deductions	17,004	15,887
Deductions from own funds	0	0
Own funds after deductions	17,004	15,887

Table 3. DLR's capital ratio

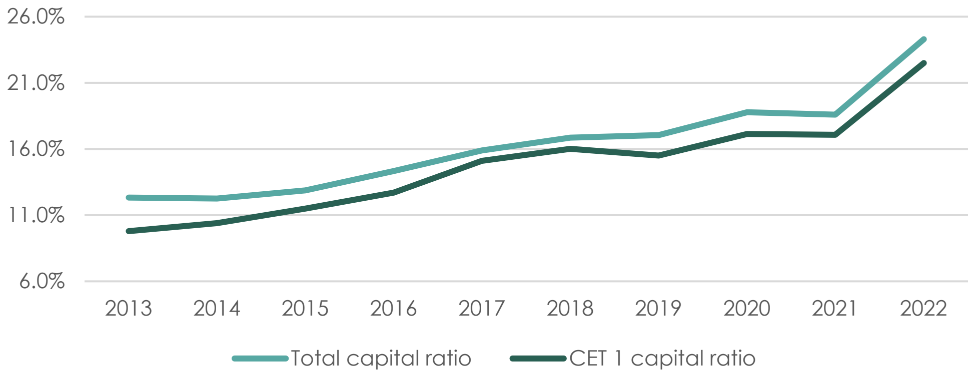
(DKKm)	2022	2021
Equity:		
– Distributable reserves	13,453	12,733
– Non-distributable reserves	2,338	2,338
Total equity	15,791	15,071
Own funds after deductions	17,004	15,887
Weighted risk exposure	69,844	85,249
Adequate own funds	6,413	7,799
DLR's total capital ratio	24.3%	18.6%

Total capital ratio

DLR's total capital ratio at end-2022 was 24.3%, while the common equity tier 1 capital ratio was 22.5%. When calculating risk exposure for full-time farms, DLR applies the IRB approach, while the standard approach has been applied for the rest of the portfolio. In recent years, and notably in 2022, DLR has seen a general increase in its capital ratios. In addition to the consolidation through DLR's results, the increase in 2022 was driven especially by the approval of a new and more accurate IRB model and, among other things, a net decrease in the carrying amount of mortgage loans (loan exposure). Furthermore, adjustments and specifications have been made to the calculation of credit risk for the portfolio in the standard approach.

Based on its current level of own funds and expected future earnings, DLR expects to be favourably positioned to comply with the expectedly increasing capital requirements.

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



Capital requirements

The statutory capital requirement for DLR was 14.7% at 31 December 2022. The requirement is based on the classic 8% requirement plus the SIFI requirement of 1.0% and a capital conservation buffer of 2.5%, a countercyclical buffer of 2.0% and a solvency requirement (Pillar II requirement) of 1.18%. The requirement was increased during 2022 with the countercyclical capital buffer rising from 0% to 2.0% at the end of the year. The countercyclical buffer is expected to be raised by another half percentage point at the end of Q1 2023, which will mean a further increase in DLR's regulatory capital requirements.

Solvency requirement, adequate own funds and solvency need
At least once a year, the Board of Directors performs a review of calculation methods, risk areas, stress tests and benchmarks etc. for calculating DLR's solvency need. In addition, the Board of Directors discusses and approves DLR's calculation of 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 material prior to submission to the Board of Directors.

In the 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 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 to assess whether special risks exist. The risk areas 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.

The calculation uses stress tests with several different scenarios to assess resilience. These scenarios are defined for example 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.

DLR's risks are assessed in the following main areas. Within each area, relevant risks are assessed in a number of sub-areas. An estimate is also made as to whether other factors require an add-on to own funds. Such factors are described in the Danish FSA's guidance, and the calculation also includes management overlays. Relevant departments are involved in determining adequate own funds. This also applies for preliminary and subsequent discussions of stress tests etc. for the various business areas.

The risk assessment covers the following areas:

- 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

A number of main subject areas are reviewed below.

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, it is assessed whether DLR may be exposed to additional risk that requires an add-on to the adequate own funds. 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 on the securities portfolio.

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 of the ICT area is carried out on this basis.

In addition, 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 6,413m at year-end 2022. See table 4. As DLR's total risk exposure amount (REA) was DKK 69,844m, this equates to a solvency need of 9.18%.

DLR's excess capital relative to the regulatory requirement is calculated at 9.4%-points, equal to DKK 6.6bn at end-2022. See table 5. DLR considers this to be a satisfactory level.

Table 4. DLR's adequate own funds and solvency need at 31 December 2022

Risk area	Adequate own funds (DKKm) (DKKm)	Solvency need
Credit risk	5,540	7.93%
Market risk	675	0.97%
Operational risk	199	0.28%
Other factors	0	0
Internally calculated solvency need	6,413	9.18%
Add-ons (special risks)	0	0
Total	**6,413**	**9.18%**

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

Table 5. DLR's own funds and excess capital at 31 December 2022

Key figures and financial ratios	Amount (DKKm)
Own funds after deductions	17,004
Adequate own funds	6,413
SIFI buffer	698
Capital conservation buffer	1,746
Countercyclical capital buffer	1,397
Systemic add-on Faroe Islands	11
Reserved debt buffer	153
Excess capital	6,584
Total capital ratio	24.3%
Individual solvency need, %	9.2%
SIFI buffer	1.0%
Capital conservation buffer	2.5%
Countercyclical capital buffer	2.0%
Systemic add-on Faroe Islands*	0.0%
Reserved debt buffer	0.2%
Excess capital, percentage points	9.4%

*Amounting to 0.02%, it is not included in the table.

Supplementary collateral, OC and debt buffer

DLR funds its lending by issuing covered bonds (SDOs). For these loans, DLR must provide supplementary 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 supplementary collateral has generally shown a declining trend in recent years, amounting to DKK 6.1bn at end-2022.

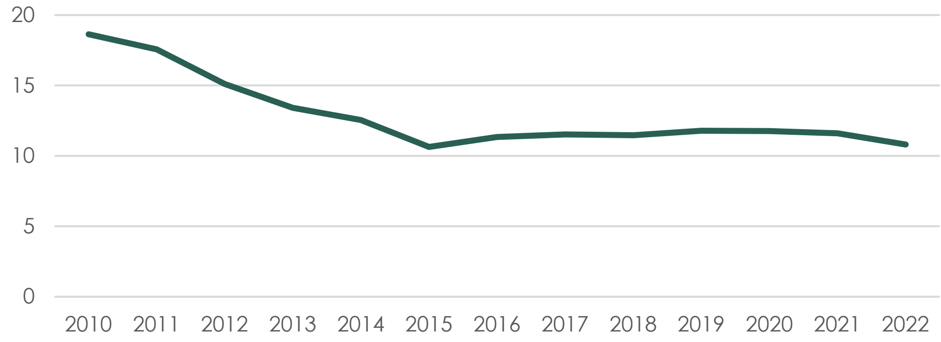
The collateral must be provided in the form of particularly secure assets. To cover this requirement, DLR may use approved assets acquired for both own funds and any proceeds from other debt issues placed in Capital Centre B and, to a certain extent, claims against banks, for example by way of guarantees.

In addition to its general own funds, DLR has issued DKK 4bn in Senior Non-Preferred Notes (SNP) to comply with the debt buffer requirement. The proceeds from the SNPs issued may also be used to acquire assets for supplementary collateral purposes.

Leverage

In recent years, DLR's leverage ratio (calculated as lending relative to equity) has been relatively constant at 10-15%. 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 8.6% at year-end 2022. See figure 4 and table 6.

DLR's Board of Directors has defined a leverage ratio threshold of 5% on top of the regulatory threshold of 3%. 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

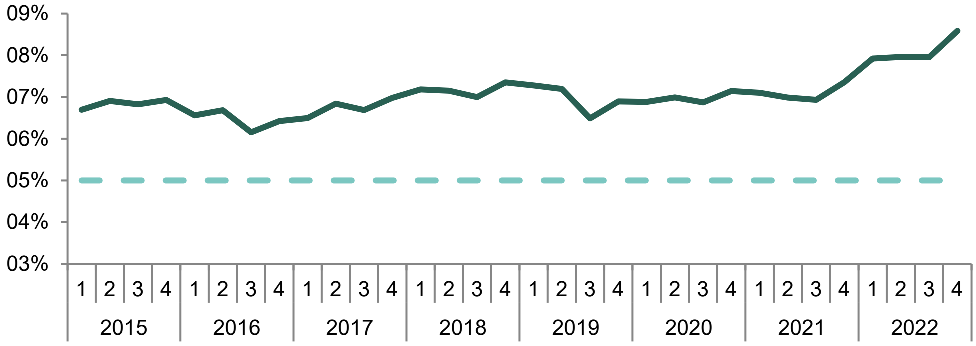


Table 6. DLR's leverage ratio under CRR, end-2022 (DKKm)

	2022	2021
Total assets according to financial statements	180,244	183,871
Total balance sheet exposures as per CRR	180,244	184,843
Off-balance sheet items, loan offers, etc.	2,787	13,644
Deductions from tier 1 capital	-85	-484
Adjustment for derivative financial instruments	0	0
Total exposure for leverage ratio calculation	182,946	198,003
Tier 1 capital	15,706	14,586
Leverage ratio	**8.6%**	7.4%

Debt buffer

As a mortgage credit institution, DLR must comply with a two-part debt buffer requirement. The debt buffer requirement is set to represent a minimum of 2% of total unweighted lending, while the sum of the requirement for the issuer's capital and debt buffer 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 3.4bn at end-2022. The requirement that the debt buffer must constitute 8% of total liabilities amounted to DKK 4.2bn at end-2022 after deducting the regulatory capital requirement and is thus the binding buffer requirement for DLR.

The debt buffer is met using equity, additional tier 1 capital, tier 2 capital and unsecured subordinated senior debt. All capital/debt should be issued from the General Capital Centre. In order to comply with the debt buffer requirement, DLR has issued Senior Non-Preferred Notes (SNP) totalling DKK 4bn.

For the issued SNPs, DLR has invested the issues in an ongoing process so that DKK 1bn of SNPs will mature each year, and these may be refinanced according to need in a similar issue. SNP notes represent unsecured debt that can be written down or converted into shares in case of resolution. SNP can also be included in S&P's estimate of an institution's Additional Loss-Absorbing Capacity (ALAC) and can thus provide an uplift to the institution's rating.

Compliance with DLR's debt buffer requirement is shown in the table below.

Table 7. Debt buffer requirement for DLR

Debt buffer requirement (2% of lending), DKKm		Debt buffer requirement (8% of liabilities), DKKm	
DLR's total lending (unweighted	169,912	DLR's total liabilities	180,244
Need for capital/debt to comply with debt buffer	3,398	Need for capital/debt to comply with debt buffer	14,420
Covered via SNP	3,398	Covered via regulatory tied-up capital (own funds)	10,266
		To be covered via other types of capital	4,153
		Covered via SNP	4,000
		Covered via reservation of DLR's excess capital coverage	153

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-, which was affirmed with a stable outlook on 1 October 2022. 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 lowering the OC requirement on DLR's capital centres.

Table 8. DLR's S&P ratings, end-2022

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					A-/Stable/A-2	
Capital and Earnings	Strong	+2		GRE Support	0			
Risk Position	Adequate	-1						
Funding	Average	0		Group Support	0			
Liquidity	Adequate	0		Sovereign Support	0			
Comparable Ratings Analysis		0						

Table 9. 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 8.98% 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, as mentioned, 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 2022, the current OC was thus 12.2% in Capital Centre B and 12.6% in the General Capital Centre, which is 3.2%-points and 10.1%-points, respectively, higher than S&P’s OC requirements.

DLR’s SNP issues are rated BBB, which follows the S&P standard approach, which is one notch below DLR’s SACP. One of DLR’s two Tier 2 issues are rated BBB-, which is two notches below DLR’s SACP and also follows the S&P standard approach. The other Tier 2 issue is not rated.

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 and ESG factors where relevant.

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, including ESG factors.

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. If the model is used to calculate capital requirements, approval from the Danish FSA must be obtained.

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 81bn, or 43% 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 DKK 70bn.

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 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.

The definition of default is essential when working with IRB models. Pursuant to the Capital Requirements Regulation (CRR), a borrower is in default if (i) DLR considers that the borrower is unlikely to pay its credit obligations, or (ii) the borrower is past due more than 90 days on any material credit obligation.

To ensure consistent handling of item (i) above, DLR has, in accordance with international requirements, defined a number of criteria that the borrower must comply with to be categorised as in default.

PD expresses the probability that a customer over a 12-month period will default on its credit obligations, cf. the above CRR requirement. A high PD reflects a high risk of a customer defaulting, whereas a low PD reflects a low risk of default. DLR calculates a PD for each individual customer.

As a result of new international standards from the European Banking Authority (EBA), DLR has for some time been working to change the default definition and on a new PD model for the part of the portfolio covered by the IRB model. The definition of default and the PD model now meet the EBA requirements, and DLR was granted approval by the Danish FSA in 2022. In continuation hereof, DLR's LGD model has been recalibrated. The LGD model still does not meet the new EBA requirements, and to mitigate this DLR has, in connection with the approval process, made a new reservation of DKK 10.8bn in Pillar 1. DLR is working to develop a new LGD model that also comply with the new EBA requirements. When a new LGD model has been approved, the reservation is expected to be substantially reduced.

Rating categories

When a customer has been assigned a statistical PD, the customer is placed in a rating category depending on PD level. Customers with the lowest PDs are placed in rating category 1 as they represent a low probability of default. The other customers are also categorised according to their PD.

The distribution of DLR's rating categories by PD band is shown in table 10. Customers with OEI (objective evidence of impairment) where no impairment loss has been identified are always placed in rating category 7 irrespective of whether the model rating is better. Customers in default are placed in rating category 8 and stage 3 in accordance with the Danish Executive Order on the Presentation of Financial Statements (IFRS 9).

The PD bands are generally fixed, and during positive economic conditions customers will migrate towards the better rating categories, while the opposite applies during economic slumps. In connection with the implementation of a new PD model, the rating bands for rating categories 5-7 were adjusted in 2022.

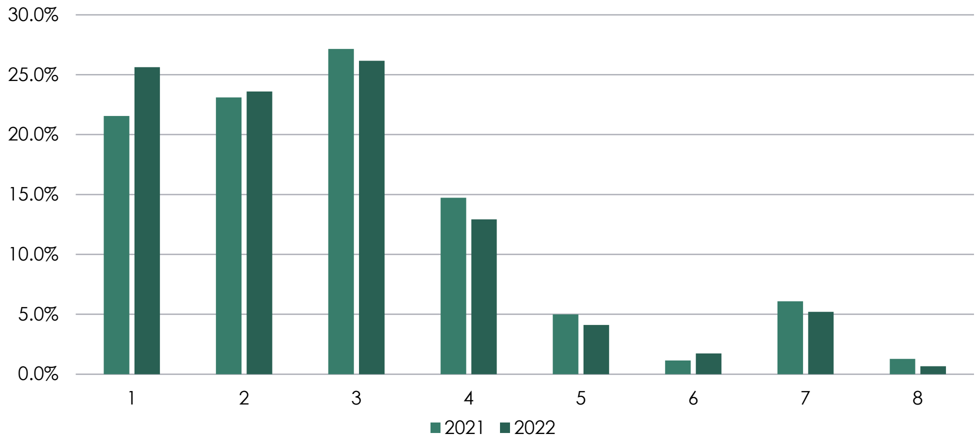
Table 10. DLR's PD rating categories

Rating category	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; 5[
6	Poor	]5; 10]
7	Very poor	]10; 100[
8	Default	100

Figure 5 shows the distribution (in %) of DLR's full-time agriculture portfolio (number of customers) by PD rating category. Because of a new PD model, some customers have migrated to other rating categories compared to where they were categorised in the previous model. For comparative reasons, it has been estimated where the customers would have been placed of the new model had applied at end-2021.

At end-2022, 88.0% of the customers were placed in rating categories 1-4, which comprise good customers. Customers placed in categories 5 and 6 typically show signs of weakness, accounting for 5.8% at end-2022. At year-end 2022, 5.2% of the customers were in rating category 7, against 6.1% the year before. These customers typically show several signs of weakness, and 75.3% of these customers are categories as OEI customers. All customers in default are placed in rating category 8, and at end-2022 they accounted for 0.7% of the total portfolio, down from 1.3% the year before.

Figure 5. Full-time agriculture portfolio (number of customers) by PD rating category



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 large a loss DLR would realise.

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.

Validation of IRB models

Risk Management in DLR carries out the task as an independent validation unit and prepares a comprehensive validation report. 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.

In connection with the development of a new compliant default definition and PD model, an in-depth initial validation of the new model was undertaken.

Business use of the IRB approach at DLR

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 manual impairment losses (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 modelled impairment for stages 1, 2 and 3, respectively, based on the use of scenario calculations. If it is found that the modelled impairment and the individual impairment losses do not adequately reflect the overall risk, they will be supplemented by a management overlay.

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, and in case of multiple loans the lowest-ranking part of the overall loan. In some cases, DLR will require a supplementary guarantee to be posted. The guarantee is reduced as the loan is paid down.

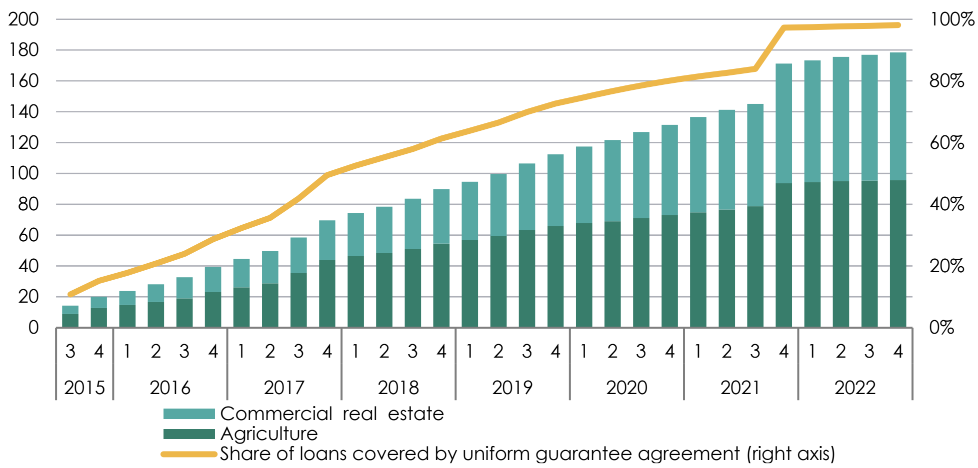
2. Risk cover – Loss-offset scheme

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 2022, 98.1% of DLR's portfolio was covered by the uniform guarantee concept. Lending under previous concepts amounted to 0.6% of DLR's portfolio, while the remaining 1.3% was not comprised by cooperation 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



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 descriptions in the sections Lending activity and portfolio. However, DLR maintains a large concentration of loans to agricultural customers and is the largest mortgage provider for full-time agricultural properties in Denmark.

Exposures of up to DKK 15m account for 43% of DLR's lending volume, and DLR's portfolio primarily consists of a large proportion of small and medium-sized exposures.

Agriculture

DLR's total lending to agricultural customers encompasses loans for nearly DKK 94bn. Of this amount, loans for actual full-time farms account for some DKK 81bn. 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 outstanding debt for properties with the highest LTV ratios through ordinary mortgage payments.

A little less than 86% of loans for agricultural customers are placed within an LTV ratio of 50, and only 0.7% above the 70% lending limit. DLR's loan portfolio is thus generally well covered by the value of the mortgage.

Business

DLR's total lending to urban commercial customers amounts to a little over DKK 78bn, of which loans for residential rental properties account for DKK 38.7bn and loans for office and retail properties account for DKK 31.4bn.

A little less than 81% of loans for residential rental properties are placed within an LTV ratio of 50, and only 0.5% above the 80% lending limit.

A little less than 92% of loans for office and retail properties are placed within an LTV ratio of 50, and only 0.5% above the 70% lending limit.

Owner-occupied

DLR's total lending for owner-occupied dwellings encompasses loans for nearly DKK 10bn. A little more than 90% of loans for owner-occupied dwellings are placed within an LTV ratio of 50, and only 0.5% above the 80% lending limit. DLR's loan portfolio is thus generally well covered by the value of the mortgage.

Loan portfolio developments

Loans disbursed

In 2022, DLR recorded the highest ever level of activity in terms of gross lending driven by a rising level of remortgaging activity and continuing fair-sized disbursement of top-up loans and loans for buying properties.

DLR's loans disbursed (gross lending) totalled DKK 46bn (measured in terms of outstanding bond debt) in 2022, which was DKK 9.2bn higher than in 2021. The level of loan activity was higher than in 2019, which was also a year of strong remortgaging activity.

The rising level of loan remortgaging activity in 2022 was driven by a sharp rise in interest rates and, accordingly, falling prices of fixed-rate bond loans. Falling prices in 2022 enabled borrowers holding fixed-rate loans to substantially reduce their debts by remortgaging their loans. The bulk of the remortgaging was from fixed-rate into loans with short refinancing periods (ARM Short).

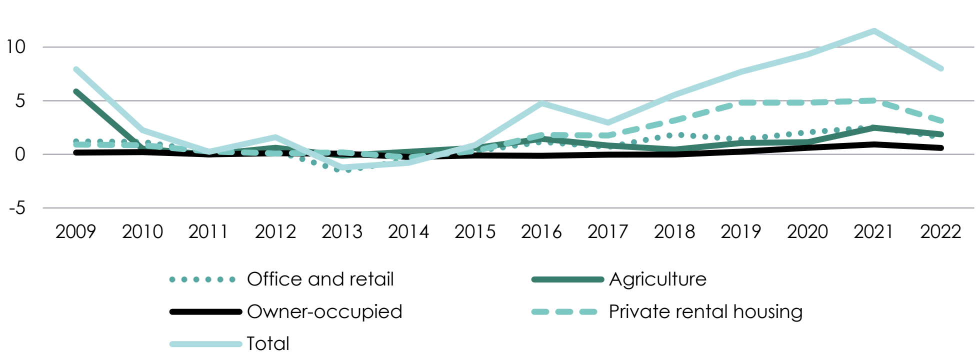
Lending growth

The large volume of loans that were remortgaged with the purpose of reducing the mortgage debt contributed to reducing the scope of the loan portfolio in 2022, and seen in isolation this reduced DLR's lending growth by a little over DKK 2bn. Still, the underlying lending growth in 2022 was satisfactory because of great competitive strength of the loan-distributing banks. In addition, demand for loans for all property types remained strong.

Overall, DLR's loan portfolio (outstanding bond debt) increased by DKK 5.8bn in 2022, against DKK 11.8bn in 2021. Disregarding the negative effect from remortgaging, there was an increase in loan activity of DKK 8.0bn (cash value) in 2022, against similar lending activity in 2021 of DKK 11.5bn.

Although DLR experienced decent activity in the market for office and retail property and residential rental in 2022, lending growth was lower than in 2021. However, growth in lending to the two segments still amounted to 60% of DLR's total lending growth in 2022. Lending growth to the agricultural sector accounted for 23% of total lending growth in 2022, while growth in lending for owner-occupied dwellings, including residential farms accounted for 7%, driven by lending growth in Greenland and the Faroe Islands.

Figure 7. Development in DLR's net lending
DKKbn



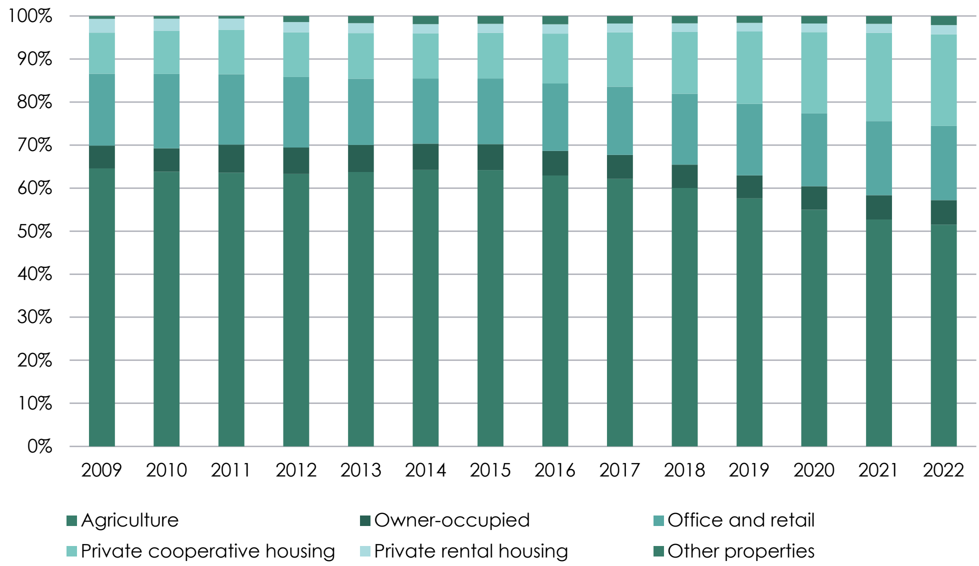
Growth in loans for office and retail property and residential rental property resulted in added risk diversification in the loan portfolio in several lending segments again in 2022, which bond investors and rating agencies also consider to be an advantage.

Composition of loan portfolio

Property categories

At the end of 2022, DLR's loan portfolio (measured as outstanding bond debt) amounted to DKK 181.9bn. Loans on agricultural properties accounted for 51.5% 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 42.8%. See figure 8.

Figure 8. DLR's loan portfolio by property category



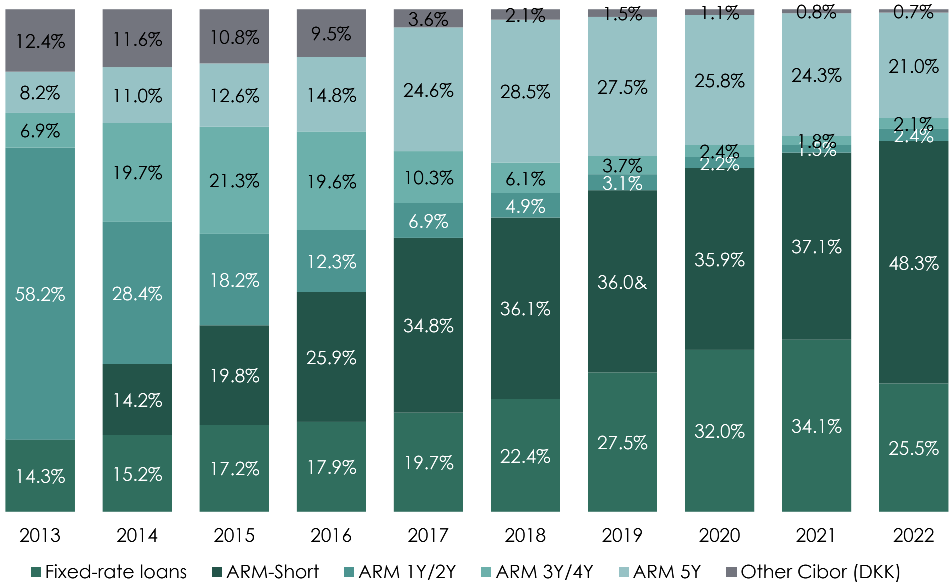
Loan types

As a result of higher interest rates in 2022, DLR's borrowers extensively remortgaged their fixed-rate loans into loans with short refinancing periods (ARM Short) to reduce their mortgage debt. The share of fixed-rate loans fell from 34.1% at end-2021 to 25.5% at end-2022. During the same period, the share of ARM Short loans rose from 37.1% to 48.3%.

The higher interest rates also contributed to reduced demand for adjustable-rate loans with long refinancing periods and to slightly greater demand for loans with short refinancing periods. In DLR's loan portfolio, the share of 5Y ARMs was thus reduced by 3.3%-points during 2022 to 21.0% of DLR's total lending at end-2022. The share of 1Y/2Y ARMs rose from 1.6% to 2.4% during the same period.

In all DLR's loan segments, loans with short refinancing periods became more popular in 2022. At 63.3%, DLR's agricultural customers still accounted for the largest share of loans with short refinancing periods at end-2022. For office and retail property and residential rental property, loans with short refinancing periods accounted for 34.0% and 39.3%, respectively, at the end of 2022.

Figur 9. DLRs udlånsportefølje fordelt på låntyper (pct.)



Repayment profile

In 2022, the share of total gross lending with an initial interest-only period was 37.5% compared to 37.8% at the end of 2021.

Interest-only loans are particularly popular in the agricultural area, as 58.2% of gross lending to the agricultural sector had an initial interest-only period in 2022. However, this percentage has declined since 2021, while the share for residential rental and cooperative housing has increased. The share of gross lending with initial interest-only periods for other property segments is shown in table 11

Table 11. Share of gross lending with an initial interest-only period

	2021	2022	Changes (percentage point)
Agriculture	61.6%	58.2%	-3.4%
Residential farms	17.8%	16.1%	-1.8%
Office and retail	7.2%	7.1%	-0.1%
Residential rental	29.5%	30.5%	1.0%
Cooperative housing	27.4%	32.5%	5.1%
Other	4.2%	0.4%	-3.8%
Total	**37.8%**	**37.5%**	**-0.4%**

Of DLR's total loan portfolio, the share of loans with an initial interest-only period was 36.1% at the end of 2022, which was marginally higher than in 2021, when the share was 35.9%. Interest-only loans accounted for 52% of lending to the agricultural sector at year-end 2022, against 50.7% the year before. The share of outstanding loans with an interest-only period in the other segments was unchanged and is shown in table 12.

Table 12. Share of outstanding loans with interest-only payments, year-end

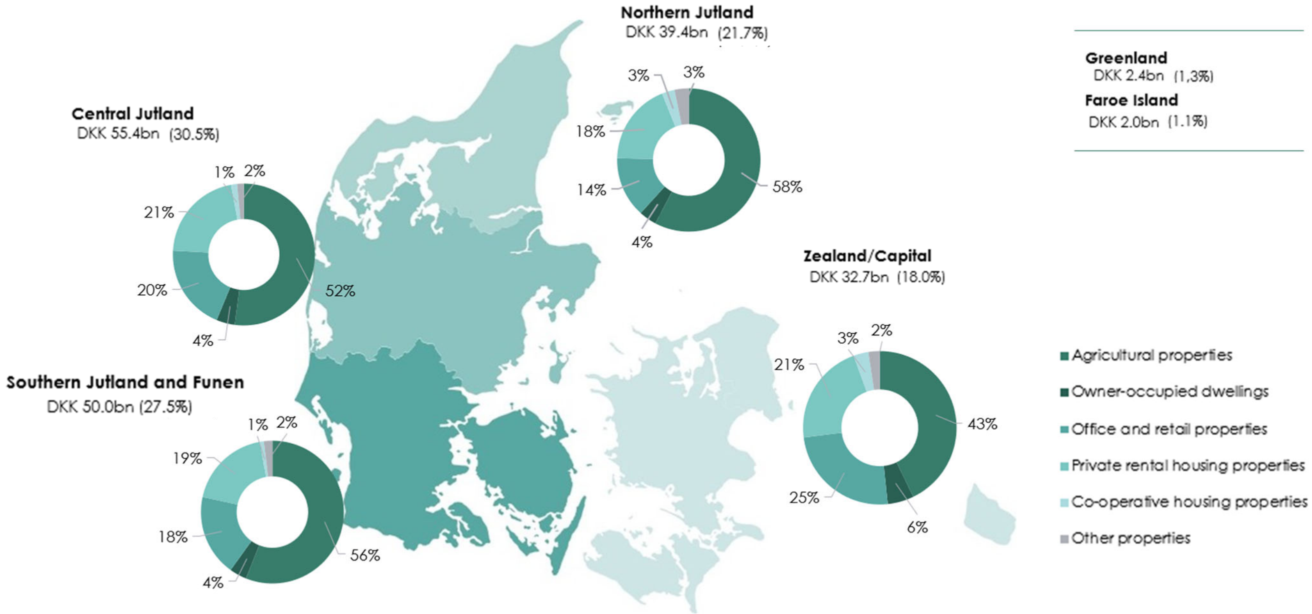
	2021	2022	Changes (percentage point)
Agriculture	50.7%	52.0%	1.3%
Residential farms	13.4%	13.6%	0.2%
Office and retail	8.6%	7.5%	-1.1%
Residential rental	30.4%	30.9%	0.5%
Cooperative housing	34.3%	34.4%	0.1%
Other	2.3%	1.9%	-0.4%
Total	**35.9%**	**36.1%**	**0.2%**

Geographical distribution

As a result of its business model, DLR's loan portfolio is limited to agricultural, commercial and cooperative housing properties, and housing in Greenland and the Faroe Islands.

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 4.4bn, corresponding to 2.4% of the loan portfolio, of which a large part is for owner-occupied housing.

Figure 10. Geographical distribution

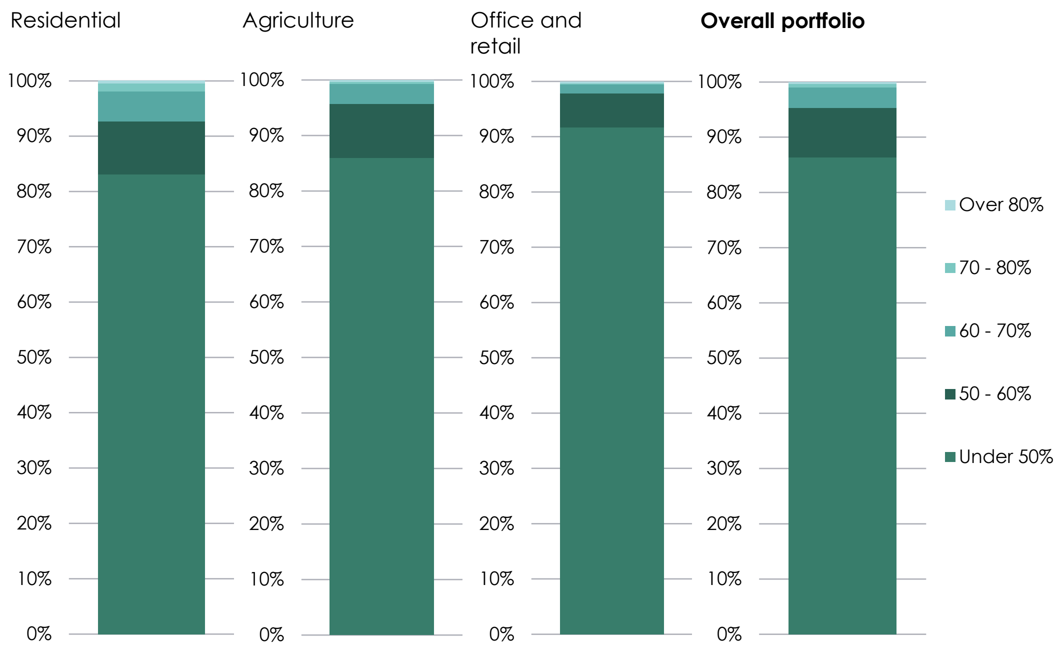


Loan portfolio LTV

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 44.7% at end-2022, against 50.8% at end-2021.

At the end of 2022, 95.7% 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 94.7% 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 11. DLR's lending by LTV band at 31 December 2022



To ensure the statutory overcollateralisation (OC) of DLR's Capital Centre B (cover pool), property values are monitored at least annually. This monitoring may be based on valuations 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 6.1bn in supplementary collateral and has, in addition, an overcollateralisation of DKK 21.5bn 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 losses.

The total value of DLR's unweighted exposure for credit risk was DKK 156.3bn at 31 December 2022, calculated after guarantees and conversion factor.

Arrears, impairment and losses

Arrears

The number of borrowers unable to meet their payment obligations towards DLR showed a slightly declining tendency in 2022, and at mid-January 2023 the number was at the lowest level ever.

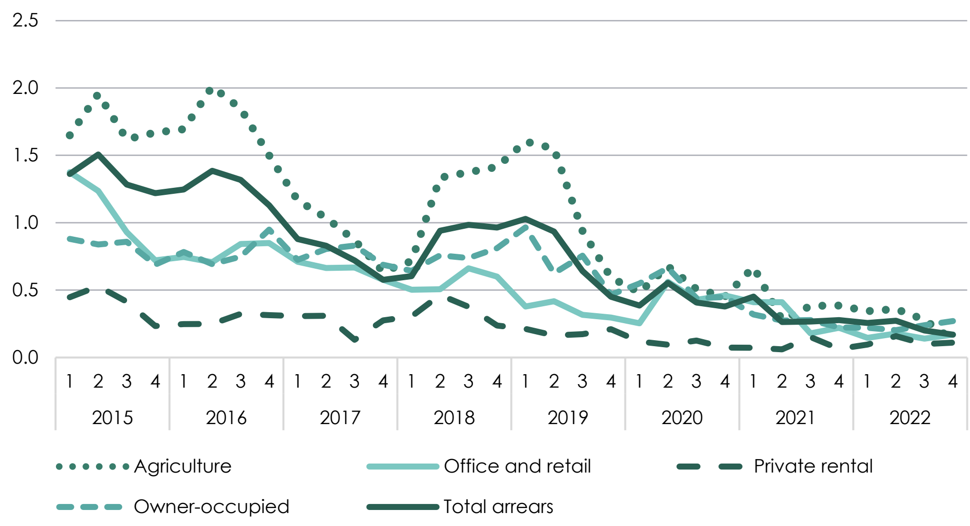
The arrears ratio 15 days after the due payment date on the December 2022 mortgage payment has fallen by 0.3 of a percentage point relative to the year before to 0.8%, and considering generally elevated inflation and interest rate increases this is considered highly satisfactory.

The arrears ratio calculated 3½ months after the due date – was 0.17% in mid-January 2023, against 0.28% in January 2022.

The generally declining arrears level throughout 2022 was driven primarily by fewer arrears on agricultural loans. Arrears on loans to non-agricultural properties only changed moderately during the same period.

Despite the fact that no increase in arrears has been registered at portfolio level, some customers and customer groups are expected to remain challenged. Against this background, DLR has made substantial management overlays to the impairment losses, primarily in relation to urban trade, and the scenarios incorporated when determining the modelled impairment have been intensified significantly for pig farmers.

Figure 12. 3½ months' arrears by property category



During 2022, the arrears ratios fell for all the major agricultural production areas. Overall, the arrears ratio for agriculture was 0.21% in mid-January 2023, against 0.44% in January 2022. The major agricultural production areas, with the exception of pig farmers, generally experienced satisfactory earnings in 2022 owing to favourable developments in settlement prices, which have improved borrowers' ability to pay.

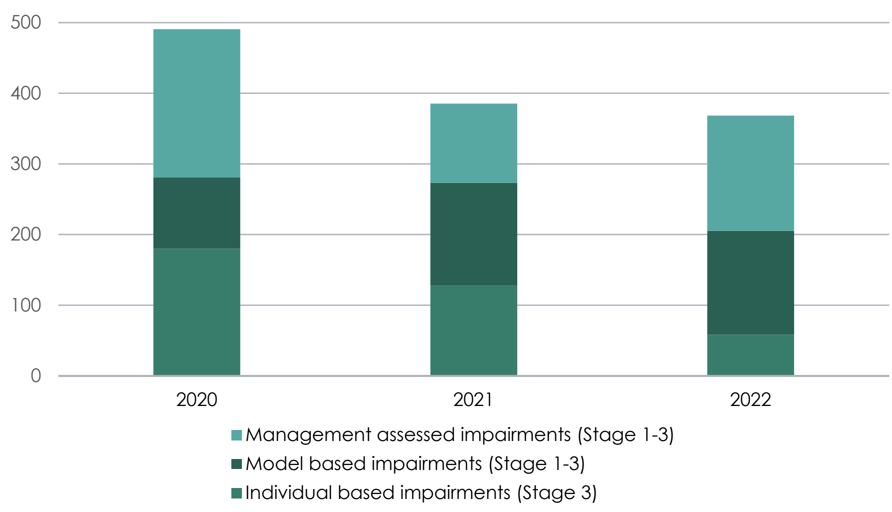
In spite of low prices of weaners and pork in 2022, DLR's arrears on loans for pig producers remain at a very low level. Following strong earnings in 2019 and 2020, most players in this sector are capable of coping with a period of weak prices. However, producers with a large need for purchasing feed should expect to experience a substantial drop in earnings when feed contracts expire due to rising feed prices. This has increased the likelihood of a collapse and a risk of falling prices of assets in the modelled impairment with a resulting increase in impairment losses for this part of the portfolio.

Loan impairment losses 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 (OECI) 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 OECI 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 58m at the end of 2022 compared to DKK 128m at the end of 2021. On top of this comes stage 1, 2 and 3 modelled impairment of DKK 147m and a management overlay of DKK 163m, which equated to total impairment losses of DKK 368m at the end of 2022.

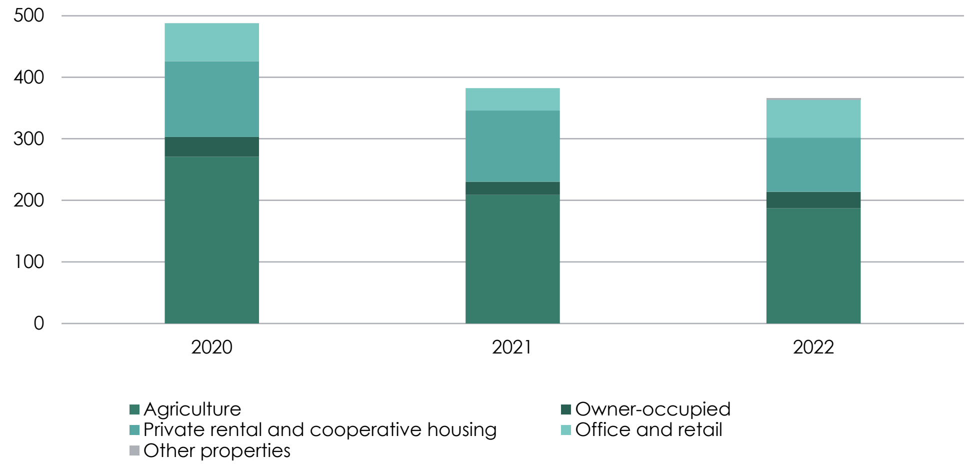
Figure 13. Accumulated impairment losses by impairment type (DKKm)



The management overlay has primarily been added to cover the generally elevated uncertainty attaching to parts of the lending due to the current situation with war in Ukraine, higher inflation, including rising energy and food prices, and substantial increases in interest rates etc. Furthermore, the management overlay covers uncertainty in determining the modelled impairment.

Figure 14 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 58% of accumulated impairment losses at end-2022.

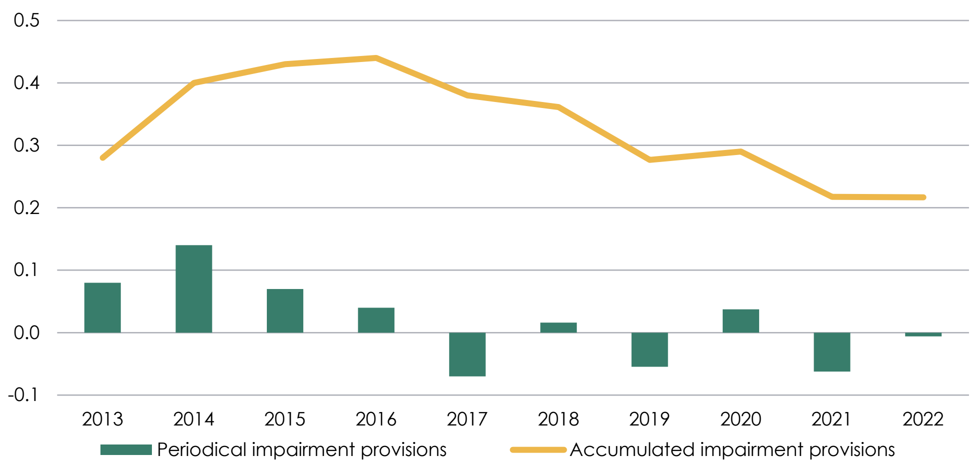
Figure 14. Accumulated impairment losses by property segment (DKKm)



The impairment percentage, denoting accumulated impairment losses in percent of total lending, represented 0.22% – calculated using the Danish FSA's guidelines – at end-2022, which is unchanged from end-2021.

Losses and impairment had a DKK 10m positive impact on the financial statements for 2022, equal to 0.01% of the loan portfolio.

Figure 15. Impairment as % of loan portfolio



Note: Negative impairment percentage = reversal

For 2022, realised losses on loans calculated after payments under guarantee agreements and after prior-year adjustments but before offsetting losses amounted to DKK 7.1m, which is slightly higher than in 2021, when realised losses were DKK 3.4m. Relative to the total loan portfolio, DLR's loss ratio was still very low at 0.0003%.

Figure 16. 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

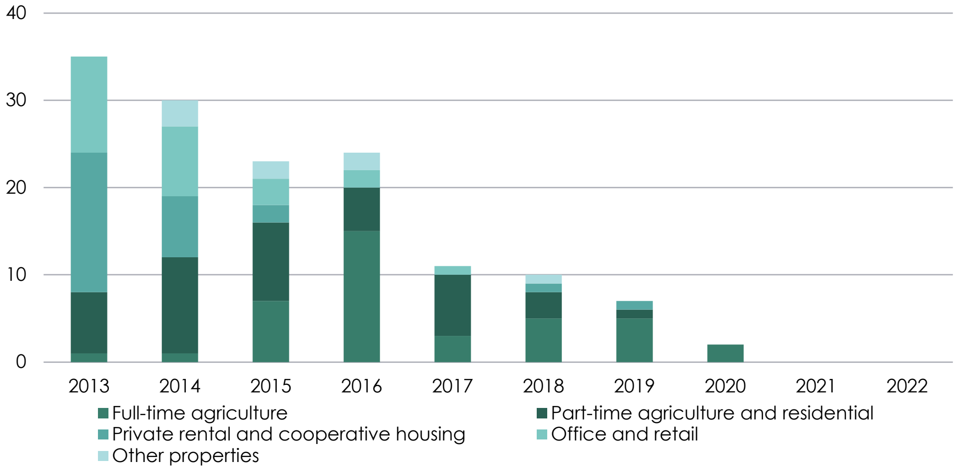
Agriculture, owner-occupied homes incl. residential farms and private residential rental properties realised losses of DKK 6.0m, DKK 1.0m and DKK 0.1m, respectively. In 2022, an amount of DKK 2m was deducted from claims previously reversed to the effect that DLR's realised losses for the period were DKK 5.1m.

With respect to the previously described loss-offsetting schemes, DLR set off losses of about DKK 1.3m in 2022 against commissions paid to the banks. To this should be added losses due to operational events etc. of DKK 2.6m. DLR thus realised a net loss in 2022 of DKK 6.4m.

Portfolio of repossessed properties and forced sales

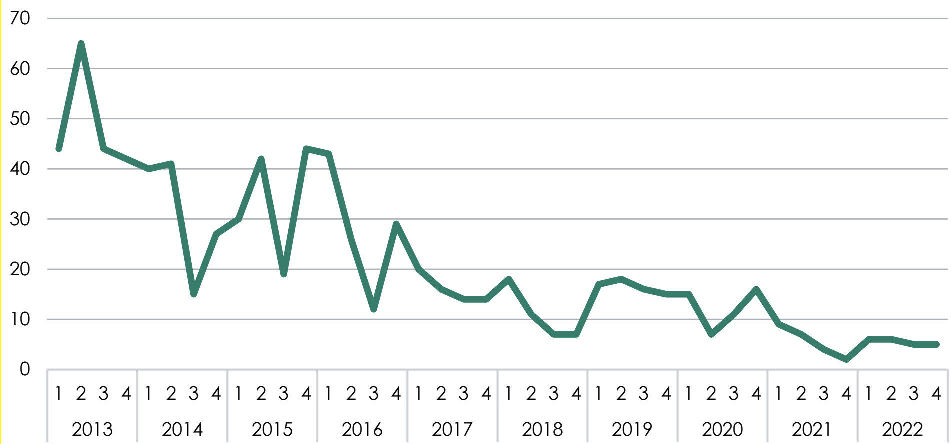
DLR had no repossessed properties at the end of 2022.

Figure 17. Portfolio of repossessed properties, year-end



The number of completed forced sales of properties in which DLR held a mortgage was 22 in 2022, which was unchanged from the year before.

Figure 18. 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, issued subordinated debt and senior loans. Only the parts of DLR's securities portfolio relating to meeting the new covered bond OC requirement from 2022 of 2%, 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 13 shows the conversion of S&P's rating categories to credit quality steps for exposures to corporates (including institutions), sovereigns and central banks.

Table 13. Rating categories and credit quality steps

Credit quality step	S&P's rating categories	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%

Environmental, social and governance risks

Article 449a of the EU's revised Capital Requirements Regulation (CRRII) introduced requirements for financial institutions to disclose information on ESG risks from 28 June 2022. DLR presents data for ESG risks in the Pillar III appendix.

DLR has integrated ESG risks into its work on risk management. Our management of ESG risks focuses initially on identifying even more clearly the extent of ESG risks for our customers and the properties put up as collateral for our loans. We must then ensure sufficient awareness of ESG risks in our loan portfolio also in the longer term, and finally that ESG risks are reduced.

ESG risks are included in the assessment of overall credit risk in DLR's portfolio. We have set targets for the desired risk profile in terms of credit risks in relation to individual sub-portfolios and risks. Credit risks are monitored in DLR's credit database, and the most significant credit risks are reported in DLR's risk overview. Movements in credit risk relative to the chosen risk tolerance are monitored in the risk database and risk overview.

As part of its ESG risk management process, DLR has incorporated ESG risks into its business strategies, governance/processes and research approaches, as described below.

ESG business strategy

Incorporation of ESG into business strategy

DLR has two overarching strategic focus areas for work on sustainability in its business and lending:

Financing the green transition

- Green loans
- Green bonds
- Broader criteria for green loans

Growth through sustainability

- ESG integrated into lending to promote sustainability in the entire loan portfolio
- Mapping customers' sustainability profile
- Sustainability training at the collaborating banks and in-house at DLR

Financing the green transition

Together with its shareholder banks and customers, DLR aims to play an important role in financing the green transition and a more sustainable Denmark. We are doing this by providing green loans for sustainable properties and investments, and by issuing green mortgage bonds. In this way, we are providing green capital for the transition that customers, investors and society are increasingly calling for. DLR offers separate green loans, for which the criteria are regularly expanded within the framework of the EU taxonomy for sustainable activities and other recognised standards, allowing us to finance more types of sustainable properties and investments with green loans.

As for other mortgage credit institutions, DLR's green loans represent a loan type on which the interest rate is fixed once every six months. Customers with sustainable properties who meet the criteria for DLR's green loans, but who prefer 5-year or 30-year refinancing periods, will therefore opt for a conventional loan. In this way, DLR finances a substantial number of properties that meet the criteria for DLR's green loans, such as properties with a grade A or B energy performance certificate, but which are financed with DLR's other loan types.

The criteria for DLR's green loans are based on the EU's taxonomy for sustainable investments when it comes to buildings, energy improvements and green energy sources, and are available for green buildings, energy improvements, green energy sources, green agricultural investments, certified sustainable agriculture, pig housing with slurry acidification and/or frequent slurry removal, and the supply of biogas facilities.

Once it becomes possible to obtain reliable and solid data, and the EU taxonomy is extended to include more sustainability criteria, including for agriculture, we will expand DLR's green loans to cover more types of investment and activity.

For customers, one advantage of green loans may be that they can be not only cheaper than conventional loans due to high levels of investor interest, but also serve as confirmation that a property or investment meets certain green criteria. This can have a positive effect not least for landlords, helping tenants focus on the property's sustainability.

Growth through sustainability

DLR aims to generate growth in all lending areas through sustainable and long-term lending. Against this backdrop, DLR has a credit policy that also incorporates ESG factors. When we assess customers, we check their focus on ESG factors. When it comes to property valuations, we look at whether there are any particular ESG factors relevant to the value of the property now or in the future. In collaboration with the loan-distributing banks, we aim to help borrowers across Denmark to become gradually more sustainable. As part of this work, DLR gathers ESG information from all new borrowers and from existing customers applying for new loans, and educates partners and employees in sustainability so that they are able to discuss ESG matters with our common customers.

These initiatives will be expanded in the course of 2023 so that DLR also begins to obtain information from existing borrowers. One aspect of these questions is borrowers' CO_2e emissions and their plans for reducing these emissions.

DLR has launched a wide range of education and information activities around sustainability and green finance. These activities aim to equip advisers and lending staff in the shareholder banks better to help borrowers make more sustainable and climate-friendly choices.

In line with recommendations from the Danish Forum for Sustainable Finance, DLR has also published an action plan for how we plan to reduce financed CO_2e emissions. The starting point for the action plan is the aforementioned mapping and improvement of data on our CO_2e calculations, and the goal is to reduce our CO_2e emissions in line with the goals of the Paris Climate Agreement and Denmark's goal of carbon neutrality in 2045 and a 70% reduction in 2030.

Governance and processes

Anchoring ESG in the organisation

To ensure an unwavering focus on ESG in all parts of the organisation, DLR has set up a CSR Committee. The CSR Committee is responsible for DLR achieving the strategic goals in its CSR policy and for establishing processes at DLR to promote sustainability, including sourcing data for use in analysis, target setting and reporting.

The committee is charged with monitoring regulatory developments relevant to DLR and ensuring that we comply with applicable rules and regulations and the recommendations the sector has agreed on under the auspices of Finance Denmark etc.

It is also responsible for updating and expanding policies in relation to specific CSR initiatives, such as DLR's credit policy, human resources policies and, procurement policy.

The Executive Board is represented on the CSR Committee. The Executive Board and the other internal committees at DLR (Credit Risk Committee, Liquidity and Market Risk Committee, IOC Risk Committee, Data Committee and IT Committee)are also informed about CSR work through the minutes of the CSR Committee's meetings. The Board of Directors is updated on selected matters and progress at board meetings and is responsible for approving DLR's CSR policy.

Integration of ESG factors into governance setup

DLR's Executive Board, together with the CSR Committee, has overall responsibility for work on sustainability, including ESG risks. The Executive Board is therefore involved in work on climate risks and opportunities through the CSR Committee, which meets around four to five times a year and is responsible for discussing and deciding on DLR's strategic climate initiatives. The Executive Board Secretariat is responsible for CSR rules and best practices being implemented in other relevant departments at DLR. After implementation, these departments' risk owners are responsible for introducing controls and for compliance with them. These controls are described in DLR's risk database, and their adequacy is monitored/assessed by Risk Management. The Credit Risk Committee reviews DLR's risk database annually and discusses risks and controls in the lending area, including ESG.

Integration of ESG factors into loan procedures

Before a loan is granted, both the collateral and the applicant's finances are carefully scrutinised. The starting point for assessing the collateral is measuring the market value of the property against which the loan is to be secured. This is done by DLR's own valuation experts, who have local knowledge. The valuation of the property takes account of ESG factors and climate risks as well as its condition and marketability. The valuation expert pays attention to ground pollution, reviews production permits, looks at geographical data (such as the risk of flooding), considers the location (proximity to natural/urban areas etc.) and assesses land use (e.g. forestry, grazing, arable) and working conditions. In terms of credit risk, the assumption is that customers and properties with a positive ESG assessment, all else equal, are expected to be better placed in the coming years and so more financially robust, although account is also taken of the risks associated with using new technology etc. This is also set out in DLR's credit policy.

ESG approaches

The European Banking Authority (EBA) has described three overall methods to assess and evaluate ESG risks (EBA report), which is part of a mandate given in Article 98(8) of the capital requirements directive (CRDIV) to, among other things, define analysis methods and tools to assess the impact of ESG risks on the lending activities of institutions. The three approaches are:

1. Portfolio alignment method
2. Risk framework method
3. Exposure method

Portfolio alignment method

The key principle behind the portfolio alignment method is assessing the extent to which loan portfolios are aligned with globally agreed ESG targets. DLR works on portfolio alignment partly through its commitment to the UN's Principles for Responsible Banking. The aim of these principles is to align the signatories' business strategies with UN Sustainable Development Goal 17 and the Paris Agreement.

Risk framework method

DLR has not yet conducted stress tests for ESG factors, but prepared a climate risk analysis in 2022 which addresses scenarios and outcomes for DLR qualitatively. The analysis finds that DLR is particularly exposed to transition risks in the short term, such as the introduction of a substantial climate levy on biological processes in farming.

DLR is in dialogue with the Danish FSA via Finance Denmark on the performance of climate stress tests. DLR is also working with financial infrastructure company e-nettet on gathering data on climate risks. In the longer term, as the data allow, DLR will carry out ESG stress tests to shed light on climate risks in different stress scenarios.

At portfolio level, DLR has launched initiatives to identify the extent to which loans and collateral are at risk of flooding etc. This process covers external data for potential increases in water levels (seawater and precipitation) and a link to individual loans. There is also continuous reassessment of collateral values as part of our covered bond monitoring. Climate risks at the individual property form part of an assessment of market value.

Exposure method

The exposure method involves measuring how individual exposures and counterparties perform on ESG. As described on pages 45-46, DLR maps borrowers' ESG profile through questionnaires answered in connection with new loan offers. Eventually, the ambition is to have ESG data for the entire loan portfolio. DLR also collects ESG data from public databases at the borrower level, such as data on ecology and energy efficiency.

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, 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:

- for DLR's securities portfolio (asset side overall in the trading book and in the banking book) the interest rate risk, including the convexity impact, calculated according to the rules of the Danish Executive Order on the Issuance of Bonds, the Balance Principle and Risk Management, 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.
- the credit spread risk on the securities portfolio (asset side overall in the trading book and in the banking book) must not exceed 2.5% of DLR's own funds. The calculation of the credit spread risk is based on the benchmarks of the Danish FSA in force from time to time, which currently determines a credit spread widening of 25 basis points for government bonds and 50 basis points for mortgage bonds. When calculating the credit spread risk, no netting is made relative to short positions.
- 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

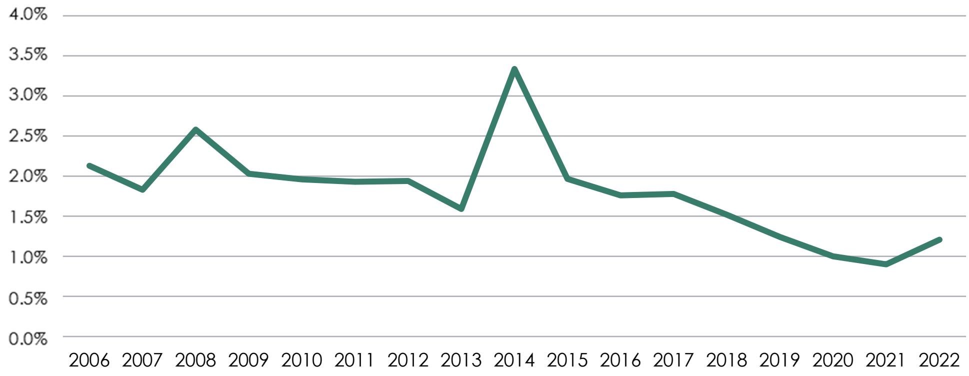
Interest rate risk is defined as the amount of the loss caused by a positive or negative parallel shift in the interest rate structure of one percentage point, i.e. the value adjustments triggered by a change in the market rate of one percentage point. DLR's financial risk attaches particularly to the 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 425m.

At the end of 2022, DLR's relative interest rate risk, including the convexity impact, on its securities portfolio was 1.2%, see the figure below. This equates to a value adjustment of the securities portfolio of DKK 205m in case of a one percentage point change in the market interest rate. The convexity impact on DLR's bond portfolio is DKK -2.2m. In this way, DLR complies with the guidelines that the interest rate risk incl. the convexity impact must be within 2.5%.

Figure 19. 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 24m in nominal terms.

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 44% of the total interest rate risk, up to two years the interest rate risk accounts for 53%, and up to five years the interest rate risk accounts for 95% of the total interest rate risk. The interest rate risk on bond holdings with a duration of more than five years accounts for 5% of the total interest rate risk.

Risk in the banking book

At end-2022, DLR's interest rate risk in the banking book primarily concerned DLR's issued debt instruments and, to a very limited extent, interest rate risk on non-performing exposures The issued debt instruments consisted of SNPs for DKK 4bn and tier 2 capital for DKK 1.3bn.

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 425m at end-2022. At end-2022, the credit spread risk on DLR's bond portfolio was DKK 276m., equivalent to 1.6% of the own funds.

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 0.002% of the own funds at the end of 2022.

Equity risk

DLR generally does not invest in equities except in connection with policy/strategic positions deemed necessary for DLR's operations (for example, equities in sector-owned companies) At the end of 2022, DLR's equity holdings consisted of unlisted shares in e-nettet.

As equity risk is defined as 10% of the market value, and DLR's equity portfolio amounted to DKK 45.1m at year-end 2022, the equity risk after tax was DKK 4.5m at end-2022.

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 14. DLR's exposures in equities in the investment portfolio (e-nettet)

Type (DKKm)	Exposure, 31 December 2022	Operational impact in 2022
e-nettet	45.1	4.9
Total	**45.1**	**4.9**

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.

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

LCR

DLR must have sufficient liquid assets to meet net cash outflows over a 30-day stress period. During this period, DLR must quickly be able to convert liquid assets to cash without making use of the Danish central bank's liquidity or public funds. A distinction is made between assets offering particularly high liquidity and very high credit quality (level 1 assets) and assets with high liquidity and high credit quality (level 2 assets).

To ensure that DLR maintains an adequate buffer to meet the LCR requirement, an internal requirement has been defined that the LCR requirement must be met by a minimum of 110%.

At end-2022, DLR's LCR was 201%.

Pillar II liquidity add-on

To replace the previous LCR floor requirement, which ceased to apply on 8 July 2022, the Danish FSA has set an individual and risk-based LCR Pillar II liquidity add-on, which DLR must meet. The Pillar II liquidity add-on is calculated daily and reported on a monthly basis.

The Pillar II liquidity requirement takes into consideration specific liquidity risks at DLR and entails a stricter requirement for the liquidity reserve to take account of the liquidity risks that DLR is and may become exposed to. The Pillar II requirement covers a time period that extends beyond the LCR requirement, which covers the next coming 30 days. The Pillar II liquidity requirement emphasises that, in addition to maintaining an adequate liquidity buffer, DLR must also have a stable liquidity buffer from one mortgage payment date to the next.

The Pillar II liquidity add-on for DLR consists of three parts:

- Pillar II liquidity add-on regarding unknown arrears
- Pillar II liquidity add-on regarding unknown open remortgaging
- Pillar II liquidity add-on regarding refinancing

DLR covers the Pillar II liquidity add-on using the same type of high quality liquid assets (HQLA) used to cover the LCR requirement. As the Pillar II requirement is an independent requirement, the assets used to meet other liquidity requirements, including requirements for supplementary collateral, overcollateralisation and LCR requirements, may not be used to meet the Pillar II requirement.

DLR makes a daily calculation of how many liquid assets (HQLA) to reserve to cover the Pillar II liquidity add-on. To ensure that DLR maintains an adequate buffer to meet the liquidity add-on, an internal requirement has been defined that the Pillar II liquidity add-on must by met by a minimum of 110%.

At end-2022, DLR has therefore reserved liquid assets to cover the Pillar II liquidity add-on by 110%.

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 2022, DLR had an NSFR of 191%.

Non-financial risks

In the risk management policy, 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 2.5bn, equal to an 8% capital requirement of DKK 199m at 31 December 2022.

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 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 has a standard that defines the overall framework for how to manage model risk at DLR. The standard is complemented by an independent model register. DLR's statistical models are categorised according to business materiality.

DLR's most important models relate to IRB models (estimation of PD and LGD), lifetime PDs for use in modelled impairment and PD regression models used in DLR's macro stress tests. DLR has established procedures for monitoring, changing and approving the models. In addition to the ongoing monitoring in the first line of defence, the most significant statistical models are also comprised by an independent validation/revision in the second or third line of defence.

As regards the PD model, DLR has quantified model risks directly in Pillar I, in accordance with EBA requirements. For modelled impairment and for the statistical components in the macro stress test model, model risks have also been estimated. Finally, DLR has reserved capital in Pillar II to mitigate model risk not estimated directly in the models.

Outsourcing risk

In DLR's risk taxonomy, outsourcing risk is considered alongside other operational risks. DLR's IT Director is in charge of outsourcing activities. Each year, a report on outsourcing risk at DLR is prepared to the Board of Directors, which represents a separate appendix to DLR's internal risk report.

DLR maintains an outsourcing register based on a review of all of DLR's suppliers. At present, ten suppliers are considered to be general outsourcing, of which four are considered significant or critical outsourcing (in accordance with the Danish Executive Order on Outsourcing Significant Areas of Activity).

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

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. In the area of IT security, the number of rules and recommendations that DLR must implement to strengthen its defence against cyber attacks and the like is growing rapidly and will continue to grow in the years ahead.

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.

DLR's Compliance department monitors DLR's compliance with rules and market standards and reports to DLR's Executive Board and Board of Directors.

IT risks

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 draws up an annual risk assessment of the IT area that identifies and assesses all relevant IT risks. Risks are investigated and described with respect to inherent risk, mitigation, controls and residual risk. Where relevant, risks are aggregated and recorded in DLR's risk register.

The risk assessment covers factors such as risks relating to deliberate harmful actions performed by employees, internal errors in the IT department, dependence on key employees in the IT department and cyber attacks. Except for the risk of cyber attacks, the risks are believed to be limited.

The risk of cyber attacks – and the complexity of such attacks – is constantly rising for the financial sector, including for DLR. DLR has already established tools and processes to prevent, identify and respond to cyber threats. DLR will continue to invest in this area to ensure that its measures remain sufficient and adequate.

Furthermore, DLR has taken out cyber risk insurance that partly covers any losses, partly provides access to IT security specialists in case of events.

In 2022, DLR strengthened its organisation in the area, among other things by recruiting an IT security manager.

Contingency plans

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. All systems must generally be recoverable within 24 hours after a breakdown is ascertained so that normal operations can be resumed. The contingency plan is tested annually based on specific objectives.

Nyropsgade 21 · 1780 Copenhagen V, Denmark
Tel. +45 70 10 00 90
www.dlr.dk

Company reg. (CVR) no. 25781309