dlr kredit
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RISK AND CAPITAL MANAGEMENT REPORT FEBRUARY 2020

RISK

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Disclosure requirement

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.

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 quarterly or half-yearly.

In the opinion of DLR, the information stated complies with both the Pillar III information requirements set out in the CRR regulation (CRR articles 431-455) and the EBA's guidelines on disclosure requirements under the Pillar III requirements.

Introduction

DLR Kredit A/S (DLR) is a Danish mortgage credit institution owned primarily by 54 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 2019, DLR's loan portfolio in terms of nominal outstanding bond debt amounted to DKK 154.6bn, of which loans granted in Greenland and the Faroe Islands amounted to a total of DKK 2.4bn or 1.6 pc of the loan portfolio.

In 2019, DLR had 193 FTE employees and 24 fee-based agricultural valuation experts. DLR has no branch offices as loans are distributed through the branch network of DLR's shareholder (owner) banks.

DLR's loan portfolio grew by DKK 7.7bn in 2019. Lending for agricultural properties accounted for 57.6 pc of the portfolio, while lending for residential farms and owner-occupied homes made up 5.4 pc of the portfolio at end-2019. The remaining just under 37 pc was accounted for by loans for commercial property, mainly office and retail property, private residential rental property and cooperative housing.

DLR generated a pre-tax profit of DKK 1,085m for 2019, which was highly satisfactory and among the best performances in DLR's history. With total own funds after deductions of DKK 13.9bn and a total risk exposure of DKK 81.8bn, DLR's total capital ratio was 17.1 pc at year-end 2019.

DLR's overriding risk is credit risk, i.e. the risk that borrowers default on their loans with DLR. Credit risk is 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 is committed to taking part in the green transition. Failure to take part in the green transition entails a variety of long-term risks, and DLR accordingly entered

into a green transition dialogue with loan-distributing banks, investors and employees in 2019. One of the purposes of this dialogue was to gather ideas and relevant data for further steps towards the green transition. If efforts are carefully planned, they are easier to target, and this enables DLR to enhance transparency and contribute to the green transition. DLR will maintain its focus on the green transition throughout 2020.

Reorganising the risk management area

In February 2019, DLR's Executive Board launched a project together with Deloitte to restructure and reorganise DLR's risk management, compliance, controlling and reporting functions. Deloitte assisted with the project until the organisational adjustments resulting from the project had been completed in June 2019, following which DLR took over implementation of the new risk management framework, which process will continue into 2020.

Based on this project, DLR realigned the organisational structure of its risk management function during the summer of 2019. The purpose of the organisational changes was to provide a clearer division of roles and responsibilities and to ensure independence between the first and second lines of defence.

To that end, DLR has established a separate department in charge of risk management. The head of Risk Management reports to the Executive Board and has been appointed Chief Risk Officer in pursuance of the Danish Executive Order on Management and Control of Banks, etc. Through the establishment of a new controlling function under the Model Development & Data Innovation department, the organisational changes have also contributed to strengthening internal controls in the first line of defence.

Management statements

The Risk and Capital Management Report was approved by the Board of Directors of DLR Kredit A/S on 6 February 2020.

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, the Chief Risk Officer and the Chief Compliance Officer.

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 of 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 three areas of control:

- DLR has defined a target for its total capital ratio for 2020 in the 16.5-17.0 pc range. At year-end 2019, DLR's capital ratio stood at 17.1 pc.
- DLR's Board of Directors has defined a leverage ratio threshold of 5 pc, which is above the statutory requirement of 3 pc. DLR's leverage ratio was 6.9 pc at the end of 2019.
- In the market area, DLR aims for a maximum interest rate risk of 3 pc, which is below the statutory requirement of 8 pc. DLR's interest rate risk on the bond portfolio was 1.2 pc at the end of 2019.

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

Copenhagen, 6 February 2020

Executive Board

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

Board of Directors

Vagn Hansen Chairman	Lars Møller Vice Chairman	
Claus Andersen	Randi Franke	Jakob G. Hald
Kim Hansen	Søren Jensen	Gert R. Jonassen
Agnete Kjærsgaard	Bjarne Larsen	Lars Petersson

MANAGEMENT AND CONTROL OF RISK

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

Board of Directors and Board committees

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

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

Pursuant to statutory requirements, the Board of Directors has also established an internal audit function that reports to the Board of Directors and which, in accordance with a Board-approved audit strategy, audits processes and internal controls in areas of importance and material risk.

At the end of 2019, DLR's Board of Directors consisted of 11 members, six of whom were elected at the Annual General Meeting. 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. The remaining five members of the Board of Directors were elected by DLR's employees.

The composition of the Board of Directors at end-2019 and information about other directorships held by the members of the Board of Directors is set out in DLR's 2019 Annual Report.

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

- The Audit Committee is charged with supervising the financial reporting process and monitoring that DLR's internal control, security, internal audit and risk management systems function effectively. The Committee's meetings are attended by DLR's internal and external auditors.
- 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 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, evaluates the competencies represented on the Board, etc.
- 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.

Committee members are drawn from DLR's Board of Directors, including the members elected at the Annual General Meeting and employee representatives. Information about the composition of Board committees and their duties is also provided in DLR's 2019 Annual Report.

Members of DLR's Board of Directors are elected by the shareholders at the Annual General Meeting. Board members are eligible for re-election.

DLR will continually ensure that the members of DLR's Board of Directors have the collective knowledge, professional skills and experience required to execute DLR's business model and strategy. The Nomination Committee set up under the

Board of Directors prepares the full Board's review of issues associated with the knowledge and experience possessed by DLR's board members.

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

When nominating candidates for the Board of Directors, the Nomination Committee takes into account considerations related to the underrepresented gender and diversity. The Board of Directors has adopted a policy to promote diversity on the Board of Directors of DLR Kredit A/S, the aim being for the Board to represent diverse competencies and backgrounds, including in terms of professional skills, work experience, gender and age. The diversity policy is described in further detail in DLR's 2019 Annual Report.

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 may be found at DLR's website[1]. Quantitative data on the remuneration of staff identified as material risk takers is provided in note 7 in DLR's 2019 Annual Report.

Risk management at DLR – the three lines of defence

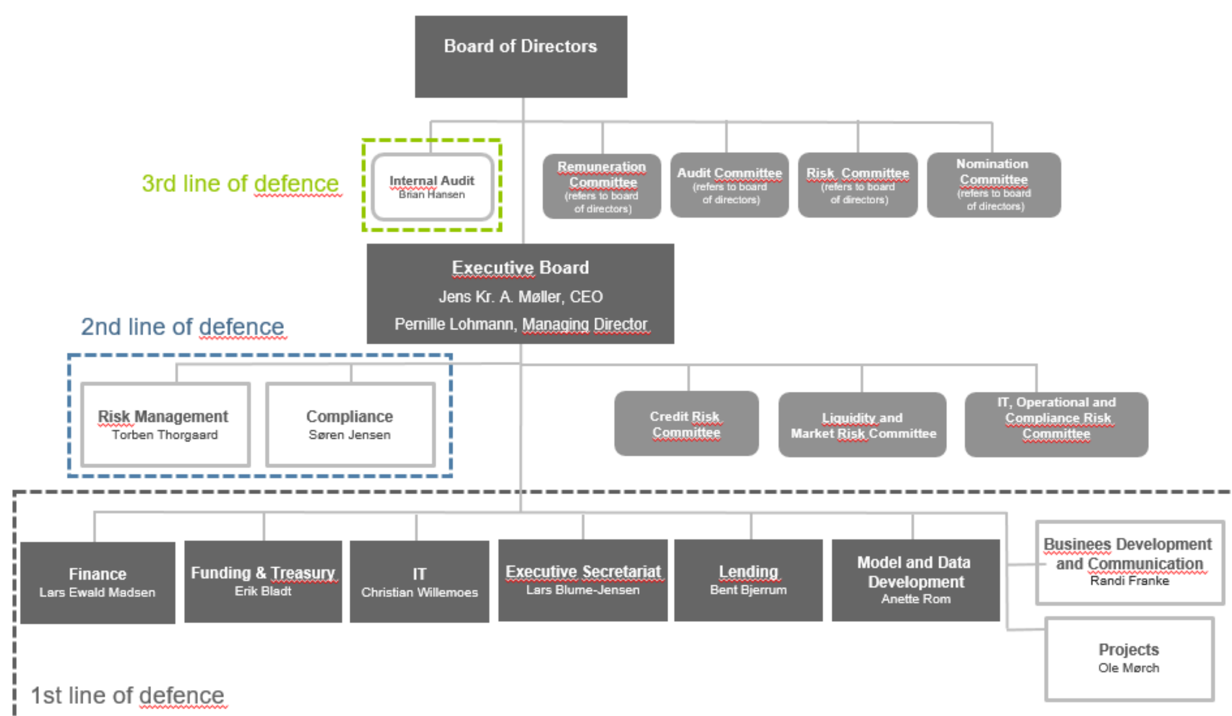
DLR's Executive Board ensures that risks are managed and mitigated as directed by the Board of Directors. Risk management at DLR is shaped around the three lines of defence model:

- 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).

[1] http://www.dlr.dk/docs/Loenpolitik.pdf

- 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 the law. 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. The Internal Audit function 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.

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). The Chief Compliance Officer also reports directly to the Executive Board.

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.
- The IOC Risk Committee 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, while Compliance is represented on the IOC Risk Committee. This internal risk committee structure was implemented during the second half of 2019 as part of the reorganisation of the risk management area.

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)
	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 risk)

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

Risk reporting

The Board of Directors is regularly updated on and addresses risks at board meetings and on an ad hoc basis as the situation requires. Furthermore, at least annually, a comprehensive risk report is prepared for the Board of Directors, who determines whether risk levels are acceptable. The Executive Board is regularly updated on DLR's risk profile and is also involved in the ongoing monitoring and management of risks of a more general or principle nature within individual risk areas.

The frequency and extent of reporting varies from regular monthly reports with a pre-defined structure to ad hoc reporting based on statutory requirements, etc. The requirement for and extent of reporting is adjusted on an ongoing basis in line with regulatory changes 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 overleaf 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 (lending portfolio, market share and rating)	BOD	Monthly
Quarterly portfolio composition report	BOD	Quarterly
Quarterly report on losses, arrears, etc.	BOD	Quarterly
Distributed loans by bank	BOD	Quarterly
Briefings – loan offers	BOD	Quarterly
Credit rating and financial counterparty monitoring	BOD	Semi-annually
Review of assets (S. 78)	BOD	Annually
IRB validation report	EB	Annually
IRB validation status	BOD	Semi-annually
Validation of approaches to measuring expected losses (impairment)	BOD	Annually
Market and liquidity risk reporting		
Market risk on securities portfolio	EB	Every two weeks
Portfolio report	BOD	Quarterly
Liquidity report (ILAAP)	BOD	Annually
Cross-organisational risk reporting (incl. non-financial risks)		
Risk assessment	BOD	Annually
Chief Risk Officer's review and report	BOD	Annually
Risk and capital management (Pillar III report)	BOD	Annually
Compliance report	BOD	Annually
DPO report (personal data compliance reporting)	BOD	Annually
Money laundering and terrorist financing reporting	BOD	Annually
Capital management reporting		
Capital position – individual solvency need (ICAAP)	BOD	Quarterly
Assessment of need to update solvency need	EB	Monthly
Capital position – contingency plan	BOD	Annually
Quarterly capital requirements compliance report	BOD	Quarterly
Quarterly recovery indicator report	BOD	Quarterly
Quarterly cover pool report	BOD	Quarterly
Recovery plan	BOD	Annually

CAPITAL POSITION

DLR's capital management efforts are governed by the Danish Financial Business Act, the Danish Executive Order on Calculation of Risk Exposures, Own Funds and Solvency Need, and Regulation (EU) no. 575/2013 of the European Parliament and of the Council of 26 June 2013. The Board of Directors and the Executive Board are responsible for ensuring that DLR's capital structure is appropriate and consistent 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. Moreover, the capital structure should be based on a high level of equity, having regard to the cost of other capital components, including additional tier 1 capital and tier 2 capital. DLR must also have adequate resources to ensure continual LTV compliance with respect to covered bond (SDO) loans and to meet rating agency OC requirements and debt buffer requirements.

Capital targets

DLR is focused on both existing and potential future requirements for mortgage credit institutions' composition of capital. The purpose of DLR's capital targets is for DLR to have adequate own funds to ensure a sound business operation, even during economic slowdowns.

DLR's capital requirement is made up of the basic 8 pc requirement plus the combined capital buffer requirement and possible Pillar II requirements. The combined capital buffer requirement is expected to increase in 2020 due to an increase in the countercyclical capital buffer that is expected to make up 2 pc at year-end 2020 against 1 pc at the beginning of the year. DLR also aims for an additional surplus.

Based on existing rules and their current interpretation, DLR's 2020 capital target will be in the 16.5-17.0 pc range, taking into account the phasing in of known countercyclical buffer requirements. As already mentioned, the countercyclical buffer is expected to amount to 2 pc at year-end 2020.

Long-term capital plan

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

DLR's capital plan going forward to 2024 centres on the following:

- Consolidation of future financial surpluses.
- Use of the IRB approach for the calculation of risk exposure on the full-time agriculture property portfolio. DLR is working to expand the use of the IRB models to other parts of the portfolio, but any effects hereof are not reflected in the capital plan.
- Continual compliance with LTV requirements and rating agency OC requirements.
- Compliance with current debt buffer requirements.
- Gradual implementation of DLR's universal guarantee concept.
- Inclusion of other potential operational factors, such as expected developments in losses and impairment charges, lending growth, etc.

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

Own funds and capital ratio

With equity making up a growing share of own funds, DLR's capital structure has been strengthened over a number of years. Tier 2 capital makes up a minor proportion of DLR's own funds. The individual components of DLR's own funds at 31 December 2019 are shown in tables 2 and 3.

DLR's own funds grew by DKK 953m in 2019. DLR made a number of capital transactions in the course of the year. In 2019, DLR bought back DLR-shares worth DKK 725m and issued tier 2 capital in the amount of DKK 650m. The net effect of these capital transactions was thus largely neutral. In addition, DLR sold DLR-shares totalling DKK 216m in several steps, primarily to loan-distributing banks, and added the DKK 846m net profit for the year to reserves.

The total risk exposure grew from about DKK 77bn to some DKK 82bn, primarily reflecting a growing portfolio in 2019.

At year-end 2019, DLR’s own funds were composed entirely of common equity tier 1 and tier 2 capital. Tier 2 capital accounted for DKK 1.3bn of total own funds after deductions of DKK 13.9bn. At year-end 2018, DLR's own funds amounted to DKK 13.0bn.

Table 2. DLR’s own funds

(DKKm)	2019	2018
Share capital	570	570
Share premium	0	0
Reserves (locked-up capital)	2,338	2,338
Retained earnings	9,495	9,292
Profit for the year	846	707
Tier 1 primary deductions:	-664	-630
Tier 1 capital less primary deductions (CET 1 capital)	12,647	12,344
Additional (hybrid) tier 1 capital	0	0
Common equity tier 1 capital	12,647	12,344
Other deductions	0	0
Tier 1 capital incl. additional tier 1 capital	12,647	12,344
Tier 2 capital	1,300	650
Included tier 2 capital	1,300	650
Own funds before deductions	13,947	12,994
Deductions from own funds	0	0
Own funds after deductions	13,947	12,994

Table 3. DLR's capital ratio

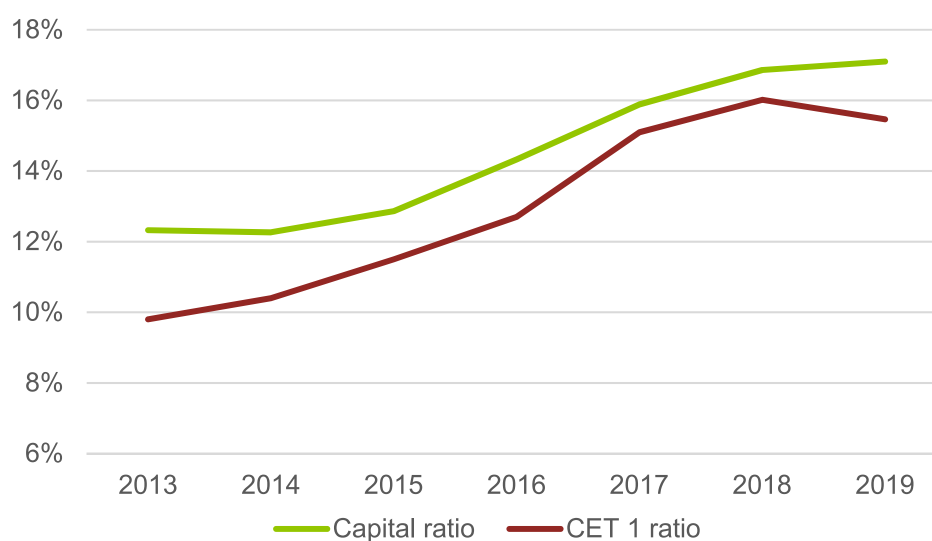
(DKKm)	2019	2018
Equity:		
– Distributable reserves	10,973	10,636
– Non-distributable reserves	2,338	2,338
Total equity	13,311	12,974
Own funds after deductions	13,947	12,994
Weighted risk exposure	81,784	77,074
Capital adequacy requirement	7,529	6,949
DLR's total capital ratio	17.1%	16.9%

Total capital ratio

DLR's total capital ratio was 17.1 pc at 31 December 2019. DLR has calculated the risk exposure on its full-time agriculture portfolio using the IRB approach, while the standard method was used for the rest of the portfolio.

The common equity tier 1 (CET 1) capital ratio was 15.5 pc at 31 December 2019.

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



Both the CET 1 capital ratio and the total capital ratio have been on an upward trend for quite some time. This is partially attributable to the gradual adjustment of the capital structure made with a view to meeting growing capital requirements.

Further changes to the capital requirements will be made in step with future changes to already published rules. In mid-2019, a political agreement was reached on the latest proposed amendment to CRR/CRD. The amendments reflect the revised regulation, and the directive includes, among other things, a leverage ratio requirement of 3 pc of common equity tier 1 capital, harmonised binding requirements for stable funding (the Net Stable Funding Ratio or NSFR), stricter requirements for the use of internal models and changes to the relevant regulator's application of institution-specific Pillar II capital add-ons. Additional amendments are in the pipeline. Depending on how the future capital requirements are implemented, DLR's total capital ratio may be affected.

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

Capital requirements

The statutory capital requirement for DLR was 13.7 pc at the beginning of 2019. The capital requirement is based on the basic 8 pc requirement plus the SIFI requirement, which was 1.0 pc for DLR at the beginning of 2020, a capital conservation buffer of 2.5 pc and a solvency requirement (Pillar II requirement) of about 1.2 pc. To this should be added the countercyclical capital buffer, which was 1.0 pc at end-2019 and is expected to be raised to 2.0 pc at end-2020.

Solvency requirement, capital adequacy and individual solvency need

DLR's Board of Directors discusses and approves DLR's capital adequacy requirement and individual solvency need at least once every quarter based on a recommendation from the Executive Board. Calculations are reviewed by the Risk Committee prior to submission to the Board of Directors. In addition, at least once

a year, the Board of Directors determines the methods to be used for the calculation of DLR's solvency need, including which risk areas, stress tests and benchmarks should be considered.

It does so based on the credit reservation method ("8+ method"), which is the official method of the Danish FSA. The method covers the risk types assessed to require capital coverage. These are credit risk, market risk, operational risk, IT risk, etc. The assessment is based on DLR's risk profile, capital position and any significant forward-looking factors, including budgets etc.

DLR complies with the guidelines set out in the Executive Order on Risk Exposures, Own Funds and Solvency Need and the Danish FSA's guidelines regarding the "8+ method" supplemented with DLR's own stress tests. Stress tests therefore constitute a key element of risk management at DLR.

DLR's resilience is assessed by means of, among other things, stress tests covering several different scenarios. One such scenario is a severe recession with a significant drop in property prices and a fall in settlement prices in the agricultural sector as defined in the Danish FSA's macroeconomic stress test. An assessment is made of the adequacy of DLR's earnings and own funds under this scenario.

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

- 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

    - Share price risk
    - Exchange rate risk
- Liquidity risk
- Operational risk
- Risks associated with information and communications technology (ICT)
- Leverage

The risk factors comprise areas that management is required to take into account in determining DLR's capital adequacy requirement and solvency need. Relevant departments are also involved in determining DLR's capital adequacy requirement and solvency need and in preliminary and subsequent discussions of stress tests etc. for the various business areas.

Credit risk is DLR's largest risk area and the area accounting for the major proportion 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 on Credit risk for further details.

Market risk is another important category for DLR. DLR sets aside capital equivalent to 8 pc of the risk exposure associated with market risk. Moreover, DLR also assesses whether it is exposed to additional risk that requires a capital allocation in excess of 8%. DLR's market risk is considered to be limited due to the balance principle, and DLR has set narrow limits for interest rate risk.

Operational risk is defined as the risk of direct or indirect loss caused by inadequate or faulty processes, systems, etc. Given DLR's single-pronged business model, its focus on internal processes, etc., this risk is considered 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 DLR as the risk of loss caused by system error or non-compliance with IT security protocols. A risk assessment is carried out on this basis.

As well as the above-mentioned factors, management regularly assesses if additional factors should be included in the capital adequacy and solvency need calculation.

DLR thus allocates the statutory 8 pc capital requirement for each risk area and then assesses whether further capital should be set aside; for example due to large exposures, the general credit quality of the portfolio or elevated market risk. In determining whether additional capital is required, DLR relies on either the stress tests prescribed by the Danish FSA's guidelines, DLR's proprietary stress tests or an assessment made on the basis of management estimates as to whether individual business areas require additional capital.

DLR's capital adequacy requirement was calculated at DKK 7,529m at year-end 2019. See table 4. As DLR's total risk exposure amount (REA) was DKK 81,784m, this gives a solvency need of 9.21 pc.

In accordance with CRR article 92, DLR has calculated its excess capital relative to the individual solvency need at 3.3 percentage points or DKK 2.7bn at year-end 2019. See table 5. DLR considers this to be a satisfactory level.

Table 4. DLR's capital adequacy requirement and individual solvency need at 31 December 2019

Risk area	Capital adequacy (DKKm)	Solvency need
Credit risk	6,699	8.19%
Market risk	639	0.78%
Operational risk	190	0.23%
Other factors	0	0
Internally calculated solvency need	7,529	9.21%
Add-ons (special risks)	0	0
Total	7,529	9.21%

Source: Calculation of capital adequacy requirement and individual solvency need at http://www.dlr.dk/regnskab-og-rapportering

Table 5. DLR's own funds and excess capital at 31 December 2019

Key figures and financial ratios	Amount (DKKm)
Own funds after deductions	13,947
Capital adequacy requirement	7,529
SIFI buffer	818
Capital conservation buffer	2,045
Countercyclical capital buffer	818
Excess capital, DKKm	2,730
Total capital ratio	17.1%
Individual solvency need, %	9.2%
SIFI buffer (2019)	1.0%
Capital conservation buffer (2019)	2.5%
Countercyclical capital buffer (1K 2019)	1.0%
Excess capital, percentage points	3.3%

Additional collateral, OC and debt buffer

For loans based on the issuance of covered bonds (SDOs), DLR must provide additional collateral if the LTV is exceeded due to, for example, a fall in the value of the property provided as collateral. DLR continually monitors for compliance with this obligation. The amount of additional collateral has declined in recent years. Besides the costs of over-collateralisation, the risk and cost of LTV compliance is linked to credit risk, as losses on the loan portfolio will be correlated with falling property prices.

To cover an LTV overrun, DLR may use its own funds, any proceeds from other debt issues placed in Capital Centre B and, to a certain extent, claims against banks.

In addition, DLR has issued DKK 4.0bn worth of senior secured bonds (SSBs) that can be used both for LTV compliance and as over-collateralisation (OC) to support bond ratings. DLR has also issued DKK 2bn worth of Senior Resolution Notes (SRNs) and DKK 2bn worth of Senior Non-Preferred Notes (SNPs) for purposes

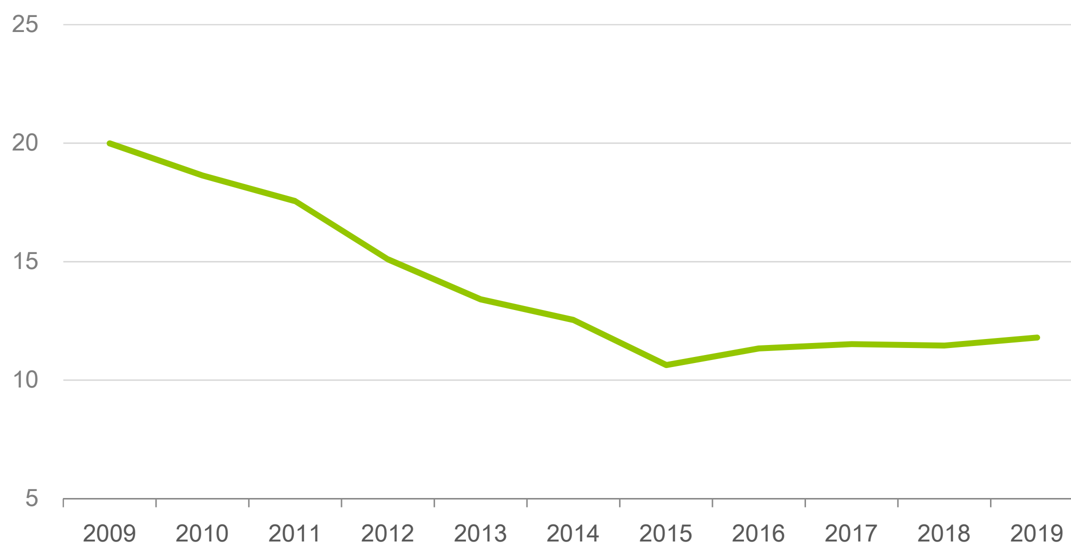
of complying with the debt buffer requirement. The proceeds from these issues can also be used as additional collateral.

Leverage

In the course of the past ten years, DLR's leverage ratio (calculated as lending relative to equity) has dropped sharply from about 20 in 2009 to 11.8 at 31 December 2019. See figure 3. The slight increase in the leverage ratio recorded since 2015 is a reflection of several factors, including DLR's buyback of shares from Finansiel Stabilitet and Danmarks Nationalbank in 2016 and from the loan-distributing banks in 2019, the repayment of additional tier 1 capital in 2017 and solid lending growth since 2016.

The current low leverage ratio is very positive for DLR's aggregate risk.

Figure 3. DLR's loan/equity ratio



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 6.9 pc at year-end 2019. See figure 4 and table 7.

DLR's Board of Directors has defined a leverage ratio threshold of 5 pc in accordance with the CRR definition. DLR's current leverage ratio of 6.9 pc is thus significantly higher than both the 5 pc requirement defined by the Board of Directors

and the likely regulatory requirement of 3 pc. Reference is made to the Pillar III appendix for further information on DLR's leverage ratio.

Figure 4. DLR's leverage ratio

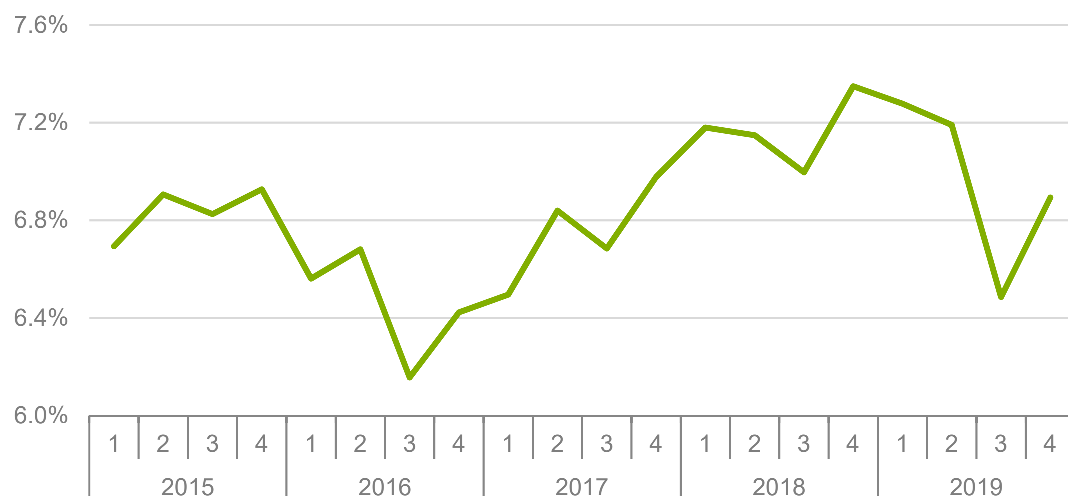


Table 7. DLR's leverage ratio under CRR, end-2019

	(DKKm)
Total assets according to financial statements	173,444
Total balance sheet exposures as per CRR	174,001
Off-balance sheet items, loan offers, etc.	10,118
Deductions from tier 1 capital	-664
Total exposure for leverage ratio calculation	183,455
Tier 1 capital	12,647
Leverage ratio	6.9%

Debt buffer

All mortgage credit institutions must maintain a debt buffer of 2 pc of their total unweighted lending. Being gradually phased in, the buffer must be at least 90 pc of the required level by year-end 2019 and 100 pc by 15 June 2020. At current lending levels, DLR must maintain a debt buffer of just over DKK 3bn.

The debt buffer may consist of equity capital, additional tier 1 capital, tier 2 capital and unsecured senior debt – all capital/debt should be issued by the General Capital Centre. In addition, issued capital/debt should have a maturity of at least two years at issuance.

In mid-2018, a supplementary debt buffer requirement was adopted. According to this requirement, the institution's required own funds and debt buffer combined must represent at least 8% of its total liabilities. This requirement must be met by 1 January 2022.

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

Rating

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

Table 8. DLR's S&P ratings, end-2019

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)

Figure 5. Rating overview

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

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

advance by six of the eight remaining notches to achieve AAA rating and thus has two unused uplifts in its bond rating. This contributes to lowering the OC requirement on DLR's capital centres.

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 11.63 pc for Capital Centre B and 2.70% for the General Capital Centre. The OC requirements are met for the nominal bond amount in the capital centre and covered by surplus capital in the capital centres. This is achieved using assets acquired for own capital together with funds obtained by issuing senior debt.

While DLR has not made any commitment to S&P about maintaining a certain level of over-collateralisation 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.

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

DLR's rating outlook is stable. The outlook was changed from positive to stable in October 2019. The previous positive outlook was linked to the expectation that Denmark might advance from BICRA group 3 to 2, which would have lifted the anchor rating for financial institutions in Denmark by one notch from bbb+ to a-. However, Denmark stayed in group 3 following the October assessment, partly because S&P saw an increased risk for the industry in general based mainly on growing earnings pressure. A reduced financial risk in Denmark caused by lower household indebtedness was offset by more negative prospects for financial sector earnings.

CREDIT RISK

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

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

Credit scoring

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

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

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

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

IRB models

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

DLR's lending to full-time farms uses the IRB method, while the rest of the portfolio follows the standard method. The full-time farm portfolio amounts to DKK 76bn, or 49 pc of DLR's total loan portfolio.

Similar, advanced statistical models are also used for internal risk management for significant parts of the business portfolio, equal to an additional DKK 51bn.

Credit risk models

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

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

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

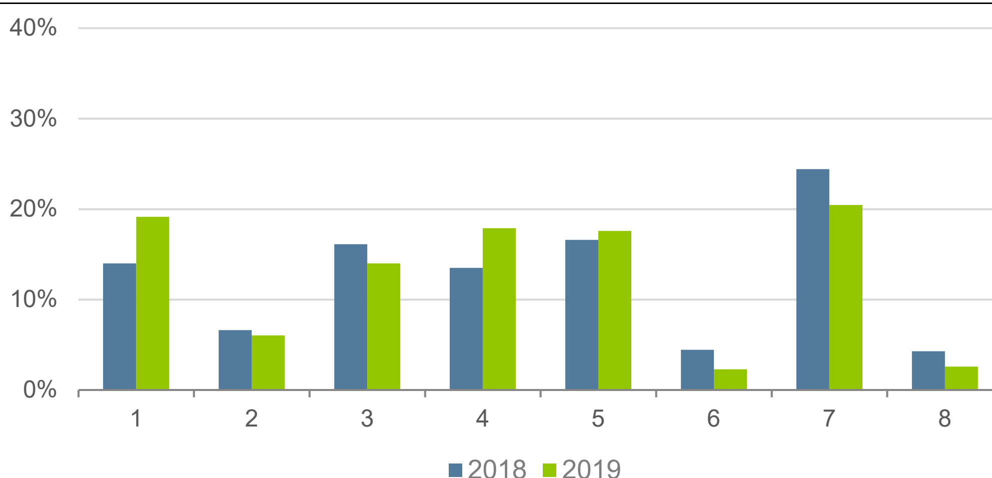
The distribution of DLR's rating classes by PD band is shown in table 10. Customers with OEI (objective evidence of impairment) where no impairment need has been identified are always placed in rating class 7, irrespective of whether the model rating is better.

Table 10. DLR's PD rating classes

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

Figure 6 shows the distribution (in pc) of DLR's full-time agriculture portfolio by PD rating class. At the end of 2019, 23 pc of the portfolio was placed in rating class 7 and 8 compared to 29 pc one year earlier. At year-end 2017, the share was 35 pc. Around 90% of the customers in class 7 are only placed in class 7 because they have OEI (overrides).

Figure 6. Full-time agriculture portfolio by PD rating class



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

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

The LGR model incorporates the value of the mortgage collateral and the size of the exposure. Defined haircuts (deductions) for a property's individual asset sub-components 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, etc. for the period until the realisation is completed. The exposure includes sales costs, etc.

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

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

Table 11 below shows that the observed rate of default at the end of 2019 was 0.9 pc. Hence, less than 1 out of a 100 customers in the full-time farm portfolio was in default. The equivalent figure at the end of 2018 was 2.0 pc.

Hence, the observed PD level at the end of 2019 was considerably below the regulatory PD level of 8.5 pc.

Table 11. DLR's PD estimates for full-time farms (IRB portfolio)

PD (excl. customers in default)	8.5%
PD obs.	0.9%

Note: PD is re-calculated for regulatory purposes. PD obs. is the observed level at end-2019. Figures are weighted for exposure.

Table 12 below shows expected losses for DLR's portfolio of full-time farm customers assuming the customer has defaulted (LGD). As can be seen in the table,

the observed LGD level was close to zero at end-2019. At the end of 2018 the figure was 0.3 pc.

Regulations require using a conservative LGD value that reflects a loss scenario during an economic recession. At the end of 2019, DLR set LGD to 11.4 pc for regulatory purposes.

Table 12. DLR's LGD estimates for full-time farms (IRB portfolio)

LGD (excl. customers in default)	11.4%
LGD obs.	0.03%

Note: LGD is re-calculated for regulatory purposes.
LGD obs. is the realised level of loss on defaulted customers in 2019.
Figures are weighted for exposure.

As a result of new international guidelines and technical standards from the European Banking Authority (EBA), DLR is currently carrying out a major re-vamp of the approved IRB model. The changes will include both PD and LGD models.

Validation of IRB models

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

Business use of the IRB approach at DLR

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

Models and rating systems are fully implemented components of DLR's standard loan application and loan approval process. Models are also used to identify riskier exposures and to calculate impairments. The rating system is also used for portfolio monitoring and in several management reports.

Ratings are an important element in the overall credit score in the 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.

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 manual 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.

Individual impairments are thus made for customers with weak credit quality when DLR at the same time estimates that its exposure is not fully secured by the mortgaged property or the guarantees provided, etc.

Modelled collective impairments of loan portfolios are based on the IFRS 9 principles with a division into stages and the use of scenario calculations. If it is found that the models for calculating the collective impairment charges and the methods for determining individual impairments do not adequately reflect the overall risk, they will be supplemented by a management-estimated add-on.

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

Guarantee schemes

As well as 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 via various guarantee agreements made with DLR's loan-distributing banks (DLR's shareholders).

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

1. Risk cover – 6 pc 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 pc of the loan's outstanding debt. In some cases, for example when certain loans that have an earlier commercial property guarantee are remortgaged, DLR will require a supplementary guarantee to be posted. The guarantee is reduced proportionally as the loan is paid down.

2. Risk cover – Loss-offset scheme

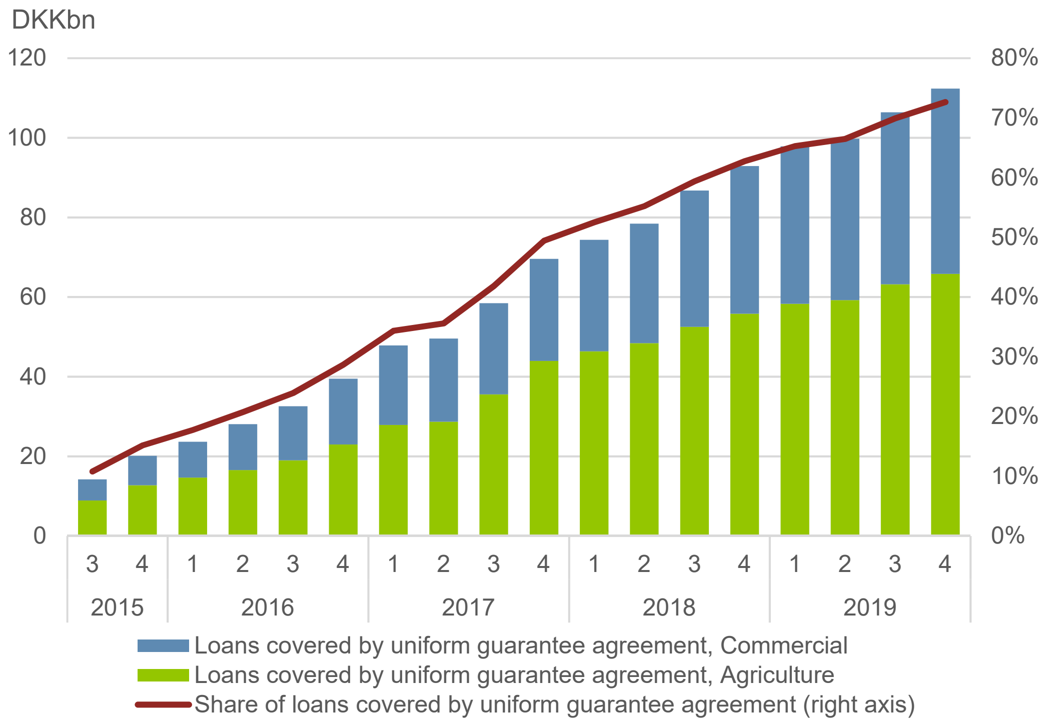
DLR's universal guarantee concept also encompasses the possibility of offsetting losses in the commission payments made to the bank, whereby all losses incurred by DLR beyond those covered by the 6 pc guarantee provided at the loan level are offset. Only losses on loans distributed by the particular 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, DLR can demand that such losses be covered by drawing on all the direct 6 pc guarantees provided by the bank in question.

At the end of 2019, 73 pc of DLR's loan portfolio was covered by the universal guarantee concept.

Figure 7. DLR lending covered by the universal guarantee concept



Loans granted up to 31 December 2014

DLR's loan portfolio was covered by two different guarantee concepts up to 2014. Guarantees provided under these concepts still apply, but the extent of the guarantees is being reduced as the loans covered are redeemed or paid down, etc.

Table 13. Overview of DLR's guarantee concepts		
	Outstanding bond debt covered by guarantee concept (DKKbn), year-end	
	2019	**2018**
Cooperative agreement - agriculture (until end-2014)	22.6	32.1
Corporate guarantee (until end-2014)	14.4	18.4
Universal guarantee concept - agriculture (from start-2015)	65.8	54.5
Universal guarantee concept - corporate (from start 2015)	46.5	35.2
Government guarantee - YJ loan	0.2	0.3
Covered by guarantee schemes	149.6	140.6
Total outstanding bond debt	154.6	146.4
Covered by guarantee schemes	96.8%	96.0%

Loan portfolio

DLR had a high level of lending activity in 2019 at DKK 43.1bn (gross) in all. Lending was characterised by both a great deal of remortgaging and solid lending growth.

The heavy remortgaging activity was due mostly to falling interest rates in 2019. Falling interest rates meant DLR – like the other mortgage credit institutions – opened new loans with lower interest rates that borrowers remortgaged into. DLR thus opened 30-year bonds with coupons of 0.5 pc, 1.0 pc and 1.5 pc during 2019 along with 20Y bonds with 1.0 pc, 0.5 pc and 0.0 pc coupons.

As well as considerable remortgaging activity, DLR also granted many new loans for property purchases and investments, and also supplementary loans in 2019.

Lending growth as measured by net lending was DKK 7.7bn in 2019, the highest growth in 10 years. The high level of lending growth was in part due to the low interest rate environment and a positive property market, though the increased competitiveness of the loan-distributing banks also played a role.

DLR continues to actively develop its collaboration with the loan-distributing shareholder banks. Initiatives include strengthening relations and knowledge of our collaboration model, focusing on shared value creation and the needs of borrowers plus further developing DLRxperten, a digital advisory platform that DLR makes available to its shareholder banks.

DLR's growth in 2019 was particularly concentrated in the market for other commercial properties than agriculture – especially residential rental property. Growth in lending to residential rental property has helped diversify loan portfolio risk, but also resulted in a breach of the Supervisory Diamond's benchmark for lending growth (max. 15 pc) throughout 2019, see Supervisory Diamond section in DLR's Annual Report 2019.

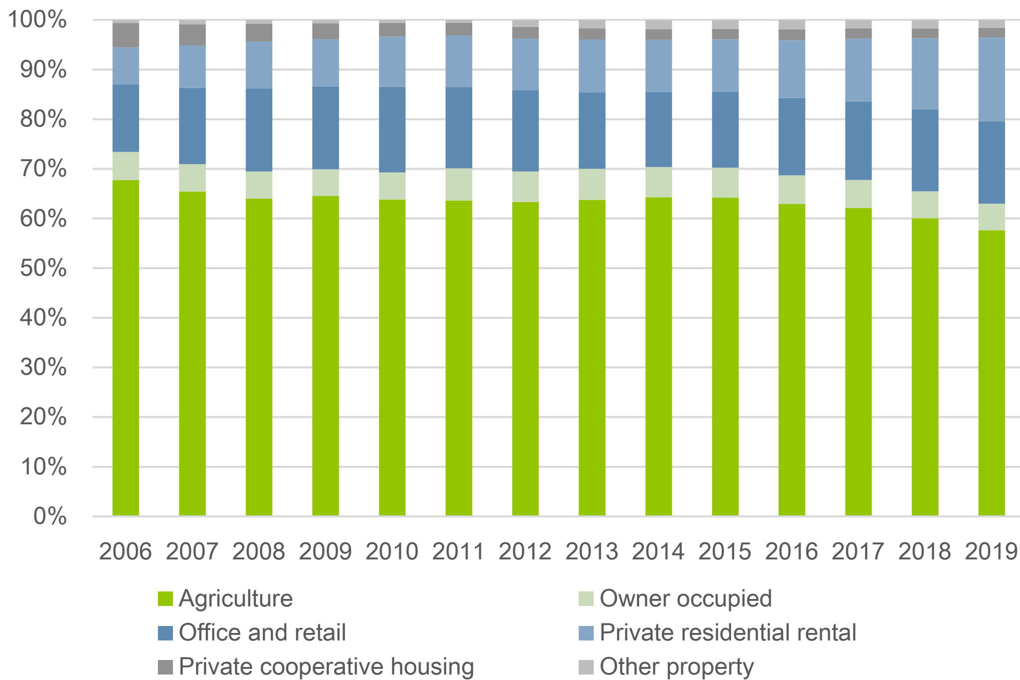
Lending growth for private residential rental property should be seen against the generally very high rate of remortgaging in 2019 – as it is only natural that customers switch between lenders when loans have to be remortgaged anyway. New customers can therefore come in a clump when there is an upheaval in the market, such as a wave of prepayments.

Composition of loan portfolio

Property categories

At the end of 2019, DLR's loan portfolio (measured as outstanding bond debt) amounted to DKK 154.6bn. Loans on agricultural properties accounted for 57.6 pc and on owner-occupied properties, including residential farms, 5.4 pc of the portfolio, while loans on commercial property and private cooperative housing properties accounted for 37 pc, see figure 8.

Figure 8. DLR's lending by property segment



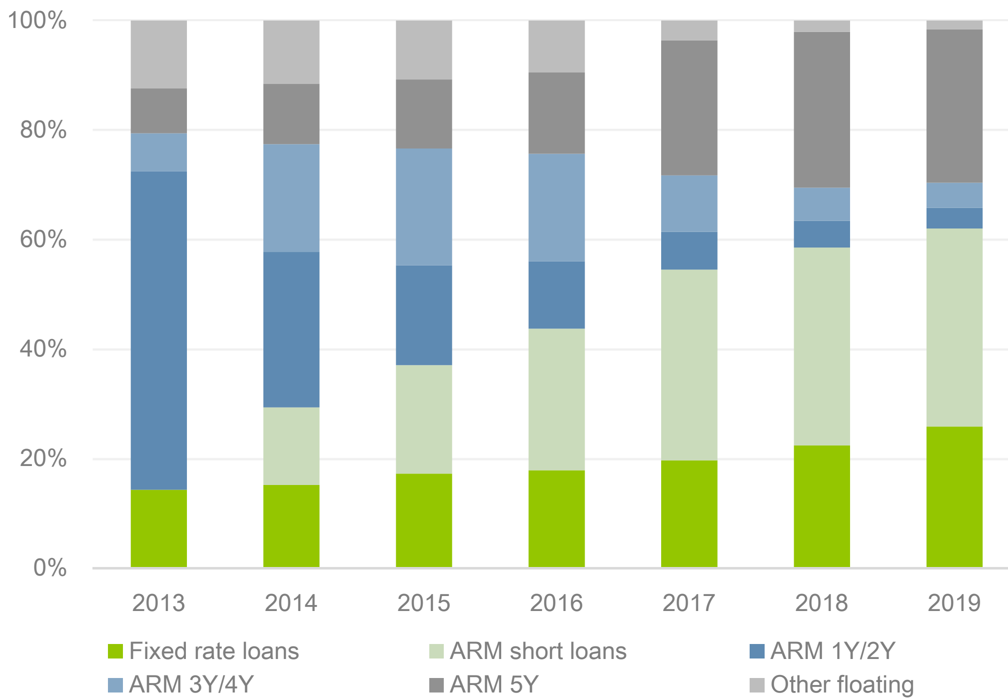
Loan types

The composition of lending by loan type has also become more diversified over the years, which has resulted in greater interest rate security, see figure 9. A greater share of loans with interest rates fixed to maturity, in particular, has contributed to reduce the interest rate sensitivity of DLR's loan portfolio in recent years. Over the past year, the share of loans with interest rates fixed to maturity has risen by 5.1 percentage points to 27.5 pc. The share of ARM loans (interest reset loans) has been reduced by 4.4 percentage points over the same period to account for 35.0 pc of total lending.

The increased share of loans with interest rates fixed to maturity should be seen as an extension of DLR's customers generally opting for a longer refinancing interval on their loans since 2014. 1-year ARM (F1) loans were previously the most popular loan type among DLR's customers. However, 1-year ARM have gradually been replaced by ARM loans with a longer refinancing interval and ARM Short loans (variable rate loans), which are now the most common loan type. At the end of 2019, 1Y ARM and ARM Short loans together accounted for just 39.3 pc of

DLR's total lending, whereas 1Y ARM loans accounted for almost 60 pc of total lending at the end of 2013. Moreover, 80 pc of DLR's ARM loans have a refinancing interval (and hence a fixed interest rate) of five years, while the term of the new bonds behind ARM Short loans is five years.

Figure 9. DLR's loan portfolio by loan type



Repayment profile

In 2019, the share of total gross lending with an initial interest-only period was 35.8 pc compared to 41.1 pc at the end of 2018. Interest-only loans are particularly popular in the agricultural area, as 52.6 pc of gross lending to agriculture had an initial interest-only period in 2019. The share of gross lending with initial interest-only payments for other property segments is shown in table 14.

Of DLR's total loan portfolio, the share of loans with initial interest-only payments was 37.3 pc at year-end 2019, which is a little less than at the end of 2018, when the share was 38.4 pc. Interest-only loans comprised 49.1 pc of lending to agriculture at the end of 2019, which is more or less the same as the previous year.

The share of outstanding loans with an interest-only period in the other segments is shown in table 15.

Table 14. Share of gross lending with initial interest-only payments

	2018	2019	Changes (percentage point)
Agriculture	61.6%	52.6%	-9.0%
Residential farms	17.6%	15.5%	-2.2%
Offices & Retail	11.0%	6.9%	-4.1%
Residential rental	31.0%	32.7%	1.7%
Cooperative housing	49.7%	35.9%	-13.8%
Other	4.2%	3.1%	-1.2%
Total	41.1%	35.8%	-5.3%

Table 15. Share of outstanding loans with interest-only payments

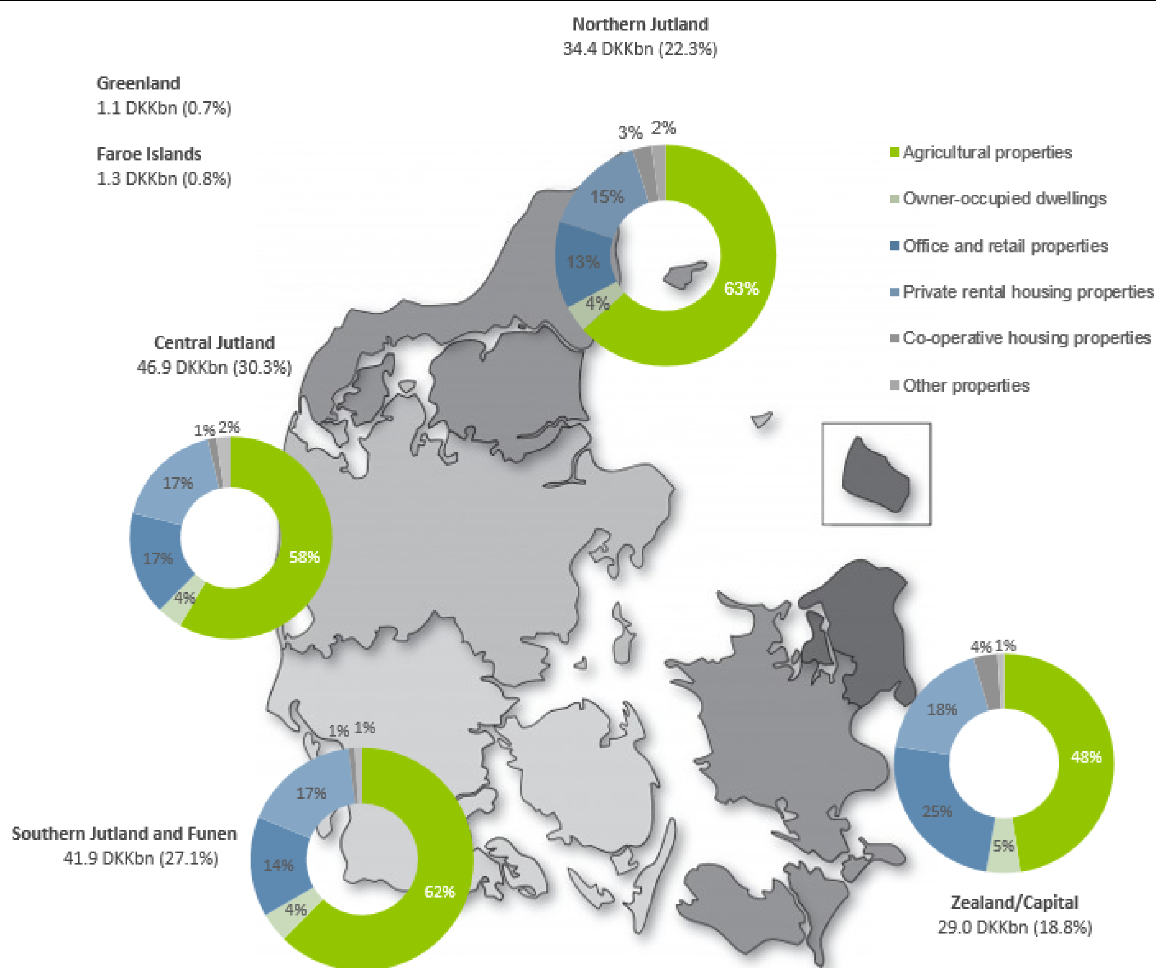
	2018	2019	Changes (percentage point)
Agriculture	49.3%	49.1%	-0.2%
Residential farms	18.0%	15.4%	-2.6%
Offices & Retail	13.0%	11.0%	-1.9%
Residential rental	33.1%	32.6%	-0.5%
Cooperative housing	37.0%	38.7%	1.7%
Other	10.8%	7.9%	-2.9%
Total	38.4%	37.3%	-1.1%

Geographical distribution

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

DLR's lending is spread across Denmark and reflects the coverage of the loan distributing banks' (DLR's shareholders) branch networks. DLR also has lending in Greenland and on the Faroe Islands totalling DKK 2.4bn, corresponding to 1.6 pc of the loan portfolio.

Figure 10. Geographical distribution

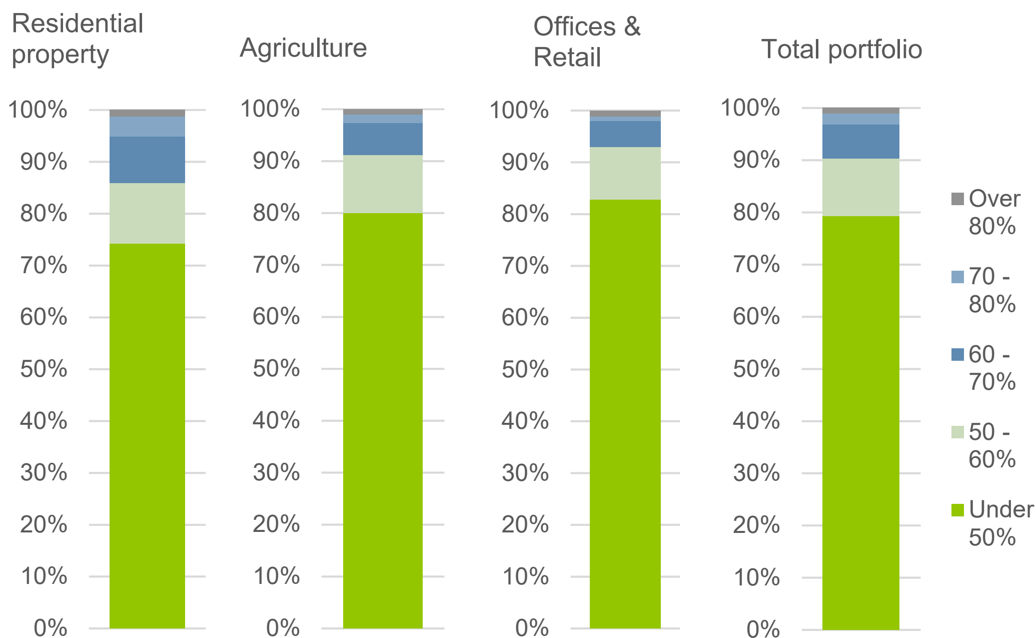


Loan portfolio LTV

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 segments.

At the end of 2019, 91.2 pc of loans granted on agricultural properties were in the <60% LTV band of DLR's latest valuations, including valuations made in connection with continual covered bond (SDO) monitoring, while 89.0 pc 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 property, have an LTV limit of 80 pc, which is why the proportion placed under 60 pc is naturally lower for these property categories.

Figure 11. DLR's lending by LTV band



To ensure the statutory overcollateralisation (OC) of DLR's Capital Centre B (cover pool), a valuation is carried out at least annually on commercial property and every three years on residential property. This can be done without a physical inspection (market valuation), but if a physical inspection has been done 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 10.5bn in supplementary collateral and has, in addition, surplus collateral of DKK 22.1bn consisting of collateral in particularly secure assets plus the option of applying claims against banks (bank guarantees) in case of falling property prices. Overall, it is estimated that the current overcollateralisation enables DLR to withstand a property price fall of about 15-20 pc without having to provide further collateral.

Unweighted exposure for credit risk

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

The total value of DLR's unweighted exposure for credit risk purposes was DKK 146m on 31 December 2019, calculated after guarantees and conversion factor.

Arrears, impairments and losses

The number of borrowers unable to meet their payment obligations towards DLR tended to fall in 2019, see figures 12 and 13, and in mid-January 2020 was at its lowest level for many years. The number of arrears increased in 2018, mainly as a result of agricultural customers' impaired ability to pay, but the development reversed in 2019.

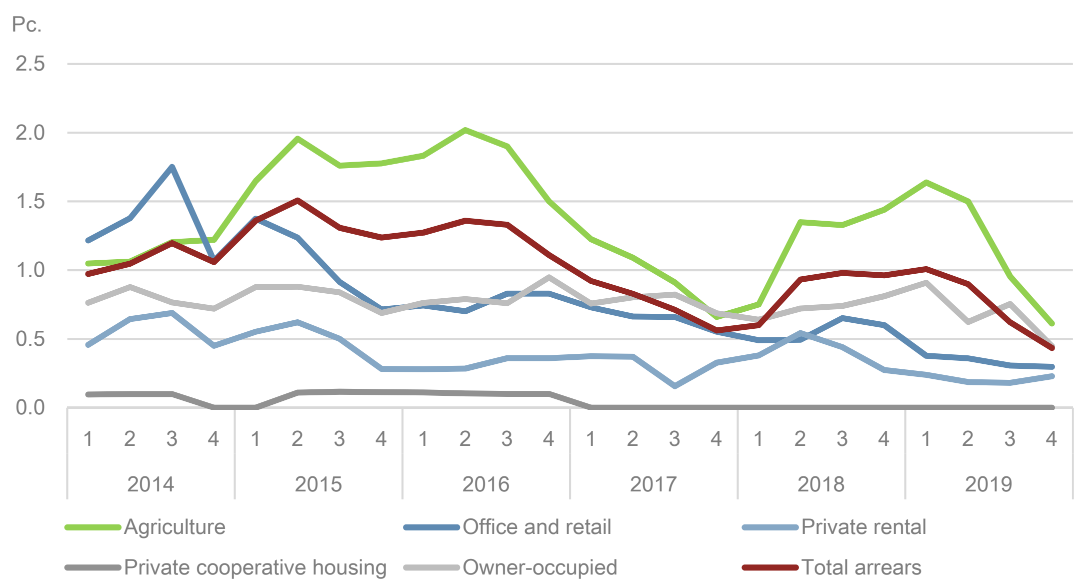
Overall, the arrears ratio – measured as the percentage of mortgage payments in arrears 3½ months after the last due date – was 0.43 pc in mid-January 2020, against 0.96 pc in January 2019. Declining arrears in 2019 were driven by a falling arrears ratio for agricultural properties, which fell to 0.61 pc in mid-January 2020 from 1.44 pc the year before.

Pork prices rose quite significantly following the massive outbreak of African swine fever (ASF) in China. Pork quotes rose 60 pc in 2019. The current, favour-

able terms of trade for pork producers are expected to persist in 2020 and potentially into 2021, though this will depend on how ASF advances in Asia, not least in China, and whether ASF spreads to more countries in Europe.

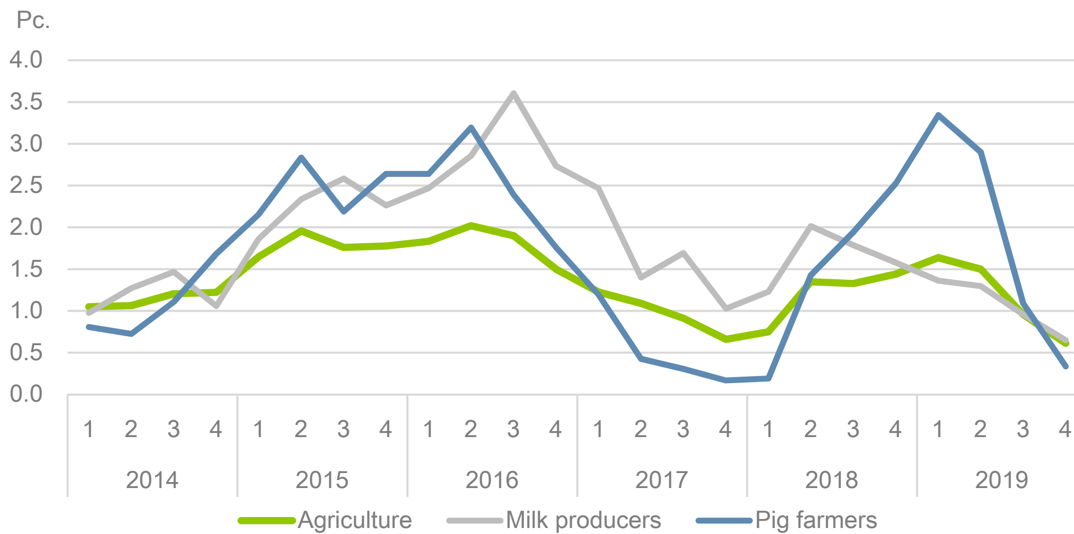
Dairy producers have enjoyed satisfactory settlement prices for quite some time now, at a little above the expected long-term average. This, together with increasing milk production at many operations, has meant solid financial results for dairy farmers.

Figure 12. 3½ months' arrears by property category



The improved terms of trade for dairy and pig farmers are reflected in the arrears ratios, which were 0.65% for dairy farmers and 0.34% for pig farmers in mid-January 2020.

Figure 13. 3½ months' arrears – agriculture



As mentioned, DLR regularly monitors its loan portfolio to identify potential impairments. An individual assessment is also made of a number of large exposures and certain exposures exhibiting signs of financial distress, etc. If an assessment identifies OEI, a stage 3 impairment provision is made against the exposure equivalent to the loss DLR estimates it could potentially incur.

Accumulated impairments fell by DKK 102m in 2019. Total individual impairments (stage 3) amounted to DKK 215m at the end of 2019 compared to DKK 287m at the end of 2018. On top of this comes stage 1 and 2 modelled collective impairments of DKK 117m and a management estimate of DKK 103m, which equates to total impairments of DKK 435m at the end of 2019. The management-estimated supplement is set to cover the excess risk on high lending growth to residential rental property, the mink sector, the cattle and pig sector and also model uncertainty.

Relative to DLR's total lending of DKK 154.6bn calculated at fair value, accumulated impairments represent 0.28 pc at year-end 2019, compared to 0.36 pc at year-end 2018.

Losses and impairments contributed an income of DKK 86m to the financial statements for 2019, equal to 0.1 pc of the loan portfolio.

Figure 14. Impairments as pc of loan portfolio

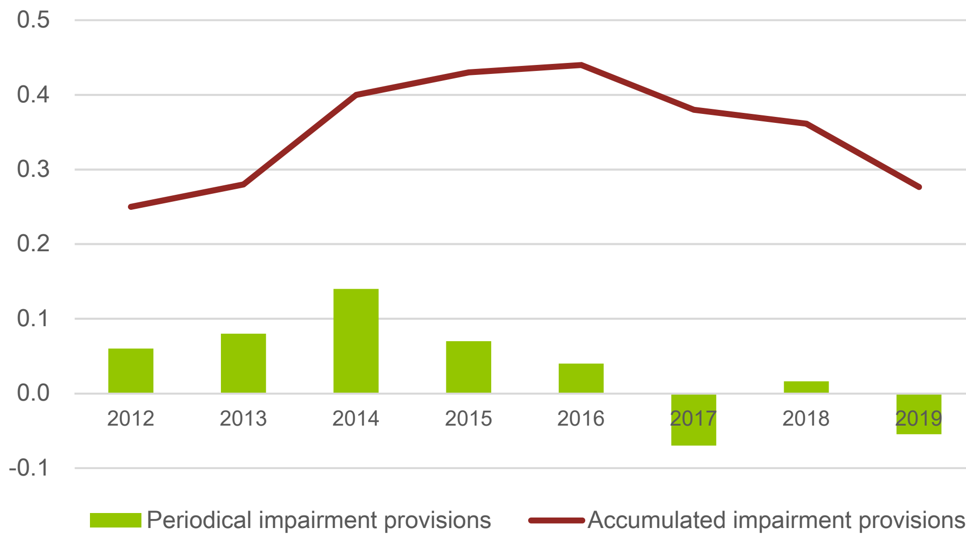
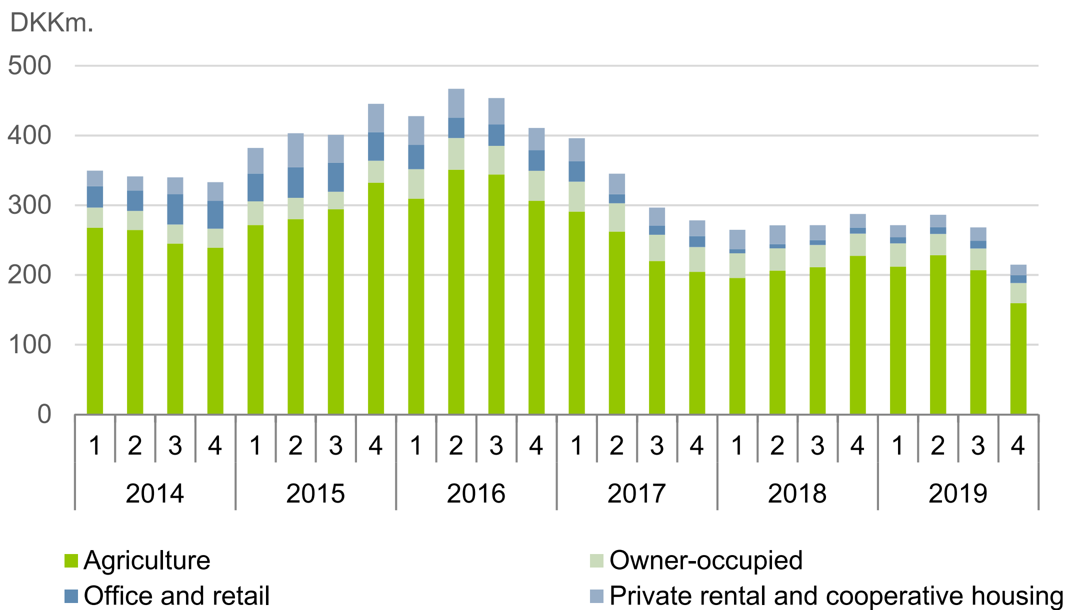


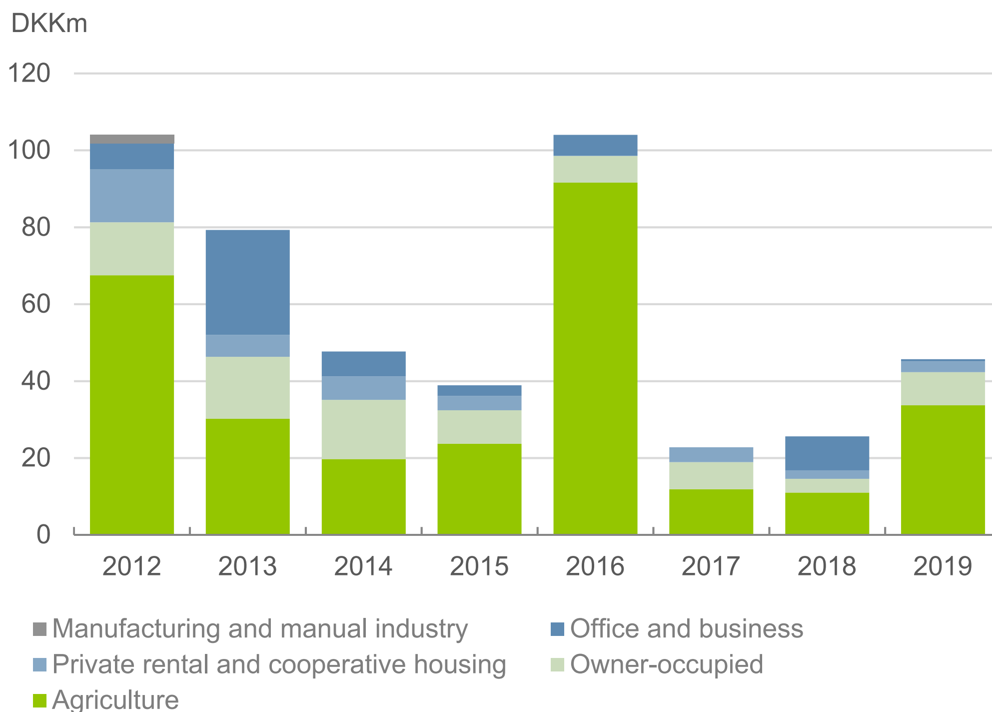
Figure 15 shows DLR's individual impairments (stage 3) by property segment. Impairment on loans for agricultural and owner-occupied property including residential farms accounted for 88 pc of individual impairments (stage 3) at end-2019.

Figure 15. Accumulated impairments by property segment (individual – stage 3)



For 2019, realised losses on loans calculated after payments under guarantee agreements but before offsetting losses, and including adjustments from previous years and recovered debts previously written off, amounted to DKK 42m, which is an increase over 2018, when realised losses were DKK 22m. Relative to the total loan portfolio, DLR's loss ratio was still very low at 0.03 pc.

Figure 16. Realised losses



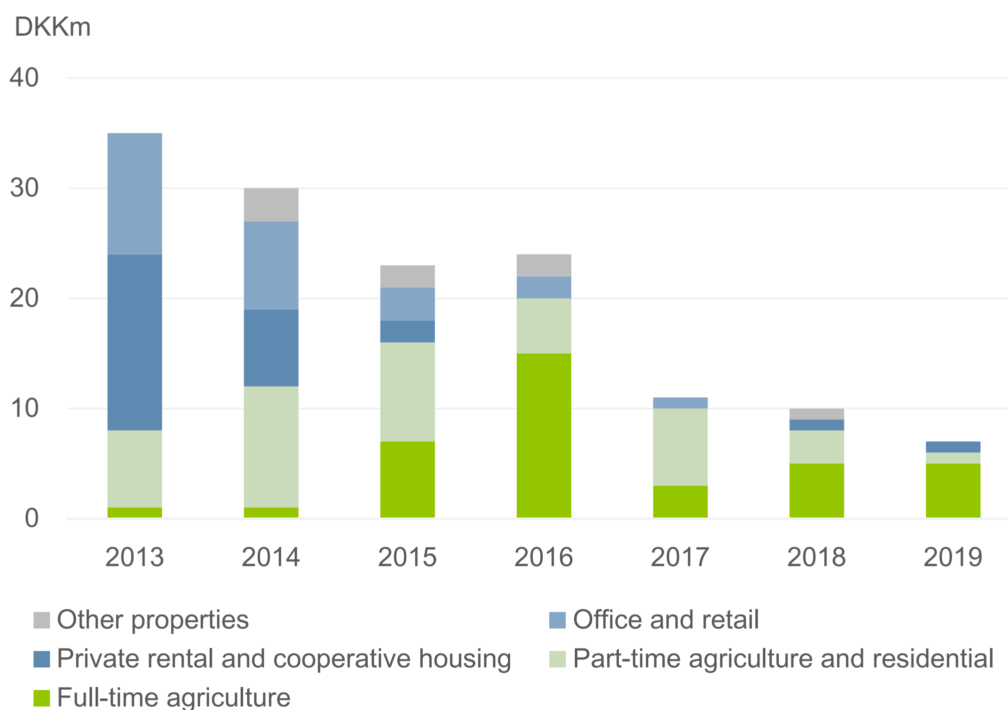
Note: Calculation shows realised loss prior to loss offsetting and the offsetting of recovered debts previously written off

The agricultural segment accounted for 73.7 pc of realised losses in 2019, which was notably higher than in the preceding year. Losses were mainly attributable to horticultural properties, part-time and hobby farms and arable farms. There were almost no losses attributable to pig farms, while DLR was able to reverse cattle farm exposures previously written off. A further DKK 8.6m loss was realised on owner-occupied dwellings, including residential farms, while losses stemming from office and retail property and private residential rental properties were DKK 0.6m and DKK 2.8m, respectively.

With respect to the previously described loss-offsetting schemes, DLR set off losses of about DKK 24.3m in 2019 against commissions paid to the banks.

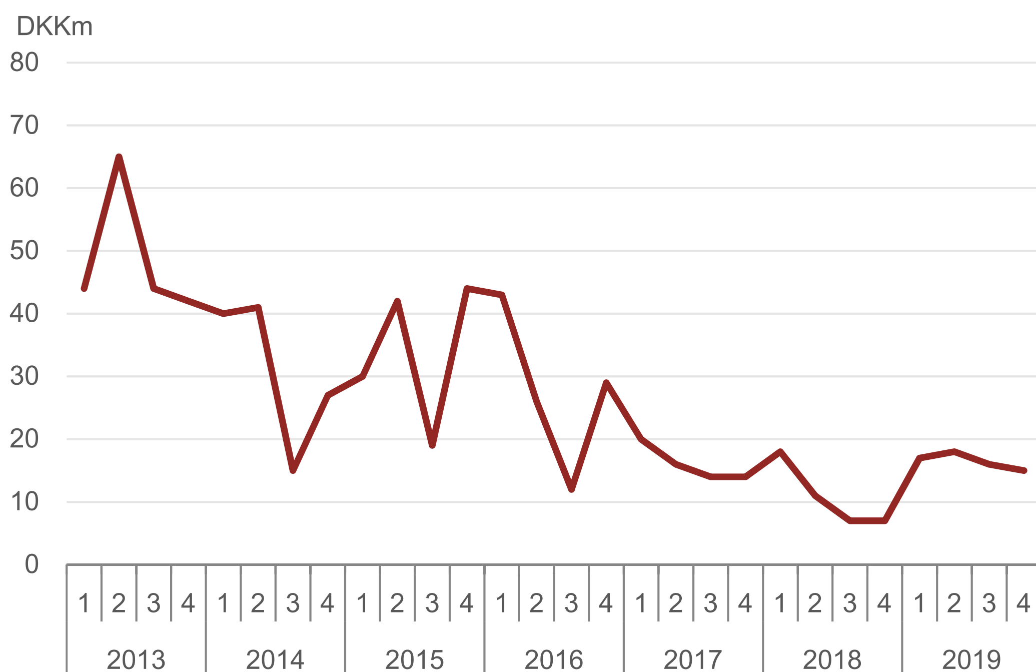
DLR's stock of repossessed properties at year-end 2019 totalled 10, two of which were pig farms (two operations) along with two cattle farms (one operation), while the remaining properties were residential farms, part-time farms and one small residential rental property and three undeveloped sites.

Figure 17. Portfolio of repossessed properties at year-end



The number of completed forced sales of properties in which DLR held a mortgage was 66 in 2019. In 2018 the number was 43. The number of forced sales fell steadily over the course of the year.

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 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 called 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 repayments, 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 is primarily part of DLR's equity. Only the parts of the securities portfolio relating to meeting requirements for supplementary collateral or balancing funds are encumbered. The remaining part of the 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. 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 16 shows the conversion of S&P's rating classes to credit quality steps for exposures to corporates, institutions, sovereigns and central banks.

Table 16. Rating classes and credit quality steps

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

The CRR Delegated Act, article 129(1)(c), states that exposures to credit institutions (for example, guarantees) that qualify for credit quality step 1 can comprise up to 15% of the collateral for an institution's outstanding (mortgage) covered bonds (SDRO/SDO). Due to concentration in the Danish mortgage credit system,

Denmark has also been permitted to use exposures to counterparties on credit quality step 2 for up to 10% of the collateral, though the aggregate exposure to credit institutions may not exceed 15% of the collateral.

MARKET AND LIQUIDITY RISK

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

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

DLR actively manages 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 means that:

- Interest rate risk calculated in accordance with the Executive Order on the Issue of Bonds, the Balance Principle and Risk Management should lie within the range 0-3 pc of the own funds. The interest rate risk on DLR's trading book (securities portfolio/assets) should be in the 0-3% 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 0-3 pc range of the own funds.
- Exchange rate risk on DLR's assets, liabilities and off-balance sheet items must be at most 0.1 pc 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.
- DLR also aims for a responsible leverage ratio in the markets area.

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 based on this decide 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. In addition, DLR is exposed to e.g. credit spread risk.

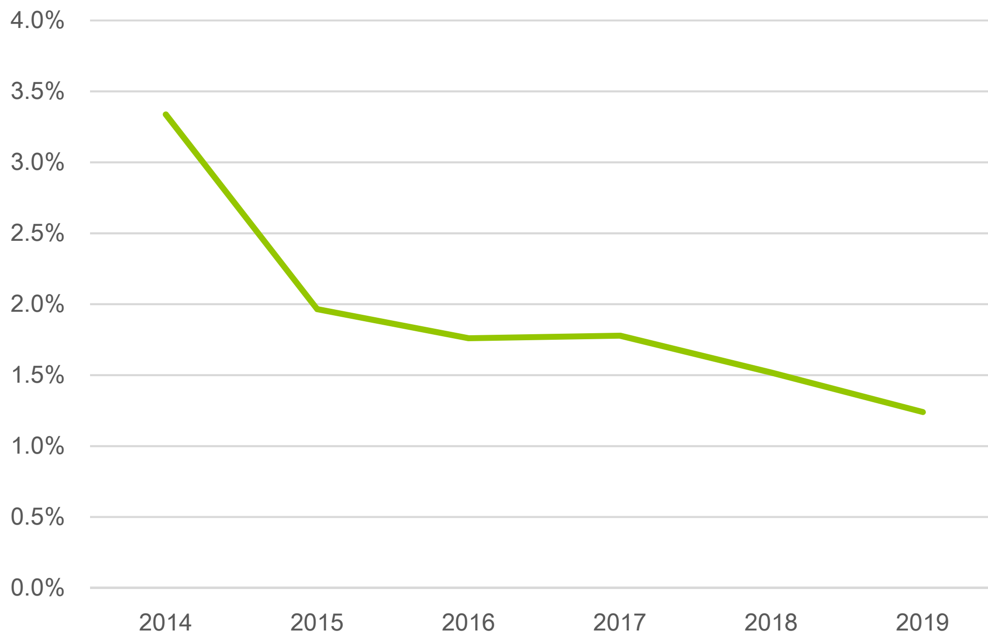
DLR has set limits for interest rate exposure in connection with its securities portfolio and issued debt instruments to keep interest rate risk at a low level overall.

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 0-3 pc of DLR's own funds, equivalent to between DKK 0 and DKK 418m.

At the end of 2019, DLR's relative interest rate risk on its securities portfolio was 1.2 pc, see figure 19. This equates to a value adjustment of the securities portfolio of DKK 173m in the case of a one percentage point change in the market interest rate. In addition, the convexity effect on DLR's bond holding is DKK 12.3m. In this

way, DLR complies with the guideline that the interest rate risk, including the convexity impact, must be within 3 pc.

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, which amounts to DKK 49m, means that DLR's total interest rate exposure including convexity effects is reduced to 1.0 pc of own funds, equal to DKK 136m at end-2019.

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 1 year accounts for 80 pc of the total interest rate risk, up to two years the interest rate risk accounts for 85 pc, and up to five years the interest rate risk accounts for 92 pc of the total interest rate risk. The interest rate risk on the bond holdings with a duration of more than five years accounts for 8 pc of the total interest rate risk.

Credit spread risk

Credit spread risk is defined as the risk of value losses due to the lower creditworthiness of a counterparty, or of exposures to the institution itself. Lower counterparty creditworthiness may occur due to a 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 DKK 350m. At end-2019, the credit spread risk on DLR's bond portfolio was DKK 196m.

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.

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

DLR's exchange rate risk amounted to 0.003 pc of own funds at the end of 2019.

Equity market risk

DLR generally does not place funds in equities apart from sector equities. At the end of 2019, DLR's equity holdings consisted of unlisted shares in VP Securities A/S, e-nettet A/S and Landbrugets Finansieringsinstitut A/S.

DLR's equity market risk after tax amounted to DKK 3m at the end of 2019.

Equities are also entered at fair value. However, if the fair value cannot be reliably estimated, these shares are set at cost, minus any deductions for write-downs.

Table 17. DLR's exposures in equities not included in the trading portfolio (e-nettet)

Type (DKKm)	Exposure, 31.12.2019	Operational impact in 2019
Sector equities	36	14
Other equities and capital shares	-	-
Total	36	14

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 policies 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, above 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 could not 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 Direc-

tors. Based on this, DLR's Executive Board has communicated the broad 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. DLR's Board of Directors has also determined that liquid funds must be placed in financial institutions that are subject to Danish law. The maximum deposit at any one bank may be 25% of DLR's own funds, though deposits must not exceed 35% of the bank's own funds.

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

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

DLR has determined the following indicators for a potential liquidity crisis situation:

- Diminished selling opportunities for DLR's bonds

- Large increases in arrears

- Large increases in losses and impairments.

LCR

According to LCR, the proportion of high quality liquid assets (HQLA) shall at all times exceed the net liquidity outflow for the next 30 days. As a designated SIFI institution, DLR has since 1 October 2015 had to comply 100 pc with the LCR requirement. DLR has set an internal minimum requirement of complying 110 pc with LCR.

Like other Danish mortgage credit institutions, DLR is authorised to exempt certain mortgage bond-related cash flows from its LCR calculation. In order to apply the exemption, DLR must meet an LCR floor requirement such that DLR holds at all times liquid assets equivalent to 2.5 pc of its total mortgage loan portfolio.

At the end of 2019, DLR had an LCR without the floor requirement of 601 pc and an LCR with the floor requirement of 249 pc.

Due to new EU rules on covered bonds, the mortgage credit institutions will going forward also have to have assets to cover the overcollateral (OC) requirement. The OC requirement comes into force in mid-2022. In connection with this, the Danish FSA has prepared a new model for the liquidity add-on for mortgage credit institutions that is expected to eventually replace the institutions' LCR floor requirement with a more individual and risk-based Pillar II liquidity add-on. The Pillar II liquidity add-on has to be reported during the observation period from 31 December 2019 and forward until the coming into force of the new EU rules on covered bonds, including the OC requirement.

NSFR

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

NSFR requires that so-called available stable funding must be equal to or higher than (minimum 100 pc) 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 (RSF) is calculated on the basis of an institution's assets. The more liquid an asset, the less stable funding an institution 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 their 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 pc, and in practice that exempts mortgage loans and issued mortgage bonds from the 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 pc of the required stable funding. DLR had an NSFR of 181 pc at the end of 2019.

NON-FINANCIAL RISK

Operational risk

At DLR, operational loss is defined as the loss resulting from inappropriate or deficient internal procedures, human or system error, or errors resulting from external events. In accordance with the risk taxonomy, operational risk covers the following three forms of risk:

- Operational risk
- Compliance risk
- IT risk

DLR's Board of Directors has therefore determined policies and guidelines for operational risk along with insurance coverage with the aim of reducing DLR's risk as much as possible.

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. DLR's Compliance function also helps minimise operational risk. 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 risk has been calculated at approximately DKK 2.4bn, equal to an 8 pc capital requirement of DKK 190m at 31 December 2019.

DLR has established business procedures concerning the regular noting 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 their next meeting. Overall, DLR experiences a relatively low number of operational incidents taking into account the number of cases handled each year.

Insurance risk

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.

IT and cyber security risk

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

DLR's IT strategy

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

DLR's IT strategy is based on the use of modern and proven technology. DLR develops strategic systems for mortgage lending in-house, while peripheral systems are based on acquired standard systems running on a Windows-based platform.

IT risk

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

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

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

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

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

Hence, contingency plans are in place should DLR's IT systems experience a serious incident that results in the digital systems being unavailable for shorter or longer periods of time. The goal of DLR's contingency planning is that key business functions can be re-established and run from alternative centres of operations within 48 hours of deciding to put the IT contingency plan into action. Business contingency plans have also been established.

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

Cyber security threats

The annual IT risk assessment addresses and evaluates prevailing threats from various types of cyber attack, where criminals use IT equipment to cause disruptions or to gain unauthorised access to data, systems, digital networks or digital services. DLR gathers information on cyber threats from, among other sources, the Centre for Cyber Security, Danmarks Nationalbank's annual "Generic Threat Landscape report" as well as information from Europol communicated through Finance Denmark.

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

Outsourcing

DLR uses outsourcing in connection with IT operations. Outsourcing is closely supervised in accordance with the Danish FSA's executive order on this, while separate guidelines have also been established for outsourcing. Hence, risk is assessed to be limited here.

Anti-money laundering (AML) and terror financing

DLR has a key responsibility to prevent and counter DLR being misused for financial crime.

Stronger framework and broad collaboration

DLR works continually to improve preventative measures against financial crime so that our efforts reflect the risk incurred by DLR's business activities. DLR's risk-scoring model was adjusted in 2019, and DLR is continuing to improve its internal controls. DLR incorporates new legislation and monitors developing trends in, for example, the money laundering of proceeds that stem from criminal activity or terror financing. Furthermore, DLR seeks to prevent financial crime by both participating in industry and organisation networks and by working actively with the authorities; for example, by contributing to FSA money laundering guidelines and a forthcoming industry standard for the Know Your Customer (KYC) procedure.

Finance Denmark's Money Laundering Task Force published its report at the end of 2019. The report mentions six behavioural principles, which DLR will work with in 2020.

Employees' role in prevention

DLR's employees play an important role in the fight against financial crime. Preventing financial crime is in continual focus and DLR reports suspicious customer behaviour and transactions to the State Prosecutor for Serious Economic and International Crime (SØIK).

DLR works continually to ensure that employees possess sufficient knowledge of the requirements that apply to the financial crime area – for example, through mandatory training for relevant employees.

The following policies and business procedures form the framework for DLR's work in the area:

- Risk management policy for the money laundering area
- DLR's "Risk assessment of the money laundering area"
- Business procedure on preventative measures against money laundering and terrorism.
- DLR's whistle-blower scheme

Managing AML work

DLR's Executive Board has appointed a Board member to be responsible for money laundering, who in cooperation with DLR's Head of AML is tasked with ensuring management is informed and focused on preventative measures against financial crime in DLR.

Processing of personal data

Existing legislation on personal data was tightened when the EU's General Data Protection Regulation (GDPR) came into effect in May 2018. GDPR lays down the rules for the protection of physical persons in connection with processing personal data, and includes an expansion of a registered person's rights. DLR's policy on the area sets out the general guidelines and principles for how DLR handles personal data, including the collection and storage of data, so that persons registered are assured a constant and high level of protection. All employees work to ensure

that the fundamental principles for good data processing practice are observed at DLR.

As part of complying with GDPR, DLR has appointed a Data Protection Officer (DPO). The DPO's role includes informing and advising the organisation and employees on data protection. Furthermore, it is the DPO that should be notified if employees experience or suspect a breach of data security.

DLR continually works to ensure appropriate protection and responsible handling of personal data. Employees at DLR have been through an internal training programme to become acquainted with the new rules and the DPO function in the organisation. In addition, DLR regularly reviews both IT and physical processes in order to ensure a high degree of protection.