



**RISK AND CAPITAL MANAGEMENT REPORT FEBRUARY 2018**

# RISK

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## Preface

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This risk and capital management report is being published in compliance with DLR's disclosure requirements under CRR rules. As a SIFI institution, DLR shall apply the European Banking Authority's (EBA) guidelines to all obligations of disclosure that DLR publishes after 31 December 2017. Publication is on DLR's website [www.dlr.dk/investor](http://www.dlr.dk/investor).

All information will be regularly updated to the extent deemed necessary, though at least in connection with the publication of DLR's Annual Report. A quarterly supplement to the annual risk and capital management report will

be published from 2018 onwards. The supplement will also be published on DLR's website [www.dlr.dk/investor](http://www.dlr.dk/investor).

It is the view of DLR that the information stated here complies with both the Pillar III information requirements as prescribed in the CRR regulation (CRR articles 431-455) and the EBA's guidelines on regulatory disclosure under the Pillar III requirements.

This report has been updated in accordance with DLR's Annual Report 2017 and has been approved by DLR's Board of Directors and Executive Board on 8 February 2018.



## Introduction

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DLR Kredit A/S<sup>1</sup> is a Danish mortgage credit institution owned by 58 local and national banks that collaborate with DLR and by Nykredit Realkredit A/S and PRAS A/S.

DLR grants loans against mortgages on real property in Denmark to finance agricultural property - including residential farms - and other commercial properties and private cooperative housing. Since 2002, DLR has also been granting loans in Greenland and since 2009 the Faroe Islands. At the end of 2017, DLR's loan portfolio in terms of nominal outstanding bond debt amounted to DKK 140.7bn, of which loans to Greenland and the Faroe Islands amounted to DKK 1.9bn or 1.4 pc of the loan portfolio.

DLR had, on average, 173 FTE employees in 2017. In addition, DLR has 24 agricultural valuation experts attached to the company. DLR has no branch offices, as loans are distributed through the branch networks of DLR's shareholder (owner) banks.

DLR's loan portfolio grew by DKK 3bn (nominal) in 2017. Lending for agricultural properties accounted for 62 pc of the portfolio, while lending for residential farms and owner-occupied dwellings amounted to just under 6 pc of the portfolio. The remaining just over 32 pc

was attributable to commercial property, the vast bulk of which was loans for office and retail property, private residential rental property and cooperative housing.

At the end of 2017, DLR's market share for agriculture-related mortgage loans was 32 pc, while its market share for mortgage loans on office and retail property and on private residential rental property was 9 pc and 7 pc, respectively.

DLR's main risk by far is credit risk, i.e. the risk that a borrower is unable to make the payments due on the loan to DLR. Credit risk is limited by collateral in the form of DLR's mortgage on the property and also the guarantee and loss-mitigating agreements DLR has with its loan-distributing shareholder banks

DLR's net profit after paying interest to the owners of hybrid (tier 1) core capital was DKK 824m, all of which was added to DLR's reserves, as DLR did not pay dividends to its shareholders.

DLR's capital base was further affected in 2017 by the sale of treasury shares for DKK 632m in all and the redemption of DKK 1.3bn in hybrid (tier 1) core capital alongside the simultaneous issuance of DKK 650m in supplementary (tier 2) capital. Developments in DLR's earnings and capital have resulted in

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<sup>1</sup> Hereafter DLR

DLR's total capital ratio increasing to 15.9 at the end of 2017 compared to 14.3 at the end of 2016. DLR's common equity tier 1 (CET 1) capital ratio was 15.1 at the end of 2017.

DLR has been rated by S&P Global Ratings since May 2012 and had its issuer rating raised by one notch in May 2017 to A-, still

with a stable outlook. DLR's covered bonds (SDO) and mortgage bonds (RO) have been assigned the highest rating of AAA by S&P and also have a stable outlook.

# 1. MANAGEMENT AND CONTROL OF RISK

## 1.1 Risk exposure and capital resources

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As a mortgage credit institution, DLR is exposed to various types of risk, such as credit risk, market risk, liquidity risk and operational risk, etc., of which credit risk is by far the most significant.

DLR applies the specific balance principle as defined in the Bond Executive Order to its lending activities. Applying the principle means there is a full funding match between the interest and principal payments received by DLR from borrowers and DLR's payments to bondholders. In practice, the balance principle means DLR's credit business does not assume interest rate, exchange rate or liquidity risk – including prepayment risk. DLR's main risk is credit risk, i.e. the risk that a borrower is unable to repay a loan.

However, DLR's risk of loss is estimated to be limited due to DLR's relatively simple business model, focus on policies and guidelines, strict credit management, guarantee and loss-mitigating concepts, limited market risk, etc.

Under current rules, Danish mortgage credit institutions may apply the standard method or the Internal Ratings Based (IRB) approach

when calculating the organisation's risk exposure for credit risk purposes. Regardless of the method chosen, the credit institution must allocate capital for each exposure equivalent to the risk on the exposure.

DLR has elected to operate with capital resources that exceed the regulatory minimum requirement. DLR's capital resources combined with its annual profit, which constitutes a front-line buffer against loss, should therefore be able to absorb losses on a substantial scale. Given this, the overall risk associated with DLR's operations is assessed to be limited.

Risk management is a key feature of DLR's day-to-day operations. Like other Danish mortgage credit institutions, DLR is subject to the Danish Mortgage Credit Loans and Mortgage Credit Bonds, etc. Act, the Danish Financial Business Act, the Executive Order on the Issue of Bonds, the Balance Principle and Risk Management ("the Bond Executive Order") and other executive orders issued pursuant to the above legislation. DLR's limited risk exposure is in part due to this detailed, risk-reducing legislation.

## 1.2 Overall risk management at DLR

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DLR is exposed to various types of risk; primarily credit risk, market risk and operational risk, but also liquidity risk, the risk of IT disruptions/breakdowns, financial counterparty risk, etc, all of which are discussed in detail in the following sections.

DLR's business model and the types of risk DLR is exposed to are closely linked.

DLR's Board of Directors has overall responsibility for monitoring and mitigating the risks incurred by DLR. Based on DLR's business model and risk assessments, etc. the Board of Directors has determined policies and guidelines and hence limits for the risks that DLR may assume. Delegation of responsibility throughout the organisation is based on these policies, guidelines and limits.

DLR's organisation is based on an Executive Board and a series of function Heads who all report directly to the Executive Board.

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

In compliance with 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 plan, conducts spot-check reviews of business procedures, manuals and internal controls in areas of importance and material risk. All business procedures, etc. are available to DLR's employees.

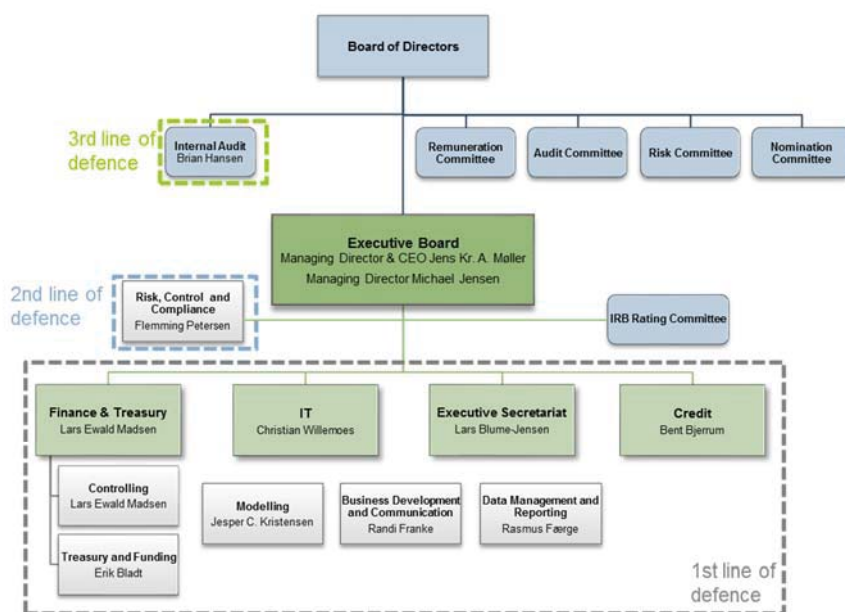
The Board of Directors is regularly updated on and addresses general risk issues at Board meetings and on an ad hoc basis as the situation requires. Furthermore, a comprehensive assessment of DLR's risk situation is prepared and presented at least annually to the Board of Directors, who determine whether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

DLR's Board of Directors has also established a *Risk Committee* and an *Audit Committee* to address risk issues. The Audit Committee is tasked with reviewing accounting, auditing and security practices and monitoring DLR's internal control and risk management systems. The Risk Committee's duties include advising the Board of Directors on DLR's overall current and future risk profile and

strategy, and helping the Board of Directors ensure its risk strategy is implemented. The Risk Committee also undertakes preparatory work on key materials associated with, for example, risk assessments and with determining

DLR’s adequate capital base and solvency need prior to the Board of Directors undertaking its deliberations.

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



Risk Management at DLR is built around the “three lines of defence” model. The Executive Board has further delegated day-to-day risk management responsibility with overall control based on three function levels:

The business operation constitutes the first line of defence. The business areas ensure that risks are identified, analysed, measured, controlled and reported, and that they are kept within the risk limits DLR’s management has

set, and also that business activities comply with external and internal requirements. The foundation for this is a clear organisational structure, well-defined reporting lines, authorisation procedures and people segregation (“four eyes principle”). This ensures a clear division of responsibilities and an appropriate segregation of functions between operations, development, risk management, reporting and control within the various types of risk.



The risk, control and compliance functions are the second line of defence. These functions are responsible for monitoring whether the management of risk and associated limits have been implemented and complied with, whether policies and business procedures are being followed and whether the internal control checks carried out by the business level function satisfactorily.

Internal audit – together with the external auditors – is the third line of defence. Based on an audit plan approved by the Board of Directors, Internal Audit is responsible for independently auditing DLR's internal controls and performing the statutory audit of DLR's annual report in collaboration with the external auditors. The internal and external auditors endorse the annual report and in connection with this submit an auditor's report to the Board of Directors detailing any issues identified that the Board should be informed about. Reports are also submitted on a regular basis to the Board of Directors and the Audit Committee.

### **1.3 Risk management, compliance and control**

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DLR has established both a *risk monitoring function* and a *compliance function* with an Independent Risk and Compliance Monitor responsible for ensuring that risk management and compliance tasks are performed appropriately. The independent risk and compliance

monitor reports directly to DLR's Executive Board. Dismissal of the independent risk and compliance monitor requires approval from DLR's Board of Directors.

In accordance with instructions, the independent risk and compliance monitor supervises DLR's governance arrangements, including the segregation of tasks in the organisation and the prevention of conflicts of interest. Supervision is based on the policies and guidelines drawn up by the Board of Directors along with associated business procedures and the business procedures prepared for the independent risk and compliance monitor. The independent risk and compliance monitor reports quarterly to the Executive Board on the control checks that have been made. The results of the control checks are also included in the annual risk report submitted to the Board of Directors.

The risk monitor may express concern and warn the Board of Directors about particular issues. In addition, the independent risk and compliance monitor always participates in the meetings of the Risk Committee and provides it with information. The independent risk monitor also regularly participates in the meetings of the Board of Directors, including in connection with presenting the risk management function's report.

DLR has, furthermore, established a separate *control function* which performs internal, independent control checks of all tasks that involve a material risk, cf. Executive Order on control and management of Banks, etc. The purpose of the control activities is to ensure that defined targets, policies, guidelines, manuals, procedures, etc. are adhered to and to prevent, identify and correct any errors, discrepancies, omissions, etc. in a timely manner. Control activities include manual and physical checks as well as general IT checks and automatic application controls in the various IT systems, etc.

Monitoring and control is done via ongoing and/or periodical assessments and checks at all significant levels. The extent and frequency of these mainly depends on the risk assessments and the results of ongoing checks. Any vulnerabilities, control failures, breaches of policy or limits, etc. or other discrepancies are reported to the Executive Board. Significant events are also reported to the Board of Directors, including the Audit Committee, and reported in the annual risk assessment.

DLR's risk and compliance monitor also has overall responsibility for DLR's independent control procedures, which ensures the risk monitor maintains a good overview of DLR's risks. Appropriate procedures have been established to ensure the independence of the

risk monitor despite any additional duties. The risk monitor, for example, does not check and control his/her own specific areas. The risk monitor may also requisition other DLR employees as needed to work on certain tasks. DLR's Risk and Compliance Monitor, Flemming Pedersen, has decided to retire from the end of February 2018, and DLR is therefore in the process of finding a replacement.

## 1.4 Managing credit risk

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Credit risk constitutes DLR's most important risk. However, several factors help to reduce credit risk. As a mortgage credit institution, DLR only grants loans against a registered mortgage on real property and within the statutory loan limits.

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 local knowledge. Credit scoring is the responsibility of DLR's credit department in Copenhagen. Credit scoring models are used for certain customer segments. DLR's organisational set-up ensures a separation of functions between the property valuation and the credit assessment.

DLR's Board of Directors has determined 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 the set limits, internal business procedures and instructions further delegate lending authorities to the various sections/persons in DLR’s organisation.

LTV calculations (calculations of the loan portfolio’s position in the order of priorities in the mortgaged properties) are used to create an overview of overall risk, as low LTV values indicate a relatively secure position in the order of mortgage priorities. DLR continually monitors LTV values, which are partly based on current (mainly annual) market valuations. Continual LTV monitoring is a permanent feature of DLR’s management reporting.

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 significant guarantee schemes that the loan-distributing banks (DLR’s shareholders) provide for the distributed loans. The schemes also include loss off-setting in the commission payments made to the banks.

Internal rating models are used with the bulk of the loan portfolio to calculate credit risk. The rating models for full-time farms comply with the requirements for advanced internal ratings-based methods (IRBA) and are approved by the Danish Financial Supervisory

Authority (FSA). The models are regularly validated. A detailed analysis of the models’ performance is made annually and supplemented with quarterly and - for some analyses - monthly updates. Validations and updates are reviewed by DLR’s Rating Committee, with significant changes requiring pre-approval from the Board of Directors and an auditors’ report before approval for the change can be sought from the Danish FSA.

DLR’s Risk Committee prepares and reviews a list of DLR’s 20 largest risks on a quarterly basis. The review is based on an evaluation of the assessed probability of the event occurring and the estimated cost of the event should it occur.

## 1.5 Management declaration

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DLR Kredit A/S’s Board of Directors approved DLR’s Risk and Capital Management Report on 8 February 2018.

It is the Board of Directors’ view that DLR’s risk management procedures are adequate and ensure implemented risk management systems meet all requirements with respect to DLR’s profile and strategy.

Furthermore, the Board of Directors views the description below of DLR’s general risk profile as giving a true and fair picture of DLR’s risk management and risk appetite.

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

An examination of the business model and policies indicates that the general requirements of the business model for each risk area are fully and comprehensively reflected in the more specific limits of the individual policies. A review of the Board of Director's instructions to the Executive Board and the authorities delegated to the Executive Board indicates that stipulated limits in individual policies are fully and comprehensively reflected in the underlying instructions to the Executive Board and the authorities delegated to the Executive Board, and that real risks are within the limits stipulated in individual policies and authorities. Based on this, the Board of Directors concludes there is compliance between the business model, policies and instructions and the real risks in the individual areas.

DLR's business strategy is based on its goal of being a strong and attractive partner within its market area. DLR aims for profitable earnings based on product pricing that reflects the

risks and capital requirements DLR assumes together with a holistic assessment of the scope of its business with customers and counterparties. DLR aims to have a suitably 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's capital target was 14.4 pc at the end of 2017, while DLR's total capital ratio was 15.9 pc.
- DLR's Board of Director's has defined a leverage ratio limit of 5 pc, which is above the statutory limit of 3 pc. DLR's leverage ratio was 7.0 pc at the end of 2017.
- 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 was 1.5 pc at the end of 2017.

The Board also takes into account, for example, the limits set in the Danish FSA's "Supervisory Diamond".

## 2. MANAGEMENT AND ADMINISTRATION

### 2.1 DLR's Board of Directors

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At the end of 2017, DLR's Board of Directors consisted of 14 members, of whom nine were elected at the Annual General Meeting. Of the AGM-elected Board members, four were elected from among the members of the Association of Local Banks, Savings Banks and Cooperative Banks in Denmark, and four from among the members of National Banks in Denmark. Furthermore, one member was elected jointly by the two Associations.

DLR employees also elected five members to the Board of Directors.

As of year-end 2017, the Board of Directors consisted of:

#### Elected by the General Meeting

- Vagn Hansen (chairman), Managing Director & CEO, Sparekassen Vendsyssel
- Lars Møller (vice chairman), Managing Director, Spar Nord Bank A/S
- Claus Andersen, Managing Director & CEO Nordjyske Bank A/S
- Gert R. Jonassen, Managing Director & CEO, A/S Arbejdernes Landsbank
- Karen Frøsig, Managing Director & CEO, Sydbank A/S
- Peter Gæmelke, Farmer
- Torben Nielsen, former governor of Denmark's Nationalbank
- Jan Pedersen, Managing Director & CEO, Danske Andelskassers Bank A/S

- Lars Petersson, Managing Director & CEO, Sparekassen Sjælland-Fyn A/S

#### Employee representatives:

- Randi H. Franke, Head of Business Development and Communication
- Jakob G. Hald, Agricultural Account Manager
- Kim Hansen, Office Attendant
- Søren Jensen, Legal Consultant
- Agnete Kjærsgaard, Administrative Officer

Gert R. Jonassen, Managing Director & CEO, A/S Arbejdernes Landsbank, was elected to DLR's Board of Directors at the Annual General Meeting on 27 April 2017. Anders Dam, Managing Director & CEO, Jyske Bank A/S, stepped down from the Board at this time. The remaining Board members elected by the Annual General Meeting were re-elected.

#### Other directorships held by the Board of Directors

Vagn Hansen (chairman), Managing Director & CEO, Sparekassen Vendsyssel

- Chairman of the Board of Directors of EgnInvest Holding A/S as well as two subsidiaries
- Chairman of the Board of Directors of HN Invest Tyskland 1 A/S
- Member of the Board of Directors of Spar Invest Holding SE
- Member of the Board of Directors of Skandinavisk Data Center A/S (SDC)
- Member of the Board of Directors of Spar Pantebrevsinvest A/S



- Member of the Board of Directors of Lokale Pengeinstitutter
- Member of the Board of Directors of Forvaltningsinstituttet for Lokale Pengeinstitutter

Lars Møller (vice chairman), Managing Director, Spar Nord Bank A/S

- Chairman of the Board of Directors of BI Holding A/S (Bankinvest Gruppen)
- Chairman of the Board of Directors of BI Asset Management A/S
- Chairman of the Board of Directors of BI Management A/S
- Member of the Board of Directors of Aktieselskabet Skelagervej 15

Claus Andersen, Managing Director & CEO, Nordjyske Bank A/S

- Chairman of the Board of Directors of Sæbygaard Skov A/S
- Member of the Board of Directors of Foreningen Bankdata
- Member of the Board of Directors of Lokale Pengeinstitutter
- Member of the Board of Directors of BI Holding A/S (Bankinvest Gruppen)
- Alternate Member of the Board of Directors of Finance Denmark

Peter Gæmelke, Farmer, Vejen

- Chairman of the Board of Directors of Danske Spil A/S
- Chairman of the Board of Directors of Løvenholmfonden (Commercial foundation)
- Chairman of the Board of Directors of NGF Nature Energy Biogas A/S

- Chairman of the Board of Directors of foreningen Norliv fmba
- Chairman of the Board of Directors of Det Grønne Museum
- Member of the Board of Directors of Kirkbi A/S
- Member of the Board of Directors of Fællesfonden
- Member of the Board of Directors of Nordea Liv and Pension A/S
- Member of the Board of Directors and member of the Committee of Shareholders of Tryghedsgruppen smba
- Member of the Board of Directors and member of the Supervisory Board of Askov Højskole
- Member of the Board of Directors of Danmarks Nationalbank
- Member of the Committee of Shareholders of Sydbank A/S
- Member of the Committee of Representatives of Hedeselskabet

Karen Frøsig, Managing Director & CEO, Sydbank A/S

- Chairman of the Board of Directors of Ejendomsselskabet af 1. juni 1986 A/S
- Chairman of the Board of Directors of DIBA A/S
- Chairman of the Board of Directors of Foreningen Bankdata
- Member of the Board of Directors and vice chairman of Landsdækkende Banker
- Member of the Board of Directors and vice chairman of PRAS A/S
- Member of the Board of Directors of Finance Denmark

- Member of the Board of Directors of Totalkredit A/S
- Member of the Board of Directors of BI Holding A/S (Bankinvest gruppen)
- Member of the Board of Directors of Musikhuset Esbjerg (The Esbjerg Performing Arts Centre) – a Commercial Foundation
- Member of the Board of Directors of FR I af 16. september 2015 A/S
- Member of the Board of Directors of Sydbank Sønderjyllands Fond
- Member of the Board of Directors of Sydbank Fonden
- Member of the Committee for Good Governance

Gert R. Jonassen, Managing Director & CEO, A/S Arbejdernes Landsbank

- Chairman of the Board of Directors of AL Finans A/S
- Chairman of the Board of Directors of Foreningen Bankernes EDB-Central
- Member of the Board of Directors and Vice Chairman of Finanssektorens Uddannelsescenter
- Member of the Board of Directors and Vice Chairman of LR Realkredit A/S
- Member of the Board of Directors of Pension Danmark Holding A/S
- Member of the Board of Directors of Pension Danmark Pensionsforsikringsaktieselskab
- Member of the Board of Directors and vice chairman of PRAS A/S
- Member of the Board of Directors of Landsdækkende Banker

- Member of the Board of Directors of Totalkredit A/S
- Managing Director at Handels ApS Panoptikon

Torben Nielsen, former governor of Danmarks Nationalbank

- Chairman of the Board of Directors of Investeringsforeningen Sparinvest
- Chairman of the Board of Directors of Eik Banki p/f\*
- Chairman of the Board of Directors of Museum Sydøstdanmark
- Chairman of the Board of Directors of Sydbank A/S
- Member of the Board of Directors and Vice Chairman of Tryg A/S
- Member of the Board of Directors and Vice Chairman of Tryg Forsikring A/S
- Member of the Board of Directors of Sampension KP Livsforsikring a/s

\*Will step down on 23 February 2018

Jan Pedersen, Managing Director & CEO, Danske Andelskassers Bank A/S

- Chairman of the Board of Directors of DAB Invest A/S
- Chairman of the Board of Directors of DAB Invest 2 A/S
- Member of the Board of Directors and Vice Chairman of Sparinvest Holdings SE
- Member of the Board of Directors of Bankernes EDB-central (BEC)
- Member of the Board of Directors of Fonden for Andelskasserne in area NORTH
- Chairman and Managing Director of Villa Prisme Komplementaranpartsselskab

Lars Petersson, Managing Director & CEO of Sparekassen Sjælland-Fyn A/S

- Chairman of the Board of Directors of Holbæk Kommunes Talentråd
- Chairman of the Board of Directors of Museum Vestsjælland
- Member of the Board of Directors and Vice Chairman of Nærpension
- Member of the Board of Directors and Managing Director of Investerings-selskabet af 10. marts 2015 ApS
- Member of the Board of Directors of Ejendomselskabet Sjælland-Fyn A/S
- Member of the Board of Directors of Investerings-selskabet Sjælland-Fyn A/S
- Member of the Board of Directors of BI Holding A/S (Bankinvest Gruppen)
- Member of the Board of Directors of Tilskuds-fonden for pensionister i DLR
- Member of the Board of Directors of Copenhagen FinTech
- Member of the Board of Directors of Regional Invest Fyn A/S
- Member of the Board of Directors of Poulsgade A/S

## 2.2 Board committees

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Four committees have been set up under DLR's Board of Directors with dedicated supervisory roles in various areas or to prepare certain matters prior to them being considered by the Board as a whole. Committee members are drawn from DLR's Board of Directors, including both employee-elected and AGM-elected.

As of year-end 2017, the Board committees consisted of:

### Audit Committee

- Torben Nielsen, former governor of Danmarks Nationalbank (chairman)
- Claus Andersen, Managing Director & CEO
- Søren Jensen, Legal Consultant

### Risk Committee

- Lars Møller, Managing Director (chairman)
- Torben Nielsen, former governor of Danmarks Nationalbank
- Jakob G. Hald, Agricultural Account Manager

### Remuneration Committee

- Vagn Hansen, Managing Director & CEO (chairman)
- Lars Møller, Managing Director
- Søren Jensen, Legal Consultant

### Nomination Committee

- Vagn Hansen, Managing Director & CEO (chairman)
- Lars Møller, Managing Director (vice chairman)
- All other members of DLR's Board of Directors

### Audit Committee tasks

DLR's Audit Committee is tasked with:

- monitoring the financial reporting process
- monitoring whether DLR's internal control systems and security measures together with internal auditing and risk management systems function effectively

- monitoring whether the Executive Board responds effectively to weaknesses and/or omissions
- ensuring agreed initiatives on strengthening risk management and internal controls, including in relation to the financial reporting process, are implemented as planned.

The Audit Committee met five times in 2017.

### **Risk Committee tasks**

In accordance with its defined mandate, DLR's Risk Committee shall:

- advise the Board of Directors on DLR's overall current and future risk profile and strategy.
- have a preparatory role in relation to the Board of Director's deliberations on determining DLR's adequate capital base and solvency need, and make recommendations to the Board of Directors on the adequacy of DLR's capital base in relation to both regulatory requirements and internal targets. Based on this, the Committee shall also review DLR's capital plans and recovery plans, etc.
- assist the Board of Directors in ensuring the Board of Director's risk strategy is implemented correctly in the organisation.
- assess whether the loan products, etc. that DLR offers its customers are in accordance with DLR's business model and risk profile, including whether earnings from the products and services reflect the risks involved and provide feedback if the products or services and their earnings

are not in accordance with DLR's business model and risk profile.

- assess whether the incentives in DLR's remuneration structure take into account risk, capital, liquidity and the probability and timing of the remuneration payment.

The Risk Committee met five times in 2017.

### **Remuneration Committee tasks**

The Remuneration Committee has a preparatory role in the Board of Directors' work concerning, for example:

- remuneration matters, including remuneration policy and other decisions relating to remuneration that may affect DLR's risk management
- the Board of Directors' appointing of material risk takers.

Please also refer to section 2.6 on remuneration policy.

The Remuneration Committee met twice in 2017.

### **Nomination Committee tasks**

The Nomination Committee should work to ensure:

- that DLR's Board of Directors has the requisite level of knowledge and experience. Please also refer to section 2.4 on appointments policy.

The Nomination Committee met twice in 2017.

## 2.3 DLR's Executive Board

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DLR's Executive Board comprises Managing Director & CEO Jens Kr. A. Møller and Managing Director Michael Jensen.

At year-end 2017, the members of DLR's Executive Board held the following directorships:

Jens Kr. A. Møller, Managing Director & CEO

- Member of the Board of Directors of Finance Denmark and the Association of Danish Mortgage Banks
- Member of the Board of Directors of e-nettet A/S
- Member of SEGES's Sector Board for Business Finance & Management
- Member of the Board of Directors of FR I af 16. september 2015 A/S

## 2.4 Appointments policy

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

DLR will continually ensure that the members of DLR's Board of Directors have sufficient collective knowledge, professional competence and experience. The Nomination Committee set up under the Board of Directors prepares the full Board's review of issues associated with the knowledge and experience of

DLR's Board members. One of the responsibilities of the Nomination Committee is to identify and recommend candidates to 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 at DLR. When recommending new candidates to the Board of Directors, DLR's Nomination Committee also takes into consideration the underrepresented gender and diversity.

## 2.5 Diversity policy

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DLR's Board of Directors has adopted a policy on diversity in the Board of DLR Kredit A/S. The Board of Directors' aim with the policy is to promote the diversity that is relevant and necessary for DLR in its Board of Directors. The composition of the Board should be based on a diversity of competences and backgrounds. Particular emphasis has been placed on the need for diversity with respect to professional background, business experience, gender and age.

Diversity is viewed as a strength that can positively contribute to DLR's development, risk management, robustness, success and growth.

Diversity should increase the quality of the Board's work and interactions, for example through a diversified approach to management tasks.



Where relevant, the requirements on the Board's competences and self-evaluations that are set out in the Danish Financial Business Act, the Executive Order on Management and Control of Banks, etc. and the Danish FSA's guidelines on the self evaluation of Boards of Directors will be incorporated.

When recruiting candidates to the Board of Directors, focus is on attracting candidates with different competences, backgrounds, knowledge and resources that align with DLR's business model and current and future priorities. When appointing candidates to the Board of Directors, great emphasis is placed on ensuring compliance with conclusions, etc in the Board's self-evaluation, such that the necessary qualifications are consistently present in DLR's Board of Directors.

When assessing potential DLR Board candidates, DLR's Nomination Committee attaches crucial importance to the candidates put forward being at all times the most suitable irrespective of gender, ethnicity, religious affiliation, etc. If two candidates are determined to be equally qualified, the candidate that represents the underrepresented gender on the Board will be proposed as a member.

The majority of the AGM-elected members of DLR's Board of Directors are members of the executive boards of local or national banks in Denmark. The number of female executive

board members at these institutions is currently very limited. This has an influence on the composition of DLR's Board of Directors, which at the end of 2017 consisted of eleven men and three women.

The Nomination Committee has set targets for gender distribution among DLR's Board members, which given the above are considered ambitious. The target was raised in October 2017. In the short term, which is taken to be within three years, the goal is for at least 25 pc of DLR's Board members to be female. Hence, the goal is for at least one more female member to be elected to the Board by the time of the AGM in 2020.

## 2.6 Remuneration policy

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DLR's Board of Directors has adopted a remuneration policy for DLR Kredit A/S that has been approved by the General Meeting. The remuneration policy states that DLR does not pay variable remuneration components to the Board of Directors, the Executive Board or material risk takers.

DLR's remuneration policy has been shaped by the wish to promote a remuneration practice that is in accordance with and promotes sound and effective risk management, does not encourage excessive risk taking and which is pursuant to DLR's business strategy, values and long-term objectives, including a sustainable business model.

Qualitative data on the remuneration of staff identified as material risk takers is presented in Table 1.

DLR's Board of Directors' Remuneration Committee has a preparatory role in the Board of Director's work concerning remuneration. The Remuneration Committee undertakes the preparatory work ahead of the Board of Directors'

decision-making on remuneration matters, including remuneration policy and other decisions relating to remuneration that may affect DLR's risk management. Furthermore, the Committee also undertakes the preliminary work connected with the Board's task of appointing material risk takers.

**Table 1 - Data on remuneration of staff identified as material risk takers**

	2017	2016
	(DKKm)	
<b>Executive Board*</b>		
Jens Kr. A. Møller, Managing Director & CEO	4.0	3.8
Michael Jensen, Managing Director	2.8	2.7
Total remuneration for Executive Board	6.8	6.5
* Executive Board only receives a fixed remuneration		
<b>Board of Directors</b>		
	(DKKm)	
Fixed remuneration	2.0	2.0
Variable remuneration	0.0	0.0
<b>Total remuneration for Board of Directors</b>	<b>2.0</b>	<b>2.0</b>
Number of Board of Director members, year-end	14	14
<b>Remuneration paid to the Board of Directors for participating in board work and the Risk and Audit Committees</b>		
	(DKK 1,000)	
Vagn Hansen, chairman	248	248
Lars Møller, vice chairman from April 2017	202	165
Anders Dam, vice chairman (stepped down April 2017)	52	165
Claus Andersen (took up position April 2016)	138	93
Claus Andreasen (stepped down April 2017)	36	110
Randi Franke (took up position April 2017)	74	0
Karen Frøsig	110	110
Peter Gæmelke	110	110
Jakob G. Hald	138	138
Kim Hansen (took up position April 2017)	74	110
Søren Jensen	138	138
Gert R. Jonassen (took up position April 2017)	74	0

Agnete Kjærsgaard	110	110
Torben Nielsen	193	193
Benny Pedersen (stepped down April 2017)	36	110
Jan Pedersen	110	110
Lars Petterson	110	110
Ole Selch Bak (stepped down April 2016)	0	45
<b>Total</b>	<b>1,953</b>	<b>1,953</b>

Members of the Board of Directors do not receive shares or other forms of incentives

<b>Other employees with influence on DLR's risk profile</b>	(DKK 1,000)	
Fixed remuneration	18.2	16.7
Variable remuneration	0.0	0.0
<b>Total</b>	<b>18.2</b>	<b>16.7</b>

#### Number of employees with influence on DLR's risk profile

Number of employees who have had an influence on DLR's risk profile in 2017	18	19
- Of which left during the year	1	4
Number of employees with influence on DLR's risk profile, year-end	17	15

DLR has no pension obligations or incentive programmes for the above-mentioned group of people.

## 2.8 Risk information flow to the management body

DLR's business operations are largely based on using IT systems, and DLR seeks as far as possible to support both legislative and business rules along with DLR's prescribed guidelines through system checks and controls and through reporting.

DLR's credit and risk management is based on regular reports (daily, weekly, monthly and quarterly) produced using SAS software and drawing on DLR business data generated by

an internally developed mortgage credit system. With respect to the actual credit and risk management models, these have been established using a SAS data warehouse. The credit and risk management models are developed, maintained and supported by DLR's Model Development department and established partly in a SAS-based programme environment and partly in DLR's mortgage credit system.

The Executive Secretariat independently attends to a number of reporting tasks in relation to both DLR's Executive Board and Board

of Directors. In addition, the Executive Secretariat is also responsible for reporting tasks connected with DLR's Board Committees.

The frequency and extent of reporting varies greatly, from regular monthly reports with a largely fixed structure to more ad hoc reporting duties prompted by, for example, statutory requirements, etc. The necessity and extent of reporting is regularly adjusted in line with

regulations, etc. In addition, general updates are presented to DLR's Board of Directors at Board meetings, which are held at least four times a year in connection with the financial reporting process.

Scheduled risk-related reports presented to DLR's Executive Board and Board of Directors are shown in table 2.

**Table 2 - Overview of DLR's risk reports**

<b>Topic</b>	<b>Recipient</b>	<b>Frequency</b>
Briefings – loan offers	Board of Directors	Quarterly
Supplementary collateral and capital requirements	Board of Directors	Quarterly
Capital position – individual solvency need (ICAAP)	Board of Directors	Quarterly
Capital position – contingency plan	Board of Directors	Quarterly
Compliance with capital adequacy requirement	Board of Directors	Quarterly
Overview of recovery indicators	Board of Directors	Quarterly
Report on Executive Board's administration of guidelines for exposures to banks	Board of Directors	Semi-annual
Liquidity report (ILAAP)	Board of Directors	Annual
Risk assessment	Board of Directors	Annual
Recovery plan	Board of Directors	Annual
Developments in DLR's lending, market shares and loan portfolio rating	Board of Directors, Executive Board	Monthly
Losses, arrears, impairments and distressed properties, etc.	Board of Directors, Executive Board	Quarterly
Composition of loan portfolio	Board of Directors, Executive Board	Quarterly
Distributed loans by bank	Board of Directors, Executive Board	Quarterly
Portfolio report	Board of Directors, Executive Board	Quarterly
Status report on ratings systems	Board of Directors, Executive Board	Semi-annual
Review of assets (S. 78)	Board of Directors, Executive Board	Annual
Independent Risk Monitor's review and report (S. 71)	Board of Directors, Executive Board	Annual
Compliance report (S.71)	Board of Directors, Executive Board	Annual
Risk and capital management (Pillar III report)	Board of Directors, Executive Board	Annual/quarterly
Market risk on portfolio holdings	Executive Board	Every 14 days
Assessment of solvency need and potential updates	Executive Board	Monthly

### 3. SUPERVISORY DIAMOND

The Danish FSA has defined a “Supervisory Diamond” for mortgage credit institutions that comprises five indicators with associated benchmarks (see table 3).

DLR has in recent years been working to comply with the Diamond’s 2018 (1, 2 and 5) and 2020 (3 and 4) criteria. In particular, consid-

erable work has been done in relation to criteria 4, loans with short-term funding, including campaigns, etc. targeting existing borrowers with the aim of securing a longer maturity on loan funding.

DLR met the Supervisory Diamond’s criteria at the end of Q4 2017.

**Table 3. DLR’s compliance with Supervisory Diamond benchmarks for MCIs, end-Q4 2017.**

<b>Supervisory Diamond for Mortgage credit institutions</b>	<b>End-Q4 2017</b>	<b>End-Q3 2017</b>	<b>Danish FSA limits</b>
1. Lending growth: (current quarter)			
Owner-occupied	0.3%	0.5%	<15%
Private rental property	8.5%	9.8%	<15%
Agriculture	1.1%	1.5%	<15%
Other commercial	2.5%	2.9%	<15%
2. Borrower’s interest rate risk:	21.7%	22.8%	<255
3. Interest-only loans to private individuals:	3.2%	3.5%	<10%
4. Loans with short-term funding: quarterly			
Q3 2016		7.4%	<12.5%
Q4 2016		5.4%	<12.5%
Q1 2016		0.0%	<12.5%
Q2 2017		4.7%	<12.5%
Q3 2017		9.3%	<12.5%
5. Loans with short-term funding: annually	19.6%	17.5%	<25%
6. Large exposures	28.1%	27.4%	<100%



## 4. CAPITAL POSITION

The Danish Financial Business Act and the Danish Executive Order on the Determination of Risk Exposures, Own Funds and Solvency Need, etc. together with the European Parliament and Council's regulation (EU) no. 575/2013 of 26 June 2013 form the basis for DLR's capital management. DLR complies with the three regulatory pillars consisting of the minimum capital requirement (Pillar I), the capital adequacy requirement (Pillar II) and the disclosure requirement (Pillar III). The Board of Directors and the Executive Board are responsible for ensuring that DLR's capital structure is appropriate and that the total capital ratio complies with regulatory requirements.

### 4.1 Capital management

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DLR's capital structure should provide sufficient capital adequacy and thus create the foundation for running a sound mortgage credit business that can sell bonds on competitive terms. Moreover, the capital structure should be based on having the largest possible equity given the cost of other capital components, including hybrid (tier 1) core capital and supplementary capital. DLR must also have sufficient surplus to ensure continual LTV compliance with respect to covered bond (SDO) loans and to meet OC requirements

from the rating agencies and also requirements concerning the accumulation of a debt buffer.

#### Capital targets

DLR is focused on both the already implemented changes regarding the mortgage credit institutions' composition of capital in accordance with CRD IV/CRR and potential future requirements. The purpose of DLR's capital targets is for DLR to have a sufficient capital base 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 requirements. DLR also aims for an additional surplus. The extent of the combined capital buffer requirements is affected by any potential phasing in of the cyclical buffer. Given the current 0% requirement for the cyclical buffer, DLR's capital target has been set at 14.7 pc in 2018 rising to within the range 15.5-17 pc in 2019, depending on the potential phasing in of the cyclical buffer.

The cyclical buffer (the counter-cyclical buffer rate) is set every quarter by the Minister for Industry, Business and Financial Affairs and has most recently been set to 0 pc at the end of December 2017. The Systemic Risk council recommended a rate of 0.5 pc at its December

2017 meeting, prompting the Ministry of Industry, Business and Financial Affairs to announce that the Minister would assess the need to activate the counter-cyclical buffer in Q1 2018.

### Long-term capital plan

DLR's capital management has for several years centred around a long-term capital plan focused on complying with future requirements for altered capital structures and the regular phasing in of buffer requirements, etc. The capital plan is continually adjusted to take into account lending growth, capital initiatives, earnings and regulatory changes, etc.

DLR's capital plan going forward to 2022 centres on the following:

- Consolidation of future financial surpluses. DLR is assumed not to pay a dividend.
- DLR uses the IRB approach to calculate risk exposure on its full-time agriculture property portfolio. DLR is also currently working to develop IRB models for its retail farm and commercial property loan portfolio, which is, however, not included.
- Continual compliance with LTV requirements and the OC requirements of the rating agencies.
- Issuance of capital to fulfil the debt buffer of 2 pc of total unweighted lending.
- Ongoing implementation of DLR's universal guarantee concept.

- Inclusion of other potential operational factors, such as developments in losses and impairments, lending growth, etc.

The composition of DLR's capital structure, etc. is regularly reassessed against DLR's capital plan.

## 4.2 Capital base and capital ratios

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DLR's capital structure has been regularly strengthened in recent years towards having a greater share of equity. This has been accomplished through the consolidation of earnings and repeated increases in DLR's share capital, etc. Moreover, DLR has not paid a dividend during the period. DLR has, however, also chosen to buy back shares from both Finansiel Stabilitet and Danmarks Nationalbank. The impact of these buybacks has been subsequently reduced, as a substantial portion of these shares has been sold on to DLR's shareholders.

The individual components of DLR's capital base at 31 December 2017 are shown in tables 4 and 5.

DLR's capital base increased by DKK 812m in 2017, mainly due to the entire net profit of DKK 824m being transferred to DLR's reserves.

The risk-weighted exposure amount for credit risk was, moreover, reduced from DKK 75.3bn at the end of 2016 to DKK 71.8bn at the end

of 2017. This was essentially due to improved conditions for the agricultural sector in 2017 and hence an improvement in the loan portfolio's creditworthiness.

In Q3 2017, DLR redeemed the DKK 1,300m in hybrid (tier 1) core capital it issued to PRAS A/S in 2012 and at the same time issued DKK 650m in new supplementary (tier 2) capital, also to PRAS A/S. These transactions should be seen against DLR's capital base being strengthened in H1 2017 through the sale of treasury shares at a market value of DKK

632m. DLR's solvency situation is therefore in reality unaffected by the redemption of the hybrid core capital, while the level of common equity tier 1 (CET 1) capital has been strengthened.

At year-end 2017, DLR's capital base was composed solely of core capital (CET 1) and supplementary capital. Supplementary capital (tier 2) accounted for DKK 650m, and in total the capital base amounted to DKK 12.4bn at year-end 2017 compared to DKK 11.6bn at year-end 2016.

**Table 4 - DLR's capital base**

(DKK m)	2017	2016
Share capital	570	570
Issuance premium	0	0
Non-distributable reserves	2,338	2,338
Retained earnings	8,683	7,325
Profit for the year	824	726
Tier 1 primary deductions:	-693	-699
Core capital after primary deductions (CET 1 capital)	11,722	10,260
Additional (hybrid) tier 1 capital	0	1,300
Tier 1 incl. hybrid core capital after deductions	11,722	11,560
Other deductions	0	0
Tier 1 capital incl. hybrid core capital	11,722	11,560
Supplementary capital	650	0
Included supplementary capital	650	0
Capital base before deductions	12,372	11,560
Deductions in capital base	0	0
Capital base after deductions	12,372	11,560

**Table 5 - DLR's total capital ratio**

(DKKmn)	2017	2016
Equity:		
– Distributable reserves	10,077	8,621
– Non-distributable reserves	2,338	2,338
– Additional tier 1 (hybrid) capital (2012)	0	1,300
Total equity	12,415	12,259
Capital base after deductions	12,372	11,560
REA	77,872	80,674
Solvency requirement	6,643	6,454
DLR's total capital ratio	15.9%	14.3%

### Capital ratios

DLR's total capital ratio was 15.9 pc at end-December 2017; cf. figure 2. DLR has calculated risk exposure on its full-time agriculture portfolio using the IRB approach, while the standard method was used for the other portfolio.

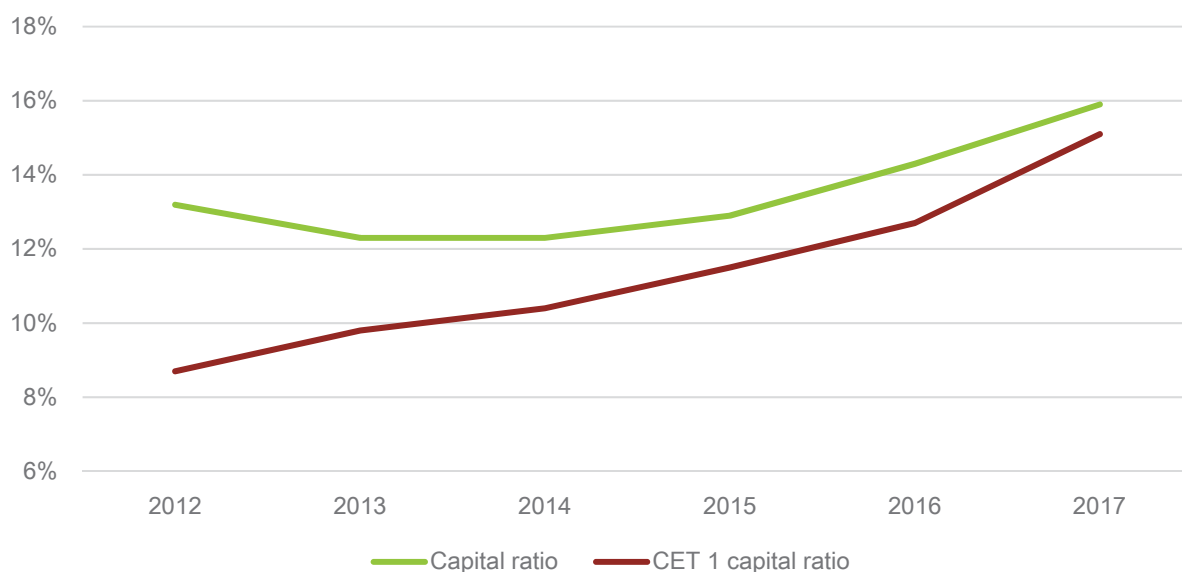
The common equity tier 1 (CET 1) capital ratio was 15.1 pc at end-December 2017.

Both the CET 1 capital ratio and the total capital ratio have been rising for quite some time. This is in part due to a gradual adjustment of DLR's capital structure towards complying with the capital requirements that are being phased in going forward to 2019.

Moreover, further changes to the capital requirements are on the cards, for example in the markets area, while the Basel Committee at the end of 2017 finished its work on a series of important changes to the capital requirements, such as calculating a floor requirement for IRB institutions. Depending on how these recommendations are implemented in the EU, this could also have consequences for determining capital.

Given its current capital base and earnings forecasts, DLR expects to be in a position to comply with the gradually increasing capital requirements.

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



### 4.3 Capital requirements

Statutory capital requirements amounted to 10.4 pc for DLR at the end of 2017. The capital requirement is based on the classic 8 pc requirement. On top of this comes the SIFI requirement, which was 0.6 pc for DLR at the end of 2017 and will gradually increase to 1 pc in 2019. Furthermore, a capital conservation buffer has been added, which at the end of 2017 was 1.25 pc but which will also increase going forward to 2019 to 2.5 pc. In 2018, the SIFI requirement and the capital conservation buffer will thus amount to 0.8 and 1.875 pc, respectively. And finally comes the solvency need (Pillar II requirement) of 0.5 pc.

### 4.4 Solvency requirement, adequate capital base and individual solvency need

DLR's Board of Directors discusses and approves DLR's capital adequacy and individual solvency need every quarter based on a recommendation from DLR's Executive Board. DLR's Risk Committee reviews the calculation prior to submission. In addition, the Board of Directors discusses in detail the methods, etc. used to calculate DLR's solvency need, including which risk areas, stress tests and benchmarks should be considered.

Determination is 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. Generally, these are credit risk, market risk and operational risk as well as a number of sub-categories. The assessment is based on DLR's risk profile, capital position and any significant forward-looking factors, including budgets, etc.

DLR complies with the instructions 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; for example, by evaluating DLR's resilience in the event of severe loss scenarios based on historical observations. Stress tests therefore comprise a key element of risk management at DLR.

DLR's resilience is assessed by, among other things, a stress test covering several different scenarios. One of these scenarios is a severe recession with a significant drop in property prices and a fall in settlement prices in the agricultural area, etc. that correspond to the benchmarks defined in the Danish FSA's macroeconomic stress tests. An assessment is made of the soundness of DLR's earnings and capital base under this scenario.

The calculation is further reinforced 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 of whether an add-on to DLR's adequate capital base is needed because of other factors.

- Credit risk
- Earnings and growth
- Credit risk for large customers
- Model uncertainty
- Other credit risks
- Counterparty risk (financial counterparties)
- Credit risk concentration
- Market risk, including
- Interest rate risk
- Equity market risk
- Exchange rate risk
- Liquidity risk
- Operational risk
- Leverage

In DLR's opinion, the risk factors comprise all the risk areas that Danish law requires the management of DLR to take into account in determining the adequate capital base and solvency need. Relevant departments are also involved in determining DLR's adequate capital base and solvency need, including participating in preliminary and subsequent discussions of stress tests, etc. for the various business areas.

*Credit risk* is DLR's largest risk area and also where the bulk of the solvency need can be attributed; cf. table 14. DLR therefore has considerable focus on this area. DLR uses the IRB approach to calculate the risk exposure

on its full-time agriculture property portfolio. For the other portfolio, DLR uses the standard method to calculate the risk exposure for credit risk. Please also refer to section 4 on credit risk.

*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 above the 8 pc. DLR's market risk is estimated to be limited due to the balance principle, just as DLR has set narrow limits for interest rate risk.

Operational risk is defined as the risk of direct or indirect loss caused by inadequate or faulty processes, systems etc. Given DLR's simple business model, focus on internal processes, etc., this risk is estimated to be limited.

DLR employs the Basic Indicator Approach (BIA) to calculate the capital requirement for operational risk.

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. Determination of the need for a potential add-on is based on either the stress tests defined in Danish FSA guidelines, DLR's own stress tests or by a management assessment of whether individual business areas require an add-on.

DLR's adequate capital base was calculated as DKK 6,643m at year-end 2017; cf. table 6. As DLR's total risk exposure amount (REA) was DKK 77,872m, this equates to a solvency need of 8.53 pc.

In accordance with CRR article 92, DLR has calculated its excess capital with respect to the individual solvency need as 5.5 percentage points or DKK 4.3bn at year-end 2017. DLR considers this satisfactory.



**Table 6. DLR's capital adequacy and individual solvency need at 31 December 2017**

<b>Risk area</b>	<b>Adequate capital base (DKKkm)</b>	<b>Solvency need</b>
Credit risk	6,158	7.91%
Market risk	293	0.37%
Operational risk	192	0.24%
Other factors	0	0
Internally calculated solvency need	6,643	8.53%
Add-on (special risks)	0	0
<b>Total</b>	<b>6,643</b>	<b>8.53%</b>

Source: Calculation of adequate capital base and individual solvency need at <http://www.dlr.dk/regnskab-og-rapportering>

**Table 7. DLR's capital base and excess capital as of 31 December 2017**

<b>Current key figures, 2017</b>	<b>Amount (DKKkm)</b>
Capital base after deductions	12,372
Adequate capital base	6,643
SIFI premium	467
Capital conservation buffer	973
Excess capital	4,288
Total capital ratio	15.9%
Individual solvency need, pc	8.5%
SIFI premium (2017)	0.6%
Capital conservation buffer (2017)	1.3%
Excess capital, pc point	5.5%

Source: Calculation of adequate capital base and solvency need at <http://www.dlr.dk/regnskab-og-rapportering>

**Table 8 - DLR's risk exposure for credit risk and capital requirements as of 31 December 2017**

<b>Category</b>	<b>Risk exposure (DKKm)*</b>	<b>Capital requirement (8 pc of exposure)*</b>
Total exposure	71,804	5,744
<i>Of which standard method:</i>		
Institutions	4,031	322
Corporates	22,290	1,783
Retail exposures	87	7
Exposures secured by mortgages on real property	9,220	738
Exposures in arrears or overdrawn	1,217	97
Covered bonds	-	-
Equities	46	4
Other exposures, etc.	351	28
<b>Standard method, total</b>	<b>37,242</b>	<b>2,979</b>
<i>Of which IRB approach:</i>		
Corporate exposures	34,562	2,765
<b>IRB approach, total</b>	<b>34,562</b>	<b>2,765</b>

Note: \* Not corrected for collective impairments

Source: DLR's internal calculations

**Table 9 – DLR's risk exposure with respect to market risk as of 31 December 2017**

<b>Category</b>	<b>Risk exposure (DKKm)</b>	<b>Capital requirement (8 pc of exposure)*</b>
Debt instruments	2,897	232
Equities	0	0
Collective investment schemes	0	0
Exchange rate risk	770	62
<b>Weighted items with market risk, total</b>	<b>3,667</b>	<b>293</b>

Source: DLR's internal calculations

## 4.6 Use of ECAIs

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 10 shows the Danish FSA's conversion of S&P's rating classes to credit quality steps for exposures to corporates, institutions, central governments and central banks.

**Table 10 - Rating classes and credit quality steps**

Credit step	quality S&P's rating classes	Exposure to corporations	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 quality step 1 can comprise up to 15 pc 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 pc of the collateral, though the aggregate exposure to credit institutions may not exceed 15 pc of the collateral.

## 4.7 Supplementary collateral, OC and the debt buffer

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When granting loans based on the issuance of covered bonds (SDO), DLR has to provide supplementary collateral if the LTV-limit is exceeded, mainly due a fall in the value of the property. Compliance with this obligation is continually monitored by DLR.

Besides the costs of supplementary collateral, the risk and cost of LTV compliance is linked to credit risk, as losses on the loan portfolio will be correlated with falls in property prices.

To cover breaches of LTV, DLR can use the capital in Capital Centre B and to some extent claims against banks.

DLR has, furthermore, issued DKK 6.0bn in senior secured bonds (SSB) that can be used both for LTV compliance and as overcollateralisation (OC) to support bond ratings. DLR has also issued DKK 1bn in unsecured senior debt and DKK 2bn in Senior Resolution Notes (SRN) to comply with the debt buffer requirement. The proceeds of these issues can also be used as supplementary capital.

### Debt buffer

Implementation of Bank recovery and resolution directive (BRRD) in Denmark meant mortgage credit institutions were required to establish a debt buffer of 2 pc of the institution's total unweighted lending. The requirement

was introduced at the same time as the mortgage credit institutions were exempted from bail-in measures in connection with a resolution/restructuring of a mortgage credit institution and also from the requirement of having liabilities eligible for writing down, which the banks have to fulfil.

When fully implemented, DLR's debt buffer is estimated to amount to just over DKK 3bn and is to be phased in between 2016 and 2020 in such a way that the buffer amounts to at least 30, 60, 80, 90 and 100 pc, respectively, of the requirement by 15 June each year.

The debt buffer may comprise equity capital, additional tier 1 (hybrid) capital, supplementary capital and unsecured senior debt – all capital/debt should be issued by the General Capital Centre. Issued capital/debt should also have a maturity of at least two years at issuance.

To comply with the first instalment of the debt buffer requirement DLR issued DKK 1bn in unsecured senior debt in mid-June 2016.

In 2017, DLR issued Senior Resolution Notes (SRN) to cover the debt buffer requirement. SRN is a relatively new type of senior debt that in a resolution situation can be written down or converted to equities. SRN can be included in S&P's estimate of an institution's Additional Loss-Absorbing Capacity (ALAC)

and can thus provide an uplift to the institution's rating. Hence, DLR had its issuer rating raised by one notch after announcing the planned issuance of up to DKK 4bn in SRN to comply with the debt buffer requirement going forward to 2019.

DLR issued DKK 2bn in all in Senior Resolution Notes (SRN) in June and September

2017, and has thus as of year-end 2017 issued senior debt totalling DKK 3bn to meet the debt buffer requirement.

## 4.8 Ratings

DLR as an issuer and DLR's bonds are rated by S&P Global Ratings (S&P) as follows:

**Table 11 - DLR's ratings from S&P, end-2017**

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

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.

In May 2017, S&P raised DLR's Issuer Credit Rating (ICR) 1 notch to A- and retained the stable outlook. As mentioned above, under-

pinning the rating uplift was DLR's announcement it would issue a total of DKK 4bn in Senior Resolution Notes (SRN) to build its debt buffer going forward to 2019, with DKK 2bn being issued within the first year. SRN meet the S&P criteria for absorbing a loss (ALAC), which meant DLR was assigned an ALAC support uplift of +1, which is added to DLR's Stand-Alone Credit Profile (SACP) of BBB+.

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

DLR's covered bonds (SDO) and mortgage bonds (RO) have been assigned the highest rating of AAA. With respect to S&P's Covered Bond rating method, it is possible to obtain a bond rating that is up to 9 notches above the ICR. S&P deducts one notch for DLR not com-

miting itself to a particular OC level ("voluntary OC"). With an ICR of A-, DLR only has a need for 6 of the 8 remaining notches to achieve the AAA rating and thus has 2 unused uplifts in its bond rating. This contributes to lowering the OC requirement on DLR's capital centres.

Table 12 - S&P's method for rating covered bonds

	DLR from 17 May 2017	DLR from 13 July 2015
<b>Issuer Credit Rating (ICR)</b>	<b>A-</b>	<b>BBB+</b>
Sovereign support	0	0
Adjusted ICR	A-	BBB+
BRRD uplift	+2	+2
<b>Reference Rating Level (RRL)</b>	<b>a+</b>	<b>A-</b>
Jurisdiction support	+3	+3
<b>Jurisdiction Rating Level (JRL)</b>	<b>aa+</b>	<b>aa</b>
Collateral support	+4	+4
Max achievable CB rating	AAA	AAA
Used collateral support notches	-1	-2
Voluntary OC	-1	-1
<b>Unused uplift</b>	<b>2</b>	<b>1</b>

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S&P's OC requirements compatible with the AAA rating have most recently been set at 14.9 pc for Capital Centre B and 11.1 pc 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 sourced from own funds together with funds obtained by issuing senior debt.

DLR has not made any commitment to S&P about maintaining a certain level of overcollateralisation in its capital centres, but DLR has, nevertheless, a clear ambition of maintaining its current AAA rating. As S&P's OC requirement is dynamic and can change due

to, for example, changes in activity levels, composition and quality, or due to a change in S&P's criteria or models, the need for supplementary collateral can alter going forward.

Senior secured bonds (SSB) are generally assigned a rating two notches above the issuer rating. DLR's 5Y SSB issuance that matured on 1 October 2017 was thus rated A+ by S&P. DLR has decided not to have its current SSB issues rated. The same applies to issues of unsecured senior debt from 2016. The SRN issues from 2017 are both rated BBB, which is one notch below DLR's SACP.



## 5. CREDIT RISK

As a mortgage credit institution, DLR only grants loans against a registered mortgage on real property subject to statutory limits on loan-to-value (LTV), etc. DLR's focused business model as a mortgage credit institution means that credit risk arising from the risk of loss due to a borrower defaulting on payment obligations to DLR constitutes by far the most significant part of DLR's aggregate risk.

Due to the chosen business model, DLR's credit risk is limited to and 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 determined 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 the set limits, internal business procedures and instructions further delegate lending authorities to the various sections/persons in DLR's organisation.

### 5.1 Credit scoring

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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 credit department in Copenhagen. Assessing the customer's finances normally involves several years of financial statements. Credit scoring models are used for certain 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.

## 5.2 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. Using the IRB approach gives credit institutions greater control of their credit risk and thus a better and more accurate foundation for calculating their capital requirement.

DLR has since Q1 2016 used the advanced IRB approach for its portfolio of full-time farms when calculating risk exposure connected to credit risk.

The full-time farm portfolio amounts to around DKK 73bn, or 51 pc of DLR's total loan portfolio. Advanced models for significant parts of the commercial property portfolio corresponding to a further roughly 40 pc are being rolled out, initially for internal use.

**Table 13 - Share of total risk exposure amount (REA) covered by various calculation methods for credit risk**

(DKKm)	Advanced IRB methods	Standard method	Advanced IRB methods in %	Standard method in %	Total	REA
Retail exposures	-	28,509	0%	100%	100%	28,509
Of which						
- Collateral in real property	-	28,391	0%	100%	100%	28,391
- Other retail exposures	-	118	0%	100%	100%	118
Corporate exposures	72,670	26,638	73%	27%	100%	99,307
Institutional exposures	-	17,764	0%	100%	100%	17,764
Government exposures	-	7,001	0%	100%	100%	7,001
Covered bonds	-	-	0%	0%	0%	-
Equity exposure	-	46	0%	100%	100%	46
Non-counterparty assets	-	351	0%	100%	100%	351
Total as of 31 December 2017	72,670	80,308	48%	52%	100%	152,977

Note: Outstanding bond debt calculated after conversion factor and without advance mortgage guarantees

**Table 14 – Credit risk exposures**

(DKKm)	Real property	Received guaran- tees	Total collateral value	REA
Retail exposures	28,289	4,754	33,043	28,509
Of which				
- Collateral in real property	28,289	4,754	33,043	28,391
- Other retail exposures	-	-	-	118
Corporate exposures	97,111	10,963	108,074	99,307
Institutional exposures	-	-	-	17,764
Government exposures	-	-	-	7,001
Covered bonds	-	-	-	-
Equity exposure	-	-	-	46
Non-counterparty assets	-	-	-	351
Total as of 31 December 2017	125,400	15,716	141,117	152,977

Note: Distribution of collateral value. Overcollateralisation and collateral values linked to off-balance sheet items not included in calculation.

### Credit risk models

DLR's models are based on a statistical approach augmented with 'expert' mathematical corrections. Furthermore, a macroeconomic stress model based on the various rating models has also been developed.

The credit risk models cover the full-time farm portfolio, which accounts for just over half of DLR's total lending. The agriculture portfolio is divided into retail (residential, hobby and part-time farms), horticulture and full-time farms. Categorisation as full-time farm assumes that one or more of the following criteria are met:

- Total agricultural holding of more than 40 ha
- Total livestock value of more than DKK 200,000

- Full-time fish farming

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 at customer-case level (unit of total 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. These factors are combined with the current exposure to calculate risk exposure. Unexercised loan commitments have no current exposure, but DLR uses the conversion factor from the standard method to estimate expected exposure at a future potential default date.

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

All customers are rated on 3 components that together give a PD score:

- Statistical PD score
- Financial history
- Economic conditions correction

Statistical PD is calculated using a number of financial key figures, the customer's payment history and chosen payment channel. If DLR has no financial data registered for a customer or the data is more than 2 years' old, the customer's earnings and capital will be automatically rated as unsatisfactory and so these customers will receive a high PD.

The customer's financial history is included in the model and is based on financial figures for the past 3-5 years. If DLR does not have at least 3 years of financial data registered, the customer's rating will be calculated as if the financial results of the past 3 years were unsatisfactory.

The model also takes into account certain economic factors for the various types of operation, and financial results are compared with the sector average. Forecasts are used to determine the agricultural sector's earnings outlook, while a prudence principle means the model has been set up so economic factors can only affect a customer's rating negatively.

The distribution of DLR's rating classes by PD band is shown in table 15. Customers with OEI where no value adjustment has been identified are always placed in rating class 7.

**Table 15 - 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 3 - Full-time agriculture portfolio by PD rating class**



Figure 3 shows the distribution (in pc) of DLR's full-time agriculture portfolio by PD rating class. Note that 30 pc of the portfolio was placed in rating class 7 and 8 at the end of 2017 compared to 35 pc one year earlier. Of that portion of the portfolio placed in class 7, around 88 pc are OEI-marked customers.

LGD indicates DLR's financial loss relative to 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 (such as sales costs), etc. for the period until the realisation is completed. As well as haircuts and a general margin of prudence, the realisation value of the collateral is adjusted for the effect of longer-than-normal sales times.

A simplified formula for LGR (%) would be:

$$\frac{(\text{exposure} - \text{collateral realisation value})}{\text{exposure}} * 100\%$$

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.

As previously stated, the loan application score is based on the PD and LGD behavioural models for risk monitoring supplemented with information and data relevant to the application situation.

The PD element of the application score is identical to the PD behavioural models described above with regard to the statistical model, financial history and the economic conditions correction. This is augmented with a customer evaluation based on the customer's solvency following a potential loan approval, a budget assessment and an analysis of operational efficiency. The statistical and historical components are weighted differently in the application score depending on whether the customer is known or unknown to DLR. Another significant factor is whether an investment is being made and the scale of that investment (investment percentage).

**Table 16 – DLR's PD estimates for full-time farms (IRB portfolio)**

PD (excl. customers in default)	11.02%
PD obs.	1.08%

Note: PD is re-calculated for regulatory purposes. PD obs. is the observed level at end-2017.

Figures are weighted for exposure.

The LGD element of the application score is based on the same PR estimate as for behavioural LGD and the same calculation method as for LGR. In other words, haircuts on individual sub-components of the property are used to derive an estimate of the value of the collateral in a realisation situation, while exposure is calculated for both existing and new loans. Planned investments are included in the value in the loan application situation.

**Table 17 – DLR’s LGD estimates for full-time farms (IRB portfolio)**

LGD (excl. customers in default)	10.30%
LGD obs.	0.50%

Note: LGD is re-calculated for regulatory purposes.

LGD obs. is the observed level at end-2017.

Figures are weighted for exposure.

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

### Validation of ratings

DLR regularly monitors portfolio ratings, as credit scores are re-calculated every month. Both the Board of Directors and the Executive Board receive periodical reports on the rating systems and portfolio developments.

The Board of Directors and the Executive Board have to approve any significant changes deemed necessary to the rating systems before they are submitted to the Danish FSA for approval. The application material will generally include an audit report detailing the auditors’ review of the changes. The Board of Directors receives a semi-annual, abridged and annotated validation report that shows how all the models have performed.

The Executive Board Secretariat prepares all validation reports, while the Model Development unit develops the models. Both report to the Executive Board and are independent of the rest of the organisation.

DLR has established a Ratings Committee comprising representatives from the Executive Board, the Executive Secretariat, the Model Development and Reporting unit and the Loan department. The Ratings Committee receives a more detailed report every quarter with validation data that is based on more tests than the abridged validation report. The purpose of the committee is to assess the ratings systems and to consider identified weaknesses and potential issues relating to the ratings system and the use of ratings together with any need for changes, adjustments, prudence add-ons and so on.

An in-depth, annotated report is prepared annually containing relevant types of validation tests including test descriptions. The report is sent to the Risk Committee, the Board of Directors, the Ratings Committee and Internal Audit.

Models are recalibrated annually, including the corresponding validation of the recalibration. The models are updated in connection with this so they reflect the most recent history. This is done independently of the validation process, so the recalibration is therefore not part of this validation.

Likewise, spot checks are carried out annually on the ratings of various customers. As well as the results of the spot checks being considered by the Ratings Committee, they are also included in the detailed validation report.



DLR's loan portfolio of full-time farms is as of 31 December 2017 covered by IRB models. Table 18 therefore only includes back-tests of

the PD model for full-time farms (The exposure class, cf. CRR Article 147, is corporate exposures):

**Table 18 - IRB approach – back-testing of probability of default (PD) by exposure class (Template EU CR9)**

Range for PD (External PD band)	Equivalent to external rating (S&P)	Weighted average PD	Arithmetic average PD by borrowers	Number of borrowers		Borrowers in default over the year	Of which new borrowers	Average historical annual default rate
				End of previous financial year (2016)	End of financial year (2017)			
0% to <0.15%	BBB+/AA	3.5%	3.5%	1,157	1,108	0	0	0.0%
0.15% to < 0.25%	BBB/BBB	4.3%	4.2%	673	655	1	0	0.2%
0.25% to < 0.50%	BBB-/BB	4.1%	4.2%	1,023	1,016	3	0	0.4%
0.50% to < 0.75%	BB+/BBB	5.1%	5.1%	556	560	4	0	0.7%
0.75% to < 2.50%	BB-/BB+	5.6%	6.0%	1,099	1,139	12	0	1.5%
2.50% to < 10.0%	B-/BB-	8.8%	8.5%	1,017	1,076	11	0	2.4%
10.0% to < 100%	CCC/C/B	23.2%	22.0%	1,761	1,767	120	1	10.8%
100 % (Default)	Default	69.5%	70.3%	264	211	26	26	0.0%
<b>Total (full-time farms)</b>		<b>13.8%</b>	<b>11.1%</b>	<b>7,550</b>	<b>7,532</b>	<b>177</b>	<b>27</b>	<b>3.4%</b>

### Business use of the IRB approach at DLR

DLR uses ratings when calculating risk exposures. The ratings system has also been used for some time in connection with loan approvals, monitoring and risk management. The models are regularly adjusted and have been developed as both statistical and expert models.

Models and ratings systems are fully implemented elements of DLR's standard loan application and loan approval process. Models are also used to identify riskier exposures, to calculate individual impairments and to determine administration margin adjustments. 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.

For now, DLR is only using the IRB approach for its full-time agriculture portfolio. Mortgaging full-time farms is often quite complicated and may include mortgaging several properties with different positions in the order of priorities, etc. This requires a detailed manual review of the case. The ratings system is a useful and important tool in the credit process that increases focus on the more risky cases. DLR's ratings system is also used when calculating individual and collective impairments.

### 5.3 Monitoring credit risk

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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 OIE, 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 impairment provisions are thus made when the customer is in financial difficulty (OEI) and DLR at the same time estimates that DLR's exposure is not fully secured by the mortgaged property or the guarantees provided, etc. Collective impairment provisions on loan portfolios are made mainly when key macroeconomic indicators point to a fall in value. This also includes management estimates to the extent that the models for calculating collective impairments are deemed to not sufficiently reflect an elevated risk.

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.

### 5.4 Guarantee schemes

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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 to loans offered from 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; cf. below. The guarantee is reduced proportionally as the loan is paid down.

### **2. Risk cover – Loss-offset scheme**

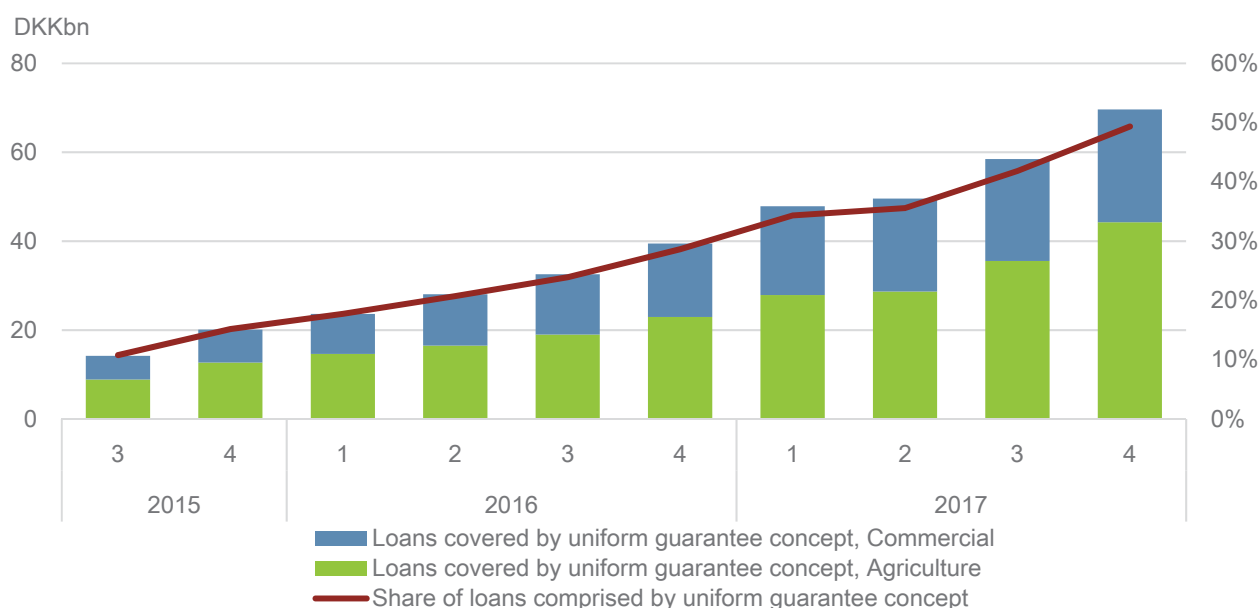
DLR's universal guarantee concept also encompasses the possibility of offsetting losses in the commission payments made to the bank, whereby all losses incurred by DLR beyond those covered by the 6 pc guarantee provided at the loan level are offset. Only losses on loans distributed by the particular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

### **3. Risk cover – Portfolio guarantee**

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 the portfolio guarantee based on the 6 pc guarantee provision on individual loans. The portfolio guarantee is based on all the direct 6 pc guarantees provided.

At the end of 2017, almost half of DLR's loan portfolio was covered by the universal guarantee concept.

Figure 4 - DLR lending covered by the universal guarantee concept  
- for loans offered after 1.1.2015



#### Loans granted up to 31 December 2014

DLR's 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.

For loans on commercial property, i.e., private residential rental property, private cooperative housing, office and retail property plus manufacturing and workshop property, the loan-distributing banks have previously provided an individual loan-loss guarantee that covers the outermost and most risky part of the loan. The guarantee covered as a minimum that part of the loan that exceeded 60% of the value of residential rental property and

cooperative housing without a municipal guarantee along with that part of the loan that exceeded 35 pc of the value of office and retail property. Loans on manufacturing and workshop property and loans issued to the Faroe Islands and Greenland required more extensive guarantees. The guarantee amount was written down proportionally as principal payments were made, and the guarantee period generally ran for up to 16 years (potentially longer for loans with interest-only payments).

Loans for agricultural properties were covered by a guarantee agreement between DLR and its partner banks. This is a collective guarantee scheme for lending granted under the cooperative agreement that is invoked if DLR's

aggregate losses on agricultural loans provided by shareholder banks exceed a pre-determined amount (DLR's excess) within a single calendar year. The excess is defined as 1.5 times the unweighted average of the losses in the preceding five years, though not less than 0.25 pc of the loan portfolio covered by the agreement. The agreement covered around DKK 41bn of the loan portfolio at year-end 2017. Hence, DLR would have to bear losses of up to roughly DKK 100m (DLR's excess) in 2018 (0.25 pc of DKK 41bn). DLR has, furthermore, an agreement allowing it to offset losses in the commission payments to individual banks if loans granted for agricultural properties via the bank result in a loss for DLR.

As loans are transferred to the universal guarantee concept, so the potential for offsetting

loans under the cooperative agreement will be reduced, just as the potential for loss-offsetting under the universal guarantee concept does not yet offer full coverage. Losses may therefore be offset to a certain extent across guarantee concepts, so that the implementation of the universal guarantee concept and the reduction in the scope of the existing cooperative agreement do not lead to an increased risk for DLR.

Loans in this area to the Faroe Islands and Greenland are not covered by the universal guarantee concept. Hence, more extensive guarantees are required here.

95 pc of DLR's portfolio was covered by one of DLR's guarantee concepts at the end of 2017, cf. table 19:

**Table 19 – Overview of DLR's guarantee concepts**

	Outstanding bond debt covered by guarantee concept (DKKbn)	
	Dec. 2017	Dec. 2016
Cooperative agreement - agriculture (until end-2014)	41.4	60.2
Commercial property guarantee (until end-2014)	22.6	28.8
Universal guarantee concept - agriculture (from start-2015)	43.9	22.9
Universal guarantee concept - commercial (from start 2015)	25.6	16.5
Government guarantee - YJ loan	0.3	0.4
Covered by guarantee schemes	133.6	128.8
Total outstanding bond debt	140.7	137.7
Proportion covered by guarantees	95.0%	93.5%

## 5.5 Leverage

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DLR has over a number of years regularly reduced its leverage ratio (calculated as lending relative to equity) from just under 23 in 2007 to 11.5 at the end of 2017, cf. figure 5. The slight increase in the leverage ratio since 2015 is a reflection of several factors. DLR decided in 2016 to buy back on shares from Finansiel Stabilitet and Danmarks Nationalbank for DKK 970m. At the same time, DLR experienced significant lending growth of around

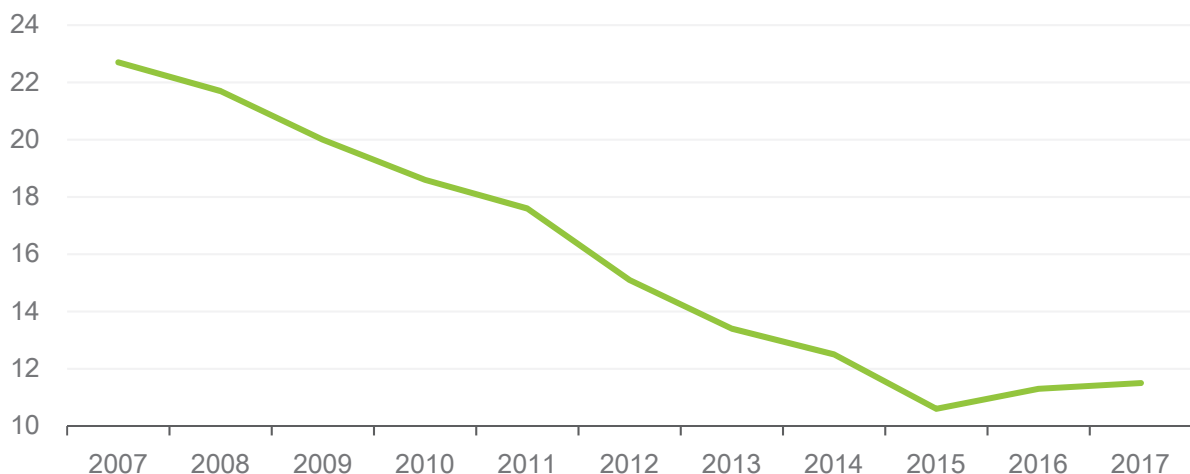
DKK 5bn, which together resulted in a slight increase in the leverage ratio. In 2017, DLR redeemed hybrid (tier 1) core capital for DKK 1,300m, sold equities to DLR's existing shareholders for DKK 632m and enjoyed decent lending growth of around DKK 3bn. This, combined with the year's positive result, has led to a modest increase in the leverage ratio.

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

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Figure 5 - DLR's leverage (lending as a pc of equity)

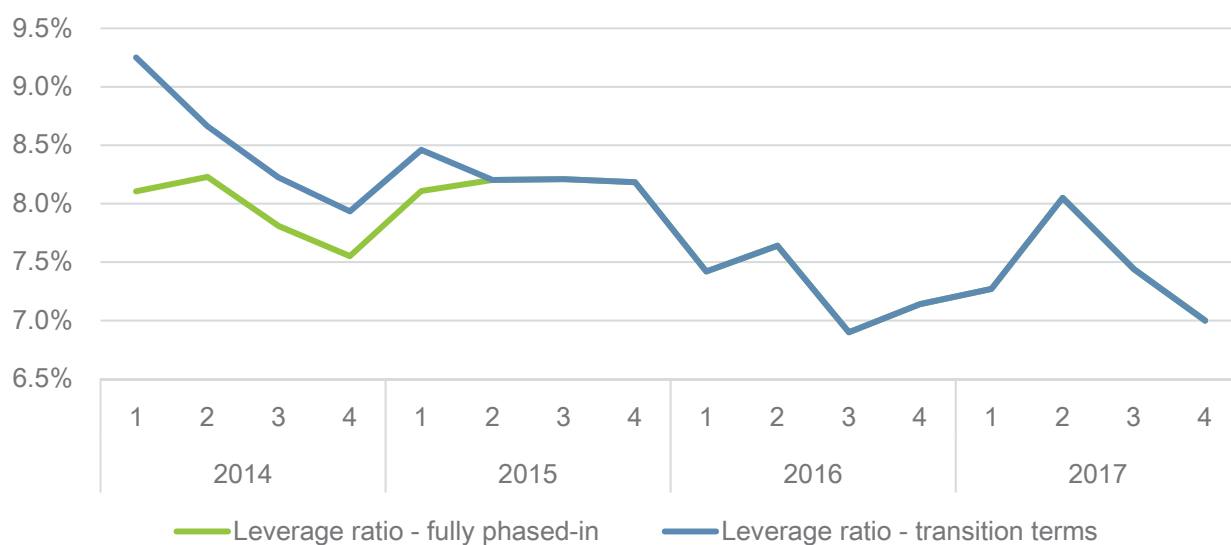
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Applying the current CRR definition of leverage ratio, where leverage is calculated as the total risk exposure amount (REA) relative to tier 1 (core) capital, DLR's leverage ratio was

7.0 pc at the end of 2017, cf. figure 6 and table 20.

Figure 6 - DLR's leverage ratio, CRR



DLR's Board of Directors has set a lower limit for the leverage ratio of 5 pc in accordance with the CRR definition. DLR's current leverage ratio of 7.0 pc thus provides a significant capital surplus relative to both the Board of

Directors' requirement of 5 pc and the likely regulatory requirement of 3 pc. Please refer also to Appendix A for further information on DLR's leverage ratio.

Table 20 - DLR's leverage ratio according to CRR, end-2017

	(DKKm)
Total assets according to accounts	163,375
Total balance sheet exposures cf. CRR	163,742
Off-balance sheet items, loan offers, etc.	4,960
Tier 1 (core) capital deductions (sector equities, etc.)	-692
Total exposure for leverage ratio calculation	161,161
Tier 1 (core) capital, transitional arrangement	11,722
Tier 1 (core) capital, CRR rules fully implemented	11,722
Leverage ratio, transitional arrangement	6.98%
Leverage ratio, CRR rules fully phased in	6.98%



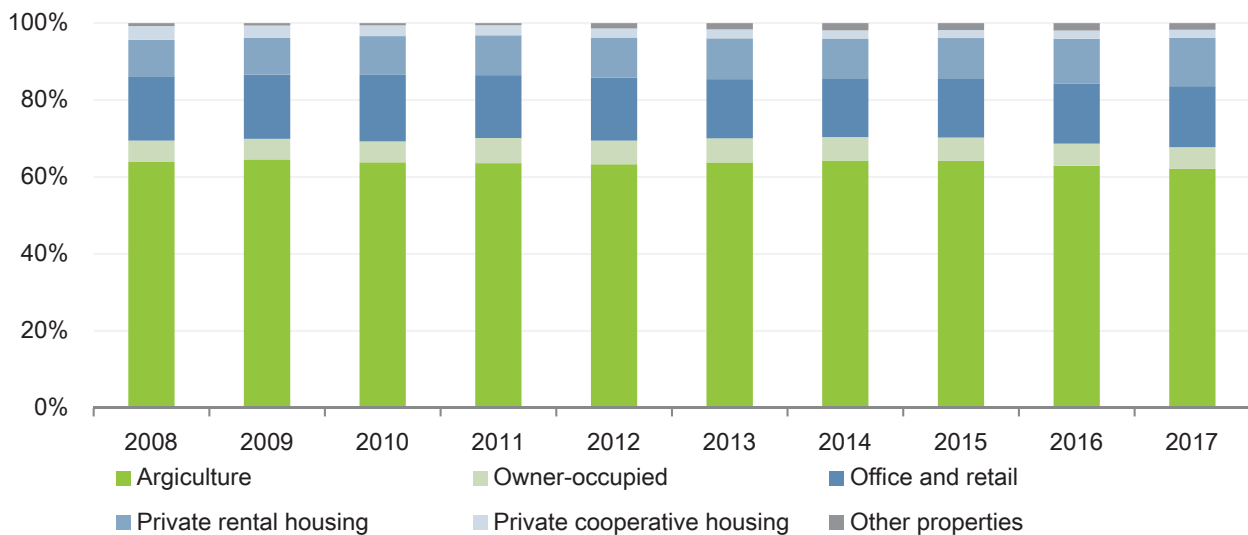
## 5.6 Composition of loan portfolio

### Property categories

At the end of 2017, DLR's loan portfolio (measured as outstanding bond debt) amounted to DKK 140.7bn. Loans on agricultural properties accounted for 62 pc and on

owner-occupied properties, including residential farms, for just under 6 pc of the portfolio, while loans on commercial property and private cooperative housing properties accounted for just over 32 pc; cf. figure 7.

Figure 7 - DLR's lending by property category



### Loan type

The composition of DLR's loan portfolio by loan type is shown in figure 8. DLR has since 2014 been running campaigns encouraging borrowers with short ARM loans to remortgage into loans with longer underlying funding. DLR's loan portfolio was dominated by ARM loans, particularly 1Y ARMs, up to 2013. Over the past four years, however, the share of ARM loans has fallen considerably to 42 pc

of DLR's loan portfolio at the end of 2017 compared to 73 pc at the end of 2013.

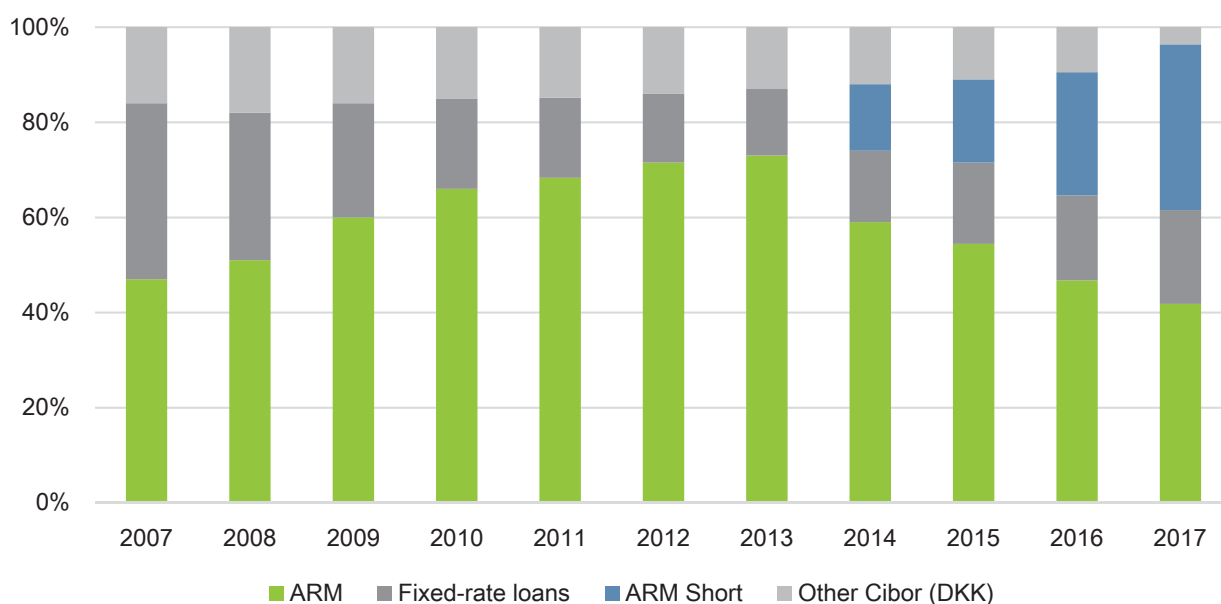
During the years 2014-2016, DLR's campaigns targeted only 1Y and 2Y ARM loans, and a marked shift occurred in 2014 and 2015 from annually refinanced loans to loans that were refinanced every three years. The campaigns were extended in 2017 to also target 3Y ARM loans, which subsequently prompted a shift in 2017 from loans with refinancing

every three years to loans with refinancing every five years.

The share of ARM Short (RT-Kort) loans, which DLR introduced at the end of 2013, has also increased markedly in connection with

the remortgaging of 1Y and 3Y ARM loans. ARM Short loans are based on issues of floating rate bonds pegged to either the CIBOR or the CITA rate, so far with maturities of 3-4 years.

Figure 8 - DLR's loan portfolio by loan type



At the end of 2017, the share of 1Y ARM loans had been reduced to 7 pc of the loan portfolio compared to 57 pc at end-2013, while 3Y and 5Y ARM loans accounted for 9 and 25 pc, respectively. ARM Short had increased to 35 pc from 0 pc at end-2013. Fixed-rate loans, meanwhile, accounted for 20 pc, while other short-rate loans made up the remaining 4 pc of the portfolio at year-end 2017.

### Repayment profile

The share of total gross lending with an initial interest-only period was 49 pc in 2017, which was an increase on 2016 when the corresponding figure was 41 pc. Interest-only loans are particularly popular in the agricultural area, as 61 pc of gross lending to the agricultural sector was with an initial interest-only period in 2017. In the commercial property area, the share of loans with an initial interest-

only period in 2017 was just 14 pc for office and retail property, while it was 37 pc for residential rental properties and 46 pc for private cooperative housing.

With regard to DLR's overall loan portfolio, the share of loans with an initial interest-only period was 40 pc at the end of 2017, which was significantly lower than in 2016 when the share was 48 pc. Hence, the share of loans with an initial interest-only period has fallen steadily over the past five years from 54 pc of the overall portfolio in 2013 – and this trend applies across all property categories.

Interest-only loans accounted for 50 pc of lending to the agricultural sector at year-end 2017 after having hovered around 56 pc since 2013. The share of loans with an initial interest-only period has fallen even more markedly in the private residential rental segment in recent years, from 63 pc at the end of 2014 to

34 pc at year-end 2017. Interest-only loans are least common among office and retail properties along with owner-occupied dwellings, including residential farms, as the shares here were 15 pc and 19 pc, respectively, at the end of 2017 compared to 27 pc for both segments at year-end 2016.

### **Geographical distribution**

As a result of its business model, DLR's loan portfolio is limited to agricultural, residential farm, commercial and cooperative housing properties, with 62 pc concentrated in the agricultural sector. 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 1.9bn, corresponding to 1.4 pc of the loan portfolio.

**Table 21 - DLR's lending by region and property type, year-end 2017**

(DKKm)	Agriculture	Owner-occupied	Office and retail	Private rental property	Cooperative housing	Other	Nominal outstanding bond debt, total
Northern Jutland	20,973	1,297	3,567	3,132	767	666	30,401
Central Jutland	27,505	1,801	6,277	5,105	673	988	42,349
Southern Region	26,106	1,779	5,275	5,369	412	609	39,551
Capital Region	1,068	405	3,633	1,868	357	81	7,413
Zealand	11,767	1,081	3,371	2,114	611	125	19,070
Greenland	0	558	129	196	59	0	942
Faroe Islands	0	974	0	0	0	0	974
<b>Total</b>	<b>87,419</b>	<b>7,895</b>	<b>22,253</b>	<b>17,784</b>	<b>2,880</b>	<b>2,469</b>	<b>140,701</b>

## 5.7 Loan portfolio LTV

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

Table 22 shows the distribution (pc) of DLR's loan portfolio by LTV band.

At the end of 2017, just over 90 pc of loans granted on agricultural properties were in the <60 pc LTV band based on DLR's latest valuations, including valuations made in connection with continual covered bond (SDO) monitoring, while 87 pc of the lending on commercial properties, including cooperative housing, was in the <60 pc LTV band – not taking into account the guarantees provided. Residential properties have an LTV limit of 80 pc, which is why the proportion placed under 60 pc is naturally lower for these property categories.

Table 22 - Distribution (pc) of DLR's loan portfolio by LTV band, year-end 2017

Property category	LTV band					Total
	Under 50%	50-60%	60-70%	70-80%	Over 80%	
AGRICULTURE:						
Cattle	74.1%	12.2%	7.9%	3.2%	2.6%	100%
Pigs	77.0%	12.2%	7.0%	2.6%	1.2	100%
Arable	83.1%	10.2%	4.9%	1.1%	0.7%	100%
Agriculture, other	86.2%	8.8%	3.3%	0.7%	0.9%	100%
Part/spare-time agriculture	86.7%	7.9%	3.6%	1.0%	0.9%	100%
AGRICULTURE, TOTAL	79.4%	10.9%	6.1%	2.1%	1.5%	100%
OWNER-OCCUPIED:						
Owner-occupied including residential farms	78.0%	10.7%	6.8%	2.9%	1.5%	100%
COMMERCIAL:						
Office/retail	80.4%	10.5%	5.7%	1.7%	1.8%	100%
Residential rental	69.7%	12.3%	10.0%	5.8%	2.1%	100%
Cooperative housing	68.1%	10.3%	9.2%	6.1%	6.2%	100%
Other property	83.0%	9.0%	4.1%	2.3%	1.6%	100%
COMMERCIAL, TOTAL	75.7%	11.1%	7.4%	3.6%	2.2%	100%
Total	78.1%	11.0%	6.6%	2.6%	1.8%	100%

Basis for valuation of properties is latest physical valuation or approved market value. Agricultural properties are also forward-indexed to a current value (Q4 2017). LTV calculated at customer loan level with continuous distribution of outstanding cash debt across the LTV bands.

Source: DLR's internal calculations

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 11.4bn in supplementary collateral and has, in addition, an overcollateralisation of DKK 17.9bn consisting of collateral in particularly secure assets plus the option of including claims against banks (bank guarantees).

## 5.8 Credit risk adjustments

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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 45) 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 148,454m on 31 December 2017, calculated after guarantees and conversion factor.

Tables 23 and 24 provide information on credit categories by sector (before weighting and deductions for collateral, which reduce the weighting). Exposures to central governments, regional/local authorities and institutions are via their exposure as guarantors, not via their direct exposure. This is why the three groups do not necessarily appear in their natural sectors.

**Table 23 – Concentration of exposures by industry or counterparty types, 31 December 2017**

Template 9:		Cash value of outstanding bond debt (DKKm)														Total				
EU CRB-D		A: Agriculture, hunting and fishing	B: Mining and quarrying, forestry and fishing	C: Manufacturing and construction	D: Electricity, gas, heat and water supply	E: Water supply and distribution	F: Construction	G: Wholesale and retail trade	H: Information and communication	I: Accommodation and food service activities	J: Information and communication	L: Real estate activities	M: Professional, scientific and technical activities	N: Administrative and service activities	O: Public administration and social work activities	P: Education	Q: Health services and social work activities	R: Arts, entertainment and recreation	S: Other	
IRB approach	03. Corporates	61,388	95	113	333	1	314	327	88	13	23	2,959	105	49	0	5	88	47	6,720	72,670
	<b>subtotal</b>	61,388	95	113	333	1	314	327	88	13	23	2,959	105	49	0	5	88	47	6,720	72,670
Standard method	07. Central governments or central banks	268	5	2	0	0	11	8	4	3	0	369	2	0	0	2	2	4	6,230	6,909
	08. Regional governments or local authorities	0	0	0	0	0	0	0	0	0	0	85	0	0	0	0	0	0	8	92
	12. Institutions	2,471	359	584	258	7	526	985	106	613	23	5,911	181	190	0	65	142	111	5,232	17,764
	13. Corporates	5,999	567	564	49	15	910	1,731	397	467	38	9,994	319	435	0	188	306	173	4,488	26,638
	14. Retail	23	0	2	0	0	7	2	1	0	0	20	2	3	0	0	0	0	58	118
	15. Secured by mortgages on immovable property	2,110	708	791	359	10	1,737	1,167	195	177	33	11,903	366	469	1	65	162	74	8,066	28,391
	16. Exposures in default	223	121	21	0	0	29	43	4	8	0	328	12	38	0	3	6	8	374	1,217
	21. Equity exposures	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46	46
	22. Other exposures	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	351	351
	<b>subtotal</b>	11,093	1,759	1,963	667	31	3,219	3,935	707	1,268	94	28,608	882	1,135	1	323	617	371	24,852	81,525
	<b>Total at 31.12.2017</b>	72,151	72,481	1,854	2,076	999	32	3,533	4,262	795	1,281	117	31,568	988	1,184	1	328	705	418	31,572

Table 24 – DLR's exposures by term to maturity, 31 December 2017

		Net exposure value (DKKm)				Total
		B: <= 1 yr	C: >1 yr <= 5 yr	D: > 5 yr	E: No set maturity	
IRB approach	03. Corporates	3	101	72,565	-	72,670
	subtotal	3	101	72,565	-	72,670
Standard method	07. Central governments or central banks	6,101	26	783	-	6,909
	08. Regional governments or local authorities			92	-	92
	12. Institutions	0	26	15,809	1,928	17,764
	13. Corporates	3	77	26,558	-	26,638
	14. Retail	-	-	118	-	118
	15. Secured by mortgages on immovable property	2	46	28,343	-	28,391
	16. Exposures in default	0	3	1,215	-	1,217
	21. Equity exposures	-	-	-	46	46
	22. Other exposures	-	-	-	351	351
	subtotal	6,106	177	72,918	2,324	81,525
<b>Total</b>		<b>6,110</b>	<b>278</b>	<b>145,483</b>	<b>2,324</b>	<b>154,195</b>

Table 25 – DLR's risk exposures, 31 December 2017

(DKKm)	Mortgage exposures incl. guarantees	Loan offers and pledges	Other	Credit exposures total	Exposure-weighted avg. risk weight (%)	Risk exposures
Retail exposures	28,401	107	-	28,509	33%	9,307
of which						
- Collateral in real property	28,330	61	-	28,391	32%	9,220
- Other retail exposures	72	46	-	118	74%	87
Corporate exposures	97,111	2,196	-	99,307	57%	56,852
Institutional exposures	15,666	161	1,936	17,764	23%	4,031
Government exposures	902	-	6,100	7,001	0%	-
Covered bonds	-	-	-	-	0%	-
Equity exposures	-	-	46	46	100%	46
Non-counterparty assets	-	-	351	351	100%	351
<b>Total at 31.12.2017</b>	<b>142,080</b>	<b>2,465</b>	<b>8,432</b>	<b>152,978</b>	<b>46%</b>	<b>72,505</b>



When calculating risk-weighted exposure amounts under the standardised method for credit risk, DLR uses assessments from the following external credit rating agencies:

- DBRS limited
- Moody's Investors Services
- Standard & Poor's Ratings Services
- Fitch Ratings

The assessments are only used for institutions in the exposure class 'exposures against institutions' where there is an external credit assessment.

If there are only two credit assessments, the assessment that gives the highest risk-weighting is used. If there are more than two different credit assessments, that one of the two lowest that gives the higher risk-weighting is used.

Table 26 shows on- and off-balance sheet amounts together with risk-weighted assets under the standard method, while table 27 shows the distribution of exposures under the standard method by asset class and risk-weighting.

**Table 26 – Exposures under the standard method, calculated at 31 December 2017 (DKKm)**

(Template 19: EUR CR4)	Exposures before CCF and CRM		Exposures after CCF and CRM		RWAs and RWA density	
	<i>reduction</i>				<i>assets</i>	
	On-balance-sheet amount	Off-balance-sheet amount	On-balance-sheet amount	Off-balance-sheet amount	RWAs	RWA density
01. Central governments or central banks	6,909	0	6,909	0	0	0%
02. Regional governments or local authorities	92	0	92	0	0	0%
06 Institutions	17,602	324	17,602	161	4,031	23%
07. Corporates	24,441	4,393	24,441	2,196	22,290	84%
08. Retail	72	92	72	46	87	74%
09. Secured by mortgages on immovable property	28,330	123	28,330	61	9,220	32%
10. Exposures in default	1,203	29	1,203	14	1,217	100%
15. Equity	46	0	46	0	46	100%
16. Other items	351	0	351	0	351	100%
<b>Total</b>	<b>79,046</b>	<b>4,960</b>	<b>79,046</b>	<b>2,479</b>	<b>37,242</b>	<b>46%</b>

**Table 27 – Exposures under the standard method, calculated at 31 December 2017 (DKKm)**

(Template 20 - EU CR5)	Risk weight						Total
	0%	20%	35%	50%	75%	100%	
01. Central governments or central banks	6,909						6,909
02. Regional governments or local authorities	92						92
06 Institutions		16,169		1,595			17,764
07. Corporates						26,638	26,638
08. Retail						118	118
09. Secured by mortgages on immovable property			27,343			1,048	28,391
10. Exposures in default						1,217	1,217
15. Equity						46	46
16. Other items	0					351	351
<b>Total</b>	<b>7,001</b>	<b>16,169</b>	<b>27,343</b>	<b>1,595</b>		<b>29,417</b>	<b>81,525</b>

## 5.9 Arrears, impairments and losses

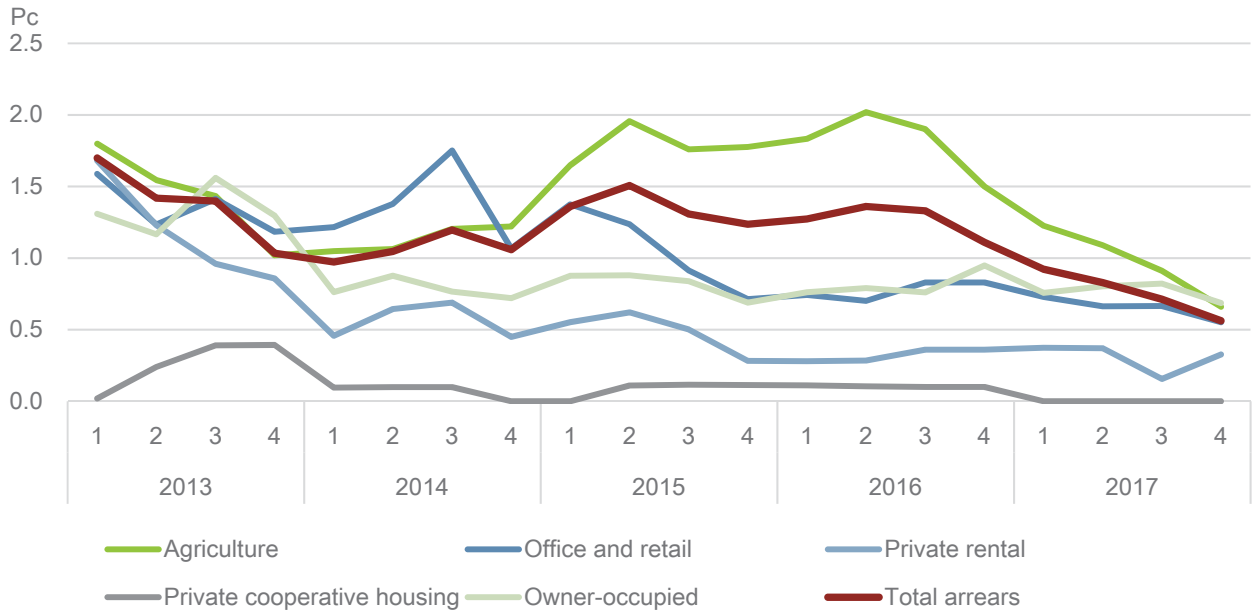
The number of borrowers unable to meet their payment obligations to DLR has been falling sharply since mid-2016, cf. figures 9-10, and is now back at pre-financial crisis levels.

Overall, the arrears ratio – measured as the percentage of mortgage payments in arrears 3½ months after the due date – was 0.55 pc in mid-January 2018 against 1.11 pc a year ago. The fall in arrears was driven, in particular, by a more than halving of the arrears ratio for agricultural properties, which fell to 0.66

pc in mid-January 2018 from 1.50 pc a year earlier. The arrears ratio for agricultural properties peaked in autumn 2011 at 2.33 pc. During the subsequent upswing for the agricultural sector arrears fell, before rising again from early 2014 to mid-2016, when agriculture suffered a major economic setback. The renewed decline in arrears from the second half of 2016 should be seen against the marked improvement in settlement prices for agricultural products, which gained traction in H2 2016, and demand from China.

Figure 9 - DLR's 105 days arrears ratios

- Key property categories

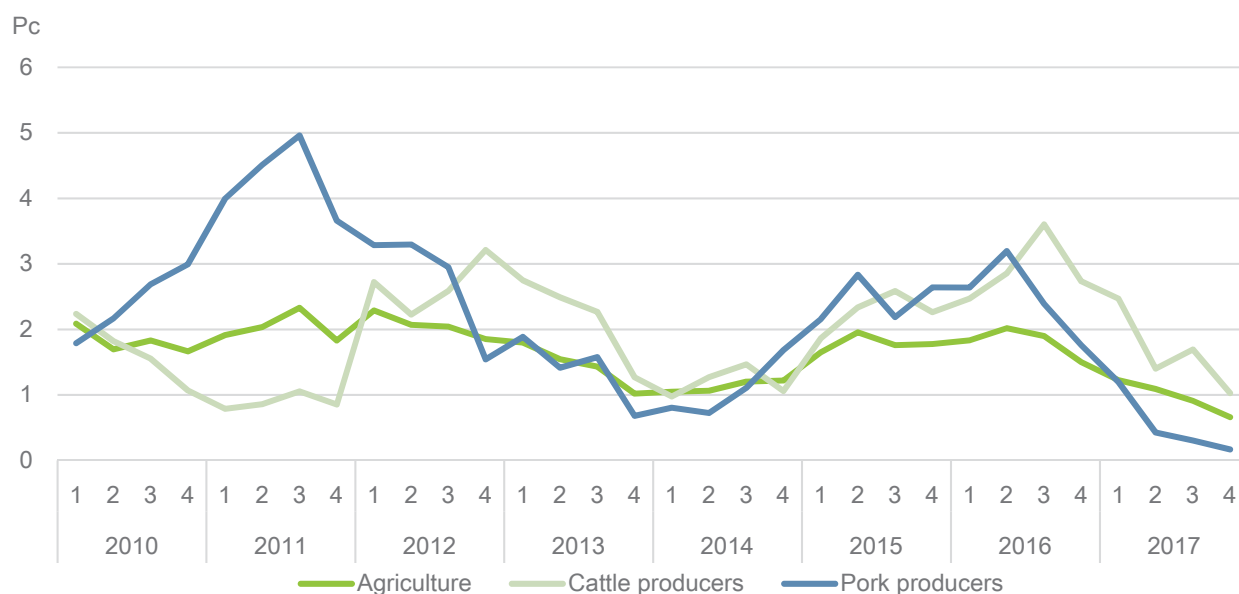


Pork prices have fallen since summer 2017, while dairy prices began to fall in January 2018. A major increase in global production, which has created an oversupply situation, was the cause in both cases. These price falls

have, however, so far not been reflected in arrears ratios for either cattle or pork operations, which fell to 1.03 pc and 0.17 pc, respectively, in mid-January and are the absolute lowest levels of arrears since before the financial crisis.

Figure 10 - DLR's 105 days arrears ratios

- Agriculture, key production areas



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 finds OEI, an impairment provision is made against the exposure equivalent to the loss DLR estimates it could potentially incur.

As can be seen in figure 11, DLR's provisioning ratio has fallen considerably in recent years and amounted to -0.07 pc of the loan portfolio at year-end 2017. The provisioning

ratio is calculated in accordance with the Danish FSA's definitions. Accumulated impairments have also demonstrated a declining trend since 2015. Total individual impairment provisions amounted to DKK 278m at the end of 2017 compared to DKK 411m at the end of 2016. On top of this comes collective impairment provisions of DKK 246m, of which DKK 111m is based on an IFRS9 calculation and DKK 135m is a management estimate, giving total impairments at year-end 2017 of DKK 524m. Relative to DLR's total lending of DKK 143bn, the accumulated provisioning ratio was 0.37 pc at the end of 2017 compared to 0.43 pc at the end of 2016.

Figure 11 - Impairments as pc of loan portfolio

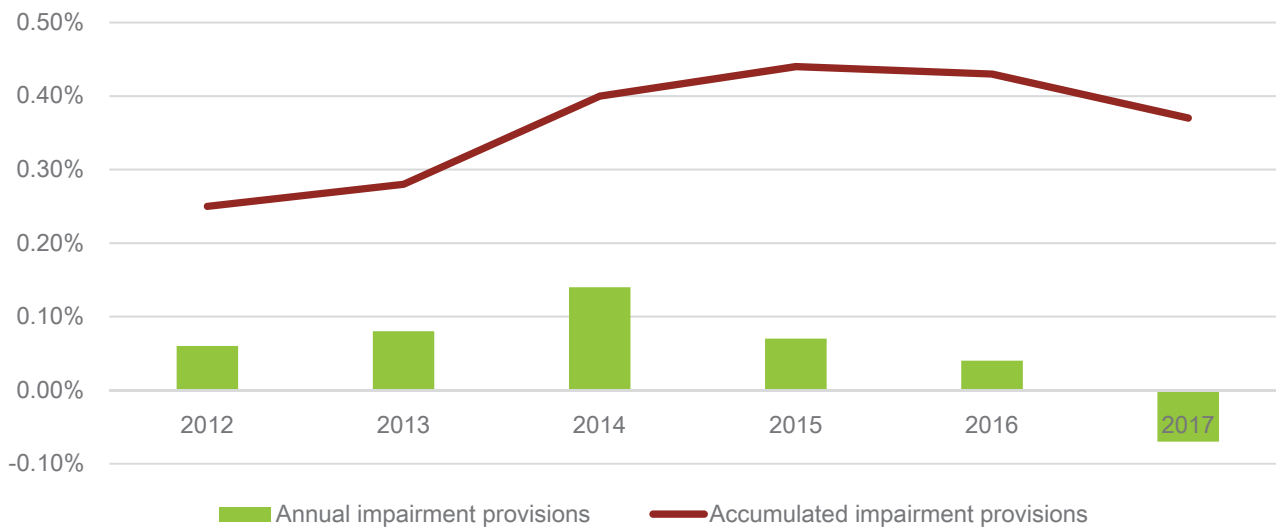
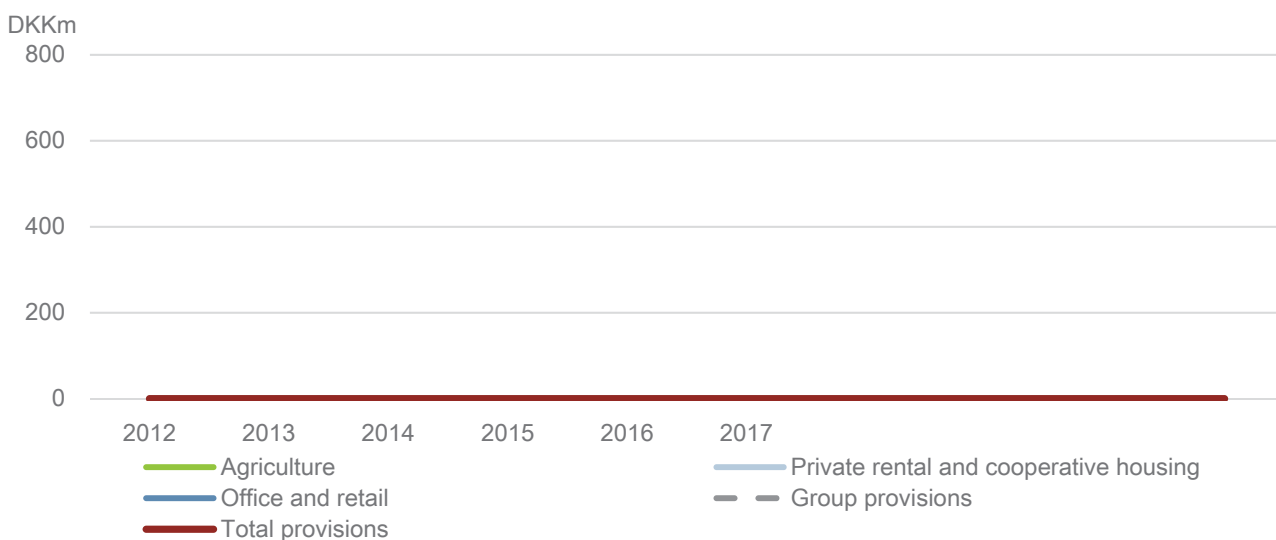


Figure 12 shows developments in DLR's impairment provisions between 2009 and 2017. Collective impairment provisions increased in 2017 as a result of the transition to IFRS9,

while individual impairment provisions in the agricultural sector were reduced by one third in 2017.

Figure 12 - Accumulated impairments by property category



**Table 28 - DLR's value adjustments and impairments by property category,  
31 December 2017**

(DKKm)	Loans in arrears without impairment. Outstanding bond debt, year-end <sup>1)</sup>	Individual impaired loans. Bond debt out- standing, year- end.	Individual im- pairments year-end	Realised value adjustments and impairment charges 2017
Agriculture, including residential farms	3,543	1,789	239	-83
Rental property and coop. housing	687	147	23	9
Office and retail property	1,167	81	16	-3
Other	32	10	1	0
<b>Total</b>	<b>5,429</b>	<b>2,027</b>	<b>278</b>	<b>-77</b>

1) Calculation also includes loans with arrears on December 2017 mortgage payment date as calculated after the due date.

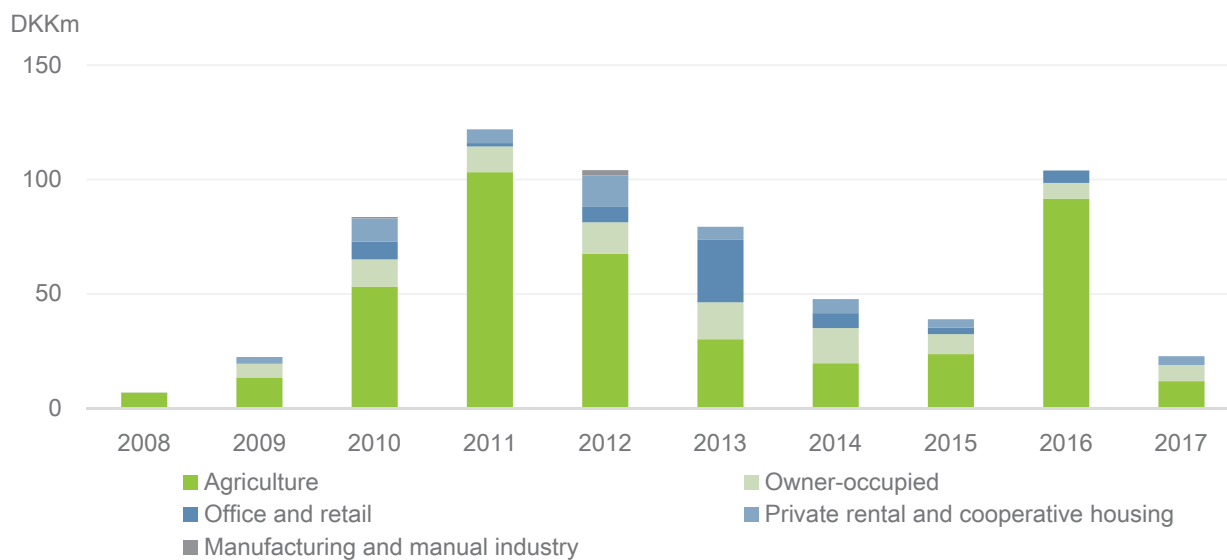
Note: Numbers cannot be directly deduced from DLR's Annual Report

Source: DLR's internal calculations

Realised losses on loans, including adjustments from previous years, amounted to DKK 9m in 2017, which is markedly lower than the realised loss of DKK 100m in 2016. Relative to the total loan portfolio, the loss ratio was thus 0.01 pc, which has not been lower since before the financial crisis.

Agriculture accounted for half the realised losses before the reversal of earlier impairment provisions in 2017. Losses were mainly attributable to cattle properties, part-time and hobby farms and horticultural properties. A further DKK 7m loss was realised on owner-occupied dwellings, including residential farms, while the loss stemming from private residential rental properties was DKK 4m.

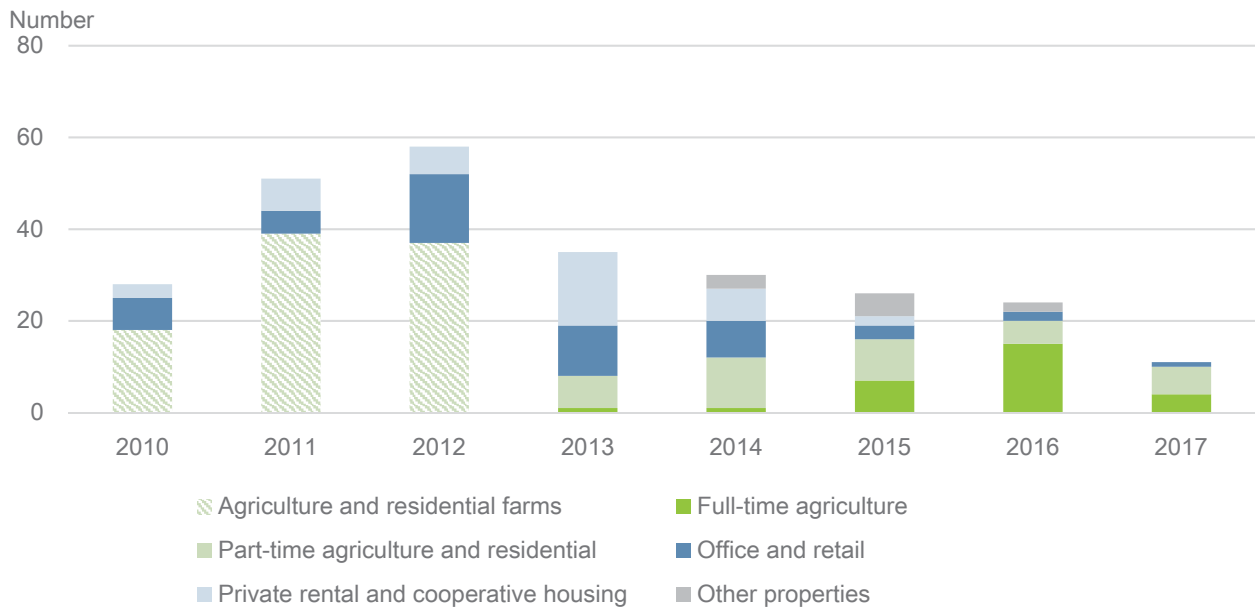
Figure 13 - Realised losses before loss offsetting



With respect to the previously described loss-offsetting schemes, DLR set off losses of DKK 27m in 2017 against commissions paid to the banks, a considerable share of which concerns losses from the years prior to 2017.

DLR's stock of repossessed properties at year-end 2017 totalled 11, two of which were pig farms (one operation) along with two cattle farms (two operations), while the remaining properties were residential farms, part-time farms and one office and retail property.

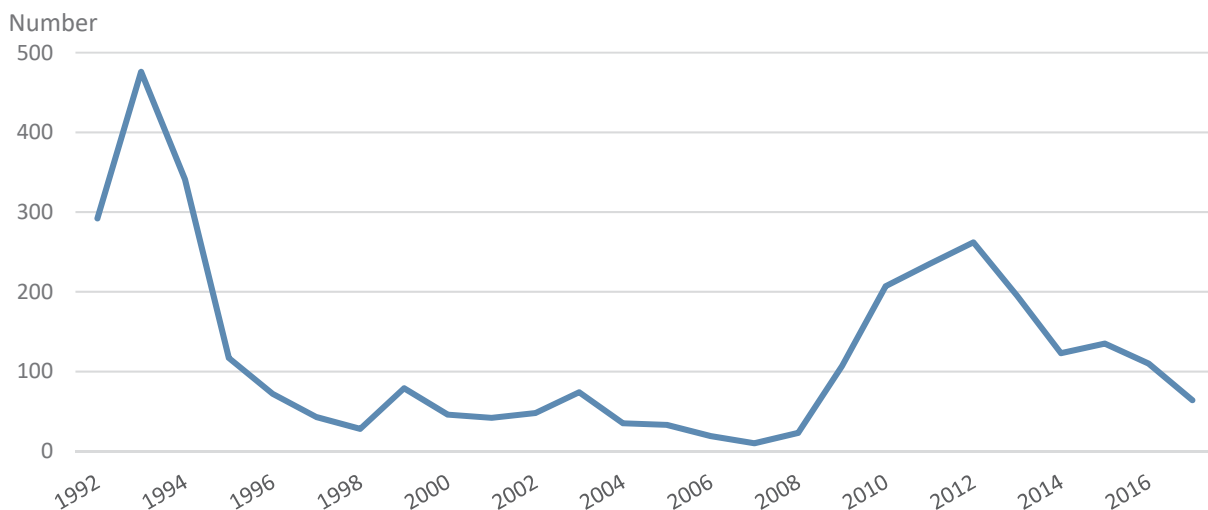
Figure 14 - DLR's stock of repossessed properties at year-end



The number of completed forced sales of property where DLR holds a mortgage was 64

in 2017, which was down on 2016, when the number was 110; cf. figure 15.

Figure 15 - Forced sales of properties in which DLR holds a mortgage





**Table 29 - DLR's impaired loans.**

Item, DKKm	2017	2016
Individual impairments:		
On loans and guarantees, start of year	411	445
Reversed impairment provisions	-195	-191
Impairment provisions for the period	62	156
Individual impairments, year-end	278	411
Collective impairments:		
On loans and guarantees, start of year	190	145
Reversed impairment provisions	0	-25
Impairment provisions for the period	56	70
Collective impairments, year-end	246	190
Total impairments, year-end	524	601
Individually impaired exposures, fair value:		
- Before impairments	2,027	3,381
- After impairments	1,748	2,970
Impact on operating results:		
Loss for the period	-23	-104
Recovered debts previously written off	14	4
Impairment provisions for the period	-118	-226
Reversed impairment provisions	195	216
Losses offset in commission payments to banks	27	48
Impairments on loans and other receivables, etc.	94	-62

Source: DLR's Annual Report note 17 and note 9

## 5.10 Encumbered assets

As a mortgage credit institution, encumbrance is a natural aspect of DLR's business model. Assets in a capital centre (cover pool) used for the issuance of covered bonds are, by definition, encumbered, as legally these assets are dedicated collateral for bondholder payments, which means DLR's entire loan portfolio is encumbered. Other assets in a capital centre, such as bonds or other liquidity that

constitute overcollateralisation for bond investors are also encumbered, as bond owners have a preferential claim on the assets in the event of insolvency (solvency encumbrance).

All DLR's assets are placed in one of DLR's two capital centres, "General Capital Centre" or "Capital Centre B". DLR has thus by definition an asset encumbrance of 100 pc.

**Table 30. DLR's asset encumbrance at 31 December 2017**

Value for accounting purposes (DKKm)	Encumbered assets	Unencumbered assets	Total assets	Asset encumbrance (pc)
Mortgage lending	143,061	0	143,061	100%
Equity instruments	46	0	46	100%
Debt instruments	11,810	0	11,810	100%
Other assets	8,458	0	8,458	100%
DLR's total assets	163,375	0	163,375	100%

Source: DLR's internal calculations

When calculating encumbrance for a mortgage credit institution it is important to distinguish between "solvency encumbrance" and "liquidity encumbrance". DLR views its securities portfolio as being unencumbered from a liquidity perspective, as DLR can freely buy or sell these assets as long as the portfolio composition requirements under LCR are complied with.

At year-end 2017, DLR had not received re-encumbered assets.

## 5.11 Current trends in DLR's key business areas

### Agriculture

Significant price increases from mid-2016 on pork products and not least weaner pigs, which are exported to Germany, together with rising milk prices from the latter half of 2016,

have resulted in considerably improved earnings for dairy and pig producers compared with the previous few years.

Growth in operating profit up to 2016 together with our forecast going forward to 2018 for full-time farms is shown in figure 13. Note that the forecast for 2017 is largely based on already known prices.

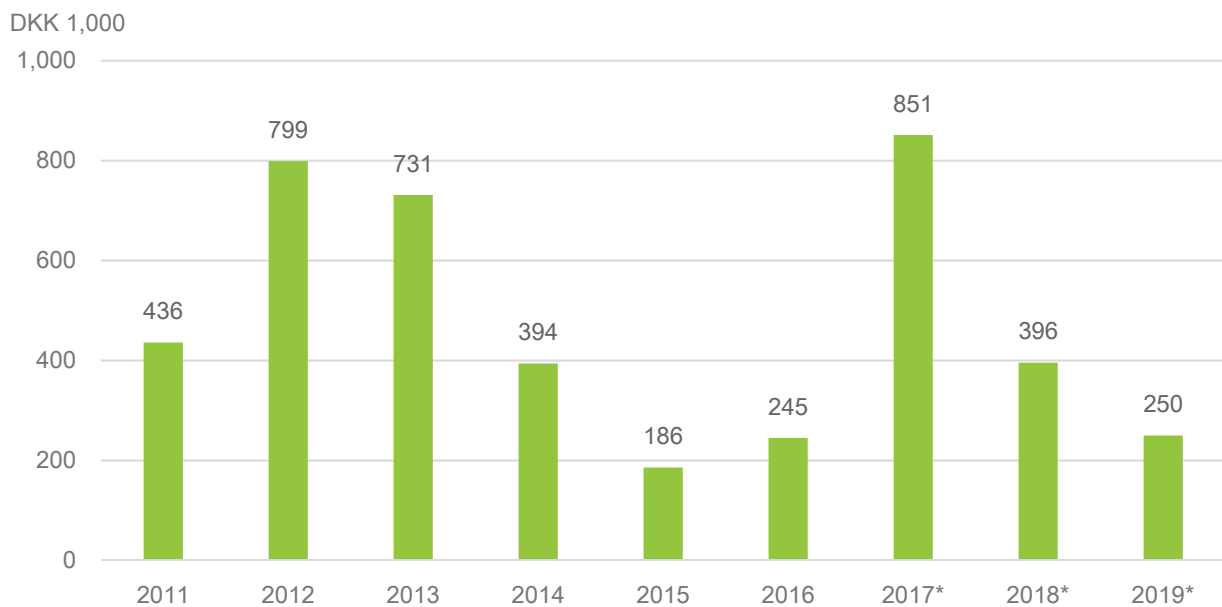
The considerably improved earnings in 2017 follow a number of years with weak financial results. This positive trend has increased the farmers' options for reducing debt and has contributed to the further development of Danish agriculture.

The latest income forecasts from SEGES indicate that improved earnings will be replaced by a deterioration in terms of trade as early as 2018 or 2019. The less rosy economic outlook for the coming years increases the need to be aware of operations that after several years of

weak earnings have a debt burden that exceeds what the operation can realistically service. Focus is needed in the coming years on finding suitable solutions both for these operations and for farms where the owner, due to his/her age, wishes to leave the industry.

We should note, however, that within all segments of the agricultural sector there are substantial differences in the results each farmer can achieve from apparently very similar operations. Hence, there are many talented farmers who even during periods of relatively poor prices are capable of realising a level of earnings that allows for the further development of their operation.

Figure 16 - Operating profit before owner remuneration for all full-time operations



Source: SEGES income forecast, January 2018

\*) Forecast

### Dairy producers

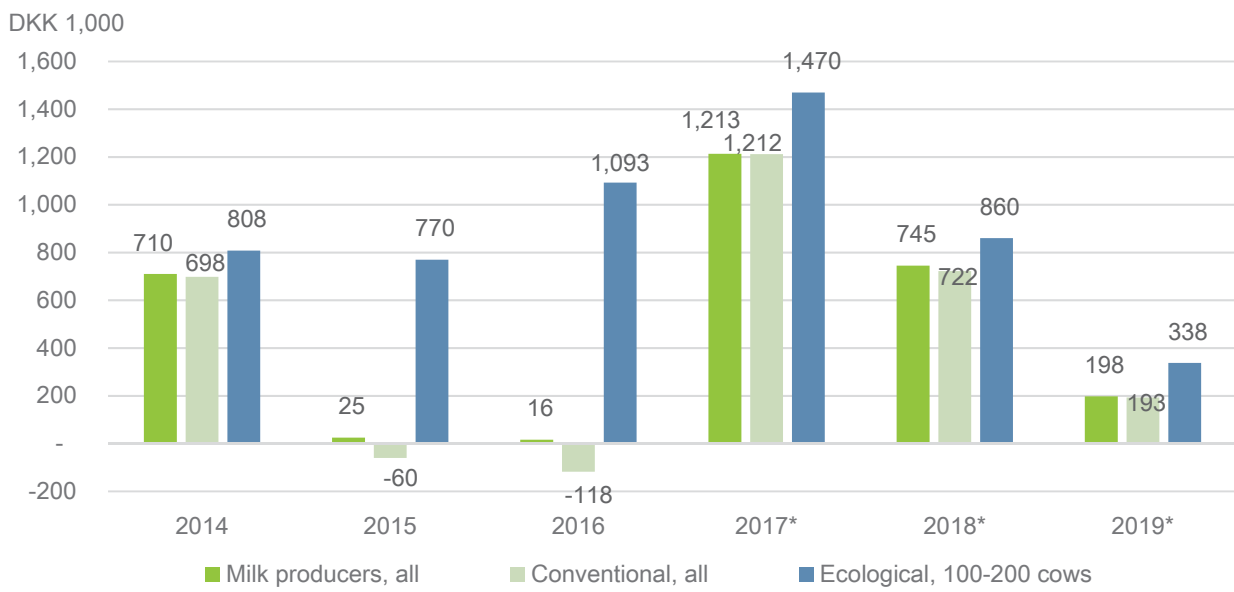
A forecast for developments in the operating profits of dairy producers is shown in figure 17. As can be seen, the outlook is for a satisfactory result in 2017 on the back of the relatively high milk price.

The increase in the price of milk was mainly due to generally rising demand for butter and cheese. A further contributory factor has been a growing interest in China for importing dairy products.

Going forward, considerable volatility in milk prices should be expected, in part due to the discontinuation of the EU's milk quota system in 2015, which could again put pressure on

operating profits. This has been confirmed by recent market developments and updated forecasts for prices and earnings.

Figure 17 - Operating profits before owner remuneration, milk producers



Source: SEGES income forecast, January 2018

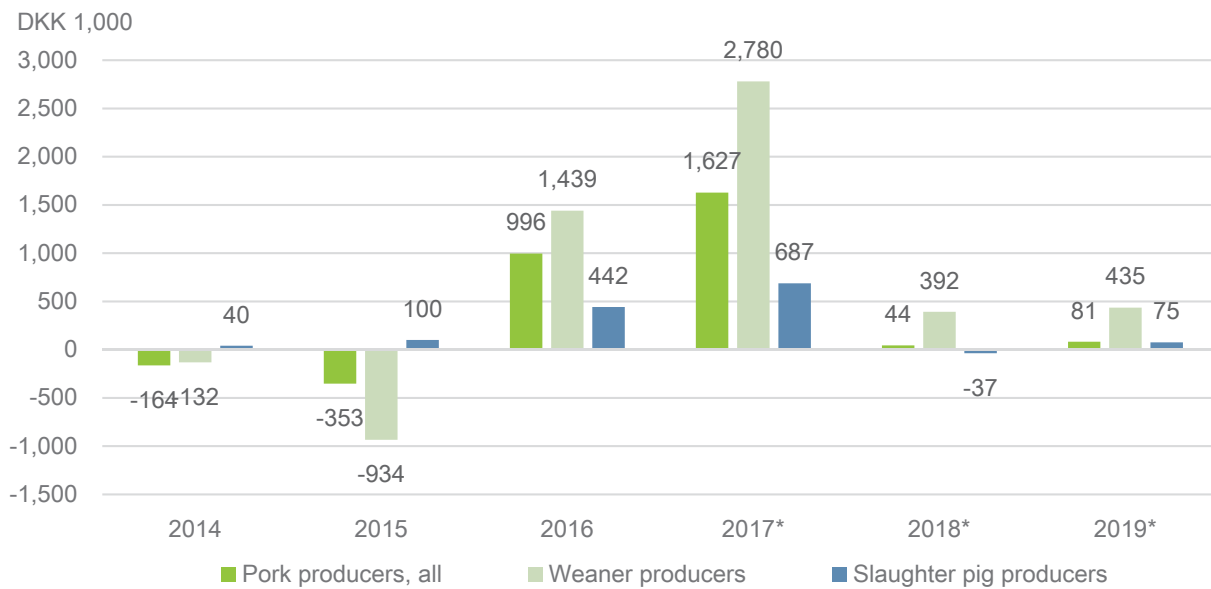
\*) Forecast

### Pork producers

As can be seen in figure 18, which shows developments in and a forecast for the operating profits of pork producers, weaner pig producers have realised the most pronounced increase in earnings, though butcher hog producers, too, experienced significantly improved earnings in 2016 and particularly in

2017 compared to the preceding years. Pork production looks set to increase in both the EU and North and South America in the coming years. The larger supply of pork on the global market will likely put pressure on settlement prices and thus reduce the earnings of producers.

Figure 18 - Operating profits before owner remuneration, pork producers



Source: SEGES income forecast, January 2018

\*) Forecast

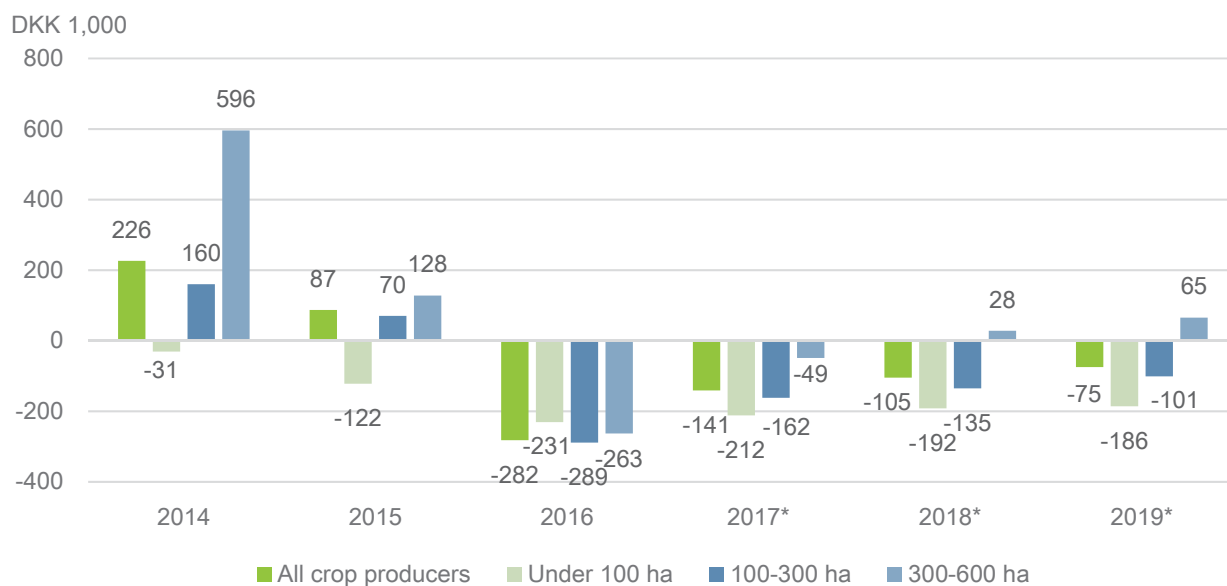
### Crop producers

Relatively low grain prices mean the earnings of crop producers are under pressure, as can be seen in figure 19. On average, however,

the outlook is still for crop producers to have balanced economies.

The larger farms that have the highest relative debt burdens also have the best results on average.

Figure 19 - Operating profits after owner remuneration, crop producers



Source: SEGES income forecast, January 2018

\*) Forecast

### Mink producers

Danish mink producers have continued to increase their market share and now account for around one third of the global production of mink pelts with much of the production being exported. Despite Danish mink pelts attracting prices 30 pc higher than foreign pelts, pronounced price falls on mink pelts between 2015 and 2017 mean a number of mink operations look likely to make a loss.

However, with the supply of mink pelts expected to fall by 30 million to 54 million pelts in 2017 and demand likely to remain robust, Copenhagen Fur expects mink prices to trend higher in 2018.

### Agricultural property market

Activity and price levels in the agricultural property and land market have remained largely unchanged on average in recent years.

The market continues to be characterised by an increasing price differentiation depending on the fertility and layout of the land. Land prices increasingly reflecting the land's yield potential is a positive development, and our overall estimate is that current price levels for farmland are supported by long-term expectations for vegetable product prices, even taking into account a certain rise in interest rates in the coming years.

Compared to other countries, the price of land in Denmark is now relatively low, which was not the case earlier. This has triggered an increasing interest among foreign investors in buying Danish land, which may help support prices.

## Commercial property

DLR's lending on commercial properties comprises loans for private residential rental property, office and retail property, manufacturing and workshop property, community power plants – including land-based wind turbines – and housing cooperatives.

DLR's loan distribution network consists of local and regional/national banks whose markets cover the entire country, although coverage of the Greater Copenhagen area is somewhat limited. Of DLR's lending to the above-

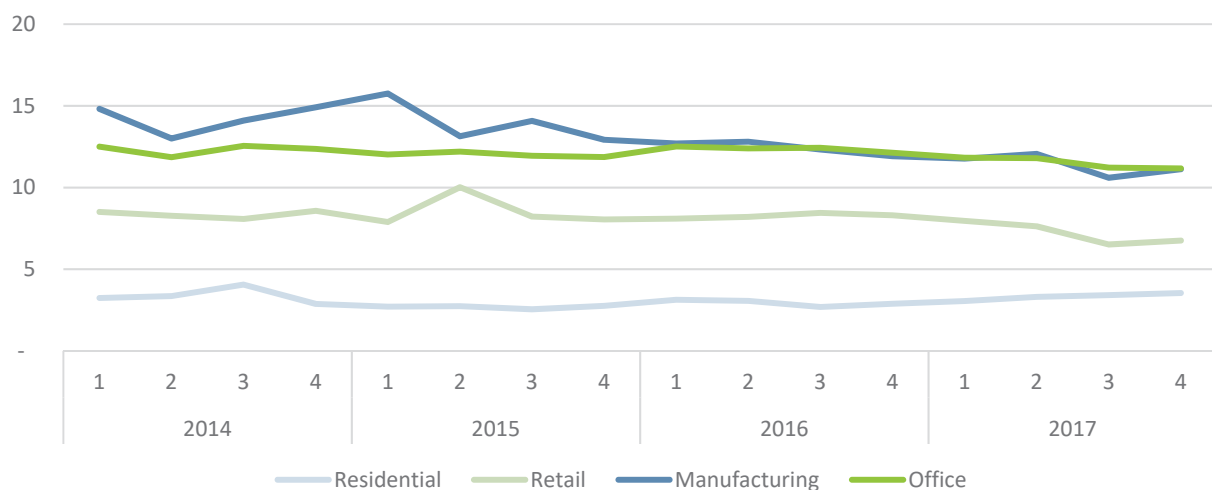
mentioned property categories, just under 90 pc is on properties located outside the capital region.

### Vacancy rates falling

As can be seen in figure 20, vacancy rates have been falling in recent years on rental properties in the office, retail and manufacturing sectors. This trend has had a positive impact on the commercial property market, albeit initially in and around Copenhagen and the other major cities.

However, this favourable development has lately been spreading from the major cities to other parts of the country, where both the rental situation and turnover rate have improved.

Figure 20 - Vacancy rates in pc.



Source: Danish property Federation

## **Commercial property market**

Still low interest rates and the improved rental climate have contributed to the commercial property market generally performing satisfactorily.

A survey carried out by the Danish Property Federation (Ejendomsforeningen Danmark) showed the professional investment property market to be rather upbeat about the future. Expectations for the office property market are particularly high due to forecasts of rising property values, increasing market rents and falling vacancy rates.

The same survey showed expectations for the residential rental property market had been

falling since 2015, though from a very high level.

There is a tendency for investor interest to be particularly focused on properties located close to public transport and good road connections. Properties with layout flexibility are also in demand, while older, outdated properties are still proving difficult to sell.

2017 saw an increased interest in contemporary, high-ceilinged, logistics facilities well located with respect to infrastructure. Demand here has been driven by a focus on efficient cargo handling and speedy delivery, and we expect this trend will continue into 2018.



## 6. 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, 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 capital base, proceeds from issued senior debt, senior secured bonds, hybrid (tier 1) core capital and supplementary capital, etc., profits/earnings and prepaid funds.

DLR applies the portfolio approach when estimating a potential capital charge for interest rate risks in or external to its trading book. DLR therefore actively manages these interest rate risks, including hedging between the interest rate risks in and external to the trading book.

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:

- Overall 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 0-3 pc range of the capital base. The interest rate risk on DLR's trading book (securities portfolio/assets) should be in the 0-3 pc range of the capital base, 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 capital base.
- Exchange rate risk on DLR's assets, liabilities and off-balance sheet items must be at most be 0.1 pc of the capital base as calculated according to exchange rate indicator 2; cf. 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 decide on which measures to take, if appropriate. Treasury prepares both a 14-day and a quarterly report (securities report). The 14-day report is submitted to the Executive Board and discussed at securities meetings that are held every 14 days, while the quarterly report is submitted to the Executive Board and the Board of Directors in connection with approving the quarterly, half-yearly and annual financial reports. Information reported includes the composition of the securities portfolio, price adjustments, interest accrual, interest rate risk and exchange rate risk.

DLR's day-to-day liquidity management is based on two daily statements: The bond sales statement and the liquidity statement. The bond sales statement provides an over-

view of the specific bond series and their respective nominal amounts earmarked for payment, and is generated in both DKK and EUR. In addition, a statement is prepared every morning of all bank deposits in DLR's various accounts in both DKK and EUR.

Based on the bond statement and the liquidity statement the Treasury department plans its bond trades with a view to ensuring adequate net liquidity. The Finance department subsequently distributes the liquidity across the respective accounts so there is sufficient liquidity to make loan payouts, interest/principal payments on outstanding bonds and to pay salaries, etc.

## 6.1 Interest rate risk

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Interest rate risk expresses the amount that DLR should expect as a price adjustment in the event of a shift in market yields of 1 percentage point. As DLR has decided to follow the specific balance principle, the interest rate risk deriving from the issuance of covered bonds (SDO) for the financing of mortgage loans reflects the mortgagor's loan conditions. Hence, DLR's interest rate risk arises solely as a consequence of a natural need to invest DLR's securities portfolio, prepaid amounts and proceeds from issued debt instruments.

Danish law stipulates that the interest rate risk on the securities portfolio and funds acquired through the issuance of debt instruments may

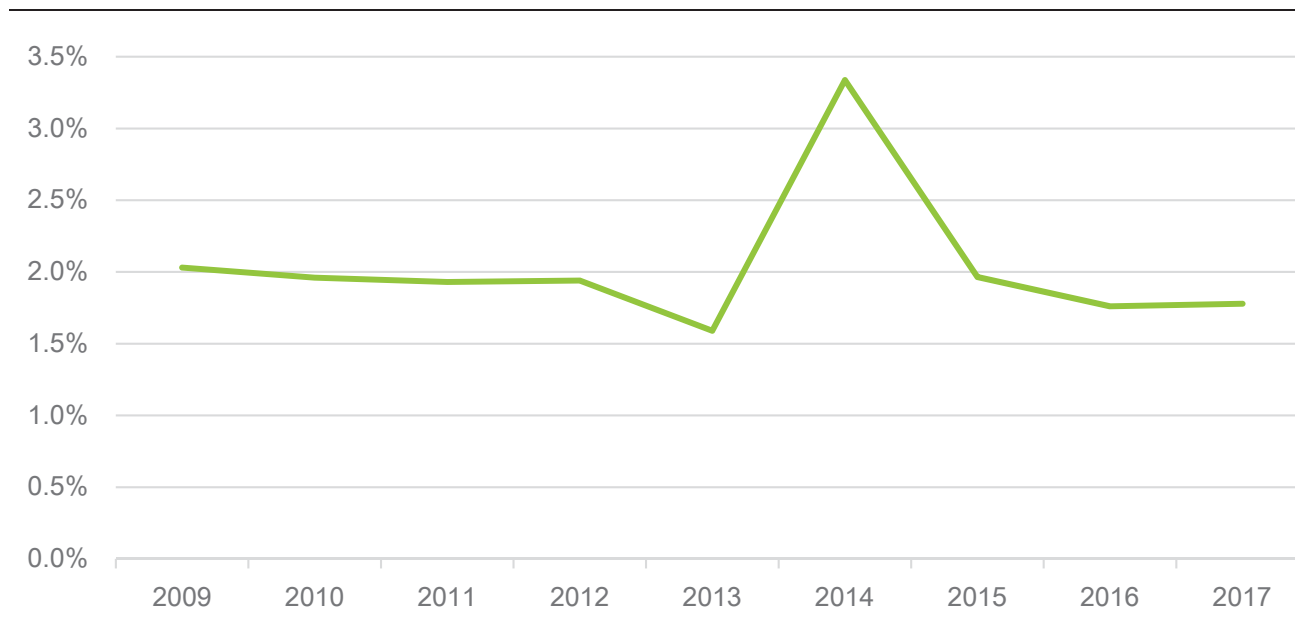
not exceed 8 pc of the capital base. With a capital base of DKK 12,372m after deductions at year-end 2017, this equates to a maximum permitted interest rate risk for DLR of DKK 990m.

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, as mentioned, be

in the range 0-3 pc of DLR's capital base. According to the Board's guidelines, the interest rate risk on the securities portfolio should thus be between DKK 0 and 371m.

The interest rate risk on DLR's securities portfolio (assets) was DKK 220m at end-2017. The relative interest rate risk is calculated to be 1.78 pc given the capital base at the end of 2017; cf. figure 21.

Figure 21 - Relative interest rate risk on DLR's securities portfolio



An important component of DLR's capital structure is regularly raising significant loans in the capital markets via the issuance of debt instruments. The debt instruments represent a loan raised outside the specific balance principle in connection with lending activities.

DLR had DKK 9bn in outstanding senior debt at the end of December 2017 divided between DKK 6bn in Senior Secured Bonds (SSB), 1bn in unsecured senior debt and 2bn in Senior Resolution Notes (SRN). These are floating

rate bonds issued in DKK with an original maturity of between 2 and 5 years. The interest rate risk on these debt instruments amounted to DKK 32m, or 0.25 pc of DLR's capital base at the end of 2017.

The interest rate risk on issued debt instruments correlates negatively with the interest

rate risk on the securities portfolio and thus reduces DLR's net interest rate risk to DKK 189m, or 1.5 pc of the capital base at the end of 2017. DLR may take a net perspective on interest rate risk because the composition of the portfolio is actively managed within duration bands so that liabilities are hedged within the same duration bands as assets.

**Table 31. DLR's outstanding senior debt issues year-end 2017**

Type	Amount (DKKm)	Issuance- date	Maturity date	Maturity (years)	Reference- Rate-	Rate- premium
SSB	2,000	16-03-2016	01-04-2018	2	3M Cibor	0.72 %
Unsecured senior debt	1,000	13-06-2016	01-07-2018	2	3M Cibor	0.73 %
SSB	1,000	24-09-2015	01-10-2018	3	3M Cibor	0.78 %
SSB	2,000	12-09-2016	01-10-2019	3	3M Cibor	0.60 %
SSB	1,000	22-03-2017	01-04-2020	3	3M Cibor	0.37 %
SRN	1,000	15-06-2017	15-06-2020	3	3M Cibor	0.62 %
SRN	1,000	15-09-2017	15-06-2022	4 <sup>3</sup> / <sub>4</sub>	3M Cibor	0.75 %
Total, senior debt	9,000					

DLR holds a large 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.

Of DLR's bond portfolio of DKK 42.1bn at year-end 2017, including bonds due to mature on 1 January 2018, 85 pc was in DKK and 15 pc in EUR. Ignoring DLR's bond holdings that are set to mature soon, 64 pc of the portfolio is invested in bonds with annual or even

shorter rate-setting intervals (CIBOR/CITA/EURIBOR).

Proceeds from DLR's issues of SSB, unsecured senior debt and SRN of DKK 9bn in all have been placed in bonds with relatively short maturities.

## 6.2 Exchange rate risk

Exchange rate risk is the risk of loss from shifts in foreign exchange rates. Due to the specific balance principle, DLR assumes only a very limited exchange rate risk, as loans

paid out in foreign currency (euro only) are always funded in that currency. Exchange rate risk thus only arises because DLR's securities portfolio – as a result of LCR requirements – includes a minor share of government and mortgage bonds in euro.

Calculated in accordance with the Danish FSA's exchange rate indicator 2, DLR's exchange rate risk was DKK 2m at the end of 2017, corresponding to 0.02 pc of DLR's capital base. According to Danish law, exchange rate risk calculated according to the Danish FSA's indicator 2 may not exceed 0.1 pc of the capital base.

### 6.3 Equity market risk

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DLR generally does not place funds in equities apart from "sector equities" related to financial infrastructure. Together with banks and other mortgage credit institutions, DLR has acquired shares in two sector companies whose mandate is to support its owners' business within mortgage credit, payment processing, IT, etc. DLR has also acquired shares in Landbrugets Finansieringsinstitut (LFI, formerly Landbrugets Finansierings-Bank). DLR has no plans to sell these sector

equities, since participation in these companies is considered necessary for mortgage banking operations. Hence, these shares are not considered part of DLR's trading book

At the end of 2017, DLR's equity holdings thus consisted solely of holdings in VP Securities A/S, e-nettet A/S and Landbrugets Finansieringsinstitut A/S. The total value of this share portfolio was DKK 46m at the end of December 2017. DLR's equity market risk after tax amounted to DKK 4m.

DLR's holding of treasury shares amounts to 21.495.118 shares at a nominal price of DKK 1 each. DLR's holding of treasury shares is not included in the price adjustment item for equities.

In compliance with DLR's accounting policies, market-traded equities are measured at fair market value. Fair value is calculated as the closing price on the balance sheet date. Unlisted equities are also entered at fair value. If the fair value cannot be reliably estimated, these shares are set at cost, minus any deductions for write-downs.

**Table 32 - DLR's exposures in equities, etc. not included in the trading book**

Type (DKKm)	Exposure, 31.12.2017	Operational impact in 2017
Sector equities	47	-3
Other equities and capital shares	-	-
Total	47	-3

## 6.4 Counterparty risk

To manage and mitigate DLR's risk of loss due to counterparties failing to meet their payment obligations to DLR, financial counterparties and the extent of the exposure are regularly monitored.

Note that DLR's risk of loss on financial counterparties is limited, as counterparty risk essentially comprises the borrower guarantees provided by the banks, with the guarantee secondary to the borrower's personal debt obligations and the mortgage right on the property.

Exposure calculations are regularly made for the individual banks to estimate DLR's financial counterparty risk.

## 6.5 Liquidity risk

### Liquidity management

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.

There are many advantages to this model, which ensures a funding match in terms of maturity, interest rate, currency and loan repayment. Hence, payments received by DLR from borrowers less an administration margin to DLR (risk and administration fee) perfectly match the amounts DLR has to pay bondholders. In general, the balance principle means DLR essentially only assumes a credit risk in connection with its lending activities.

As the individual borrower's dates for making interest and principal payments are pre-determined, DLR will – assuming due payment – receive the funds prior to or no later than concurrently with the equivalent payments falling due to bondholders. A mismatch will only oc-

cur when the frequency of the borrower's payments is higher than DLR's payments on the underlying bonds (for example, ARM loans). For DLR, this will result in a regular liquidity surplus (prepaid funds).

Loan prepayments (immediate redemptions) also give DLR additional liquidity, which is then invested until the amount has to be paid out to bondholders as extraordinary drawings. Like the liquidity from immediate redemptions, excess liquidity from prepaid funds is placed in secure, liquid bonds or as term deposits with banks and ring-fenced from the rest of the securities portfolio.

Following implementation of CRR/CRD IV, new requirements were introduced – cf. S.8 (9) of the Danish Executive Order on Management and Control of Banks, etc. – for the calculation and assessment of liquidity and liquidity risk (ILAAP – Internal Liquidity Adequacy Assessment Process). Since 2014, DLR has therefore produced a separate annual liquidity report along the lines of a solvency need assessment (ICAAP – Internal Capital Adequacy Assessment Process). The ILAAP is approved by DLR's Board of Directors prior to being submitted to the Danish FSA.

DLR's Board of Directors has 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 pc of DLR's capital base, cf. Article 395 of the Capital Requirements Regulation (CRR), though deposits must not exceed 35 pc of the bank's capital base.

DLR generally only deposits funds in banks with an S&P rating of at least BBB/A-2. DLR's policies and guidelines on liquidity risk stipulate that a maximum of DKK 50m may be deposited in banks that do not have an S&P rating of at least BBB/A-2. Should a bank be assigned a rating below BBB/A-2, DLR will transfer the liquidity to another bank within 30 calendar days.

In consideration of DLR's bond ratings by S&P, DLR continuously ensures that total bank account deposits at individual banks related to DLR's Capital Centre B and the General Capital Centre do not exceed a limit of 5 pc of the outstanding cover pools in, respectively, Capital Centre B and the General Capital Centre. If the total amount deposited with a single bank exceeds 5 pc, DLR will immediately reduce its deposit at that bank and place the amount in compliance with the above rules.

DLR has, moreover, monetary policy counterparty status and has also prepared contingency plans in the event of a liquidity shortfall. A monetary policy counterparty is an account holder with Danmarks Nationalbank that has access to monetary policy instruments.

Monetary policy instruments include lending facilities whereby DLR can borrow in DKK against collateral in a matching portfolio of bonds (less a haircut). This increases DLR's flexibility with respect to liquidity management. Nevertheless, DLR's policy and goal is to be non-dependent on Danmarks Nationalbank's lending facility, which is why DLR also has drawing rights available at other banks.

There is a particular liquidity risk (refinancing risk) associated with the refinancing of ARM loans. This is because the refinancing auctions (where the interest rate is reset) involves the sale of very significant amounts of non-callable bullet bonds from all the mortgage credit institutions. The market is therefore sensitive to liquidity crises, spread widening and the like.

According to the legislation regulating the refinancing risk associated with ARM loans, bonds with a maturity shorter than the underlying loan are subject to a statutory maturity extension of one year at a time in the event of a planned refinancing failing due to insufficient buyers for the new bonds (refinancing failure trigger/RF). Bonds with a maturity of up to two years are further covered by a statutory maturity extension if the effective interest rate has risen by more than 5 percentage points over one year (interest-rate trigger/IT).

The increased focus on refinancing risk, which has also resulted in the "Supervisory Diamond" for mortgage credit institutions and the rating agencies' more stringent demands on Danish issuers to reduce funding imbalances, means DLR's funding profile has undergone a pronounced structural change in recent years.

DLR has thus been running remortgaging campaigns since 2014 that target borrowers with 1Y and 2Y ARM (F1/F2) loans, encouraging them to refinance into loans with longer-term funding. In 2017 the campaign was extended to also target 3Y ARM loans (F3 loans).

Between 2013 and 2017, DLR's share of F1/F2 loans in its loan portfolio fell by 51 percentage points. At year-end 2013 F1/F2 loans accounted for 58 pc of DLR's loan portfolio, while the share by year-end 2017 had been reduced to 7 pc. Borrowers have mostly shifted into longer ARM loans, mainly 5Y ARMs, or to DLR's floating rate loans, "ARM Short" (RT-Kort), where the underlying bonds currently have a maturity of 3-4 years. When refinancing ARM Short loans, DLR can choose to issue bonds with maturities of 1-10 years, which means greater funding flexibility.

### **Contingency funding**

DLR's contingency funding mainly comprises the securities portfolio of DKK 42bn. However, some of these holding are reserved for other



purposes and so cannot be included as contingency funding, which thus amounted to DKK 24bn net at the end of 2017.

Most of these funds are used to cover LTV disclosure obligations, OC requirements with respect to DLR's rating and to comply with LCR requirements. Hence, in reality these funds can only be used to acquire assets for these purposes.

With its bond holdings, DLR fulfils the Board of Directors' requirement that at least 60 pc of the minimum capital requirement for DLR's capital base is placed in Danish government bonds and mortgage bonds.

#### **LCR (liquidity coverage ratio)**

The LCR requirement is defined in a delegated act (the LCR Delegated Act), which was issued in accordance with CRR. 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. Due to its SIFI (systemically important financial institution) status, DLR has had to comply 100 pc with the LCR requirement from 1 October 2015. The requirement must be complied with in all currencies where an institution has more than 5 pc of its total liabilities. DLR therefore also had to comply with the LCR requirement in euro in 2017.

Like the other Danish mortgage credit institutions, DLR has been granted an exemption by

the Danish FSA with regard to the LCR calculation of certain mortgage bond-related cash flows. As a condition for the exemption the FSA set an LCR floor requirement, such that DLR should at all times hold liquid assets equivalent to 2.5 pc of DLR's total mortgage loan portfolio. The floor requirement can be met without taking into consideration that 1B covered bonds may at most account for 70 pc of the liquid assets. The formulation of the floor requirement means the LCR requirement has to be calculated according to two different fraction equations that both have to be above 100 pc:

$$\begin{aligned} & \text{LCR without floor} \\ &= \frac{\text{HQLA (Government bonds requirement)}}{\text{Net liquidity outflow (30 days forward)}} \end{aligned}$$

$$\begin{aligned} & \text{LCR with floor} \\ &= \frac{\text{HQLA (No govt. bonds requirement)}}{2.5 \text{ pc of DLR's mortgage lending}} \end{aligned}$$

DLR's holding of government bonds combined with its holding of covered bonds (SDO) issued by other mortgage credit institutions ensures DLR has adequate HQLA to continually comply with the LCR requirement without the floor. When LCR is calculated without the floor, at least 30 pc of the HQLA should be in the form of cash, deposits at Danmarks Nationalbank or government bonds.

At the end of 2017, DLR had an LCR without the floor requirement of 958% and an LCR with the floor requirement of 281%.

**Table 33a - DLR's LCR without floor**

	Total (DKKm)				Euro (EURm)			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
	2017	2017	2017	2017	2017	2017	2017	2017
HQLA	5,409	7,422	7,421	7,436	60	67	67	58
Net liquidity outflow	565	555	7	1,898	50	15	20	21
LCR without floor	958%	1,338%	101,902%	392%	120%	452%	342%	278%

**Table 33b - DLR's LCR with floor**

DLR's LCR with floor	Total (DKKm)				Euro (EURm)			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
	2017	2017	2017	2017	2017	2017	2017	2017
HQLA	9,873	11,199	10,879	10,128	60	67	67	58
2.5 pc of DLR's mortgage lending	3,518	3,492	3,481	3,457	18	28	34	27
LCR with floor	281%	321%	313%	293%	338%	237%	200%	217%

## NSFR

In November 2016 the EU Commission presented its proposal for an NSFR requirement (Net Stable Funding Ratio). EU negotiations on the final form of the NSFR are still ongoing. NSFR aims to help ensure the institution has suitably stable funding over a 1-year time frame. NSFR specifies the required amount of long-term and stable funding relative to the liquidity profile of the institution's assets and the potential drains on liquidity that may arise from off-balance sheet items.

The ongoing negotiations on NSFR include a determination of "interdependent assets and liabilities" that acknowledges the Danish refinancing legislation, which has rules on extending existing bonds when refinancing is not possible. This means there will generally not be any NSFR requirement for Danish mortgage credit loans and the issued covered bonds if the proposal is, as expected, approved in this form.

The NSFR proposal is expected to be approved in 2018.

## 7. IT RISK AND OPERATIONAL RISK, ETC.

### 7.1 IT risk

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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. Within mortgage-specific areas, DLR therefore bases its IT operations on its own in-house developed systems, while standard software is used in other areas. DLR has decided to outsource the technical side of IT operational management.

#### IT contingency plans

Given the central role IT plays in DLR's business activities, considerable focus is placed on the IT risks DLR is exposed to. Based on a risk and consequence analysis, DLR determines a security level that matches the significance of the relevant IT systems. A series of measures have been enacted with respect to

both operational disruptions and disaster situations in order to minimise the risks DLR's IT operations are exposed to.

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

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

### **Outsourcing**

Outsourcing is used 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 very limited here.

## **7.2 Operational risk**

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By operational risk is meant the risk of loss resulting from unsuitable or deficient internal procedures, human error or actions, system errors, or from external events. Legal risk and model risk are also operational risks.

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.

IT constitutes a key operational risk area. DLR's management therefore regularly addresses IT security, including contingency and emergency plans, etc.

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, various process descriptions have been produced to provide instructions for pertinent procedures and to define an area's allocated responsibilities. These measures help ensure DLR complies with both external and internal requirements.

DLR also registers losses or potential losses attributable to operational risk. DLR's Executive Board is continually updated on operational incidents, while DLR's Risk Committee is updated quarterly. DLR's Board of Directors is regularly updated on operational events that exceed a pre-determined limit and at least annually on all operational incidents that have occurred.

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. According to this method operational risk amounts to DKK 2,401m of risk exposure at 31 December 2017. That results in a capital requirement of DKK 192m (8 pc of the exposure) to cover operational risk as of end-2017.

### **7.3 Insurance risk**

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Another element focused on in 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.

### **7.4 Property risk**

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DLR’s portfolio of land, buildings and domicile properties (excluding temporarily held properties) is modest relative to DLR’s equity and balance sheet. DLR prefers not to assume any significant property risk.

The value of properties, which solely comprise DLR’s domicile property in Copenhagen, was DKK 97m at the end of 2017, equivalent to 0.8 pc of DLR’s equity.

## APPENDIX A

**Table A1-A4: Leverage ratio disclosure<sup>2</sup>**

Table A1. LRSum: Summary reconciliation of accounting assets and leverage ratio exposures

	Amount as per 31.12.2017	
1	Total assets as per published financial statements	163,374,911,524
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	-
3	(Adjustment for fiduciary assets recognised on the balance sheet pursuant to the applicable accounting framework but excluded from the leverage ratio total exposure measure in accordance with Article 429(13) of Regulation (EU) No 575/2013)	-
4	Adjustments for derivative financial instruments	666,879
5	Adjustment for securities financing transactions (SFTs)	-
6	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	4,960,048,689
EU-6a	(Adjustment for intragroup exposures excluded from the leverage ratio total exposure measure in accordance with Article 429(7) of Regulation (EU) No 575/2013)	-
EU-6b	(Adjustment for exposures excluded from the leverage ratio total exposure measure in accordance with Article 429(14) of Regulation (EU) No 575/2013)	-
7	Other adjustments	-
8	Leverage ratio total exposure measure	168,335,627,092

Table A2. LRCom: Leverage ratio common disclosure

	CRR leverage ratio exposures	
On-balance sheet exposures (excluding derivatives and SFTs)		
1	On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	163,741,736,428
2	(Asset amounts deducted in determining Tier 1 capital)	-692,413,737
3	Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets) (sum of lines 1 and 2)	163,049,322,691

<sup>2</sup> Cf. Commission implementing regulation (EU) 2016/200 of 15 February 2016 laying down implementing technical standards with regard to disclosure of the leverage ratio for institutions, according to Regulation (EU) No 575/2013 of the European Parliament and of the Council.

Derivative exposures		
4	Replacement cost associated with all derivatives transactions (ie net of eligible cash variation margin)	-
5	Add-on amounts for PFE associated with all derivatives transactions (mark-to-market method)	-
EU-5a	Exposure determined under Original Exposure Method	666,879
6	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	-
7	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	-
8	(Exempted CCP leg of client-cleared trade exposures)	-
9	Adjusted effective notional amount of written credit derivatives	-
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	-
11	Total derivatives exposures (sum of lines 4 to 10)	666,879
SFT exposures		
12	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	-
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	-
14	Counterparty credit risk exposure for SFT assets	-
EU-14a	Derogation for SFTs: Counterparty credit risk exposure in accordance with Articles 429b(4) and 222 of Regulation (EU) No 575/2013	-
15	Agent transaction exposures	-
EU-15a	(Exempted CCP leg of client-cleared SFT exposure)	-
16	Total securities financing transaction exposures (sum of lines 12 to 15a)	-
Other off-balance sheet exposures		
17	Off-balance sheet exposures at gross notional amount	-
18	(Adjustments for conversion to credit equivalent amounts)	4,960,048,689
19	Other off-balance sheet exposures (sum of lines 17 and 18)	4,960,048,689
Exempted exposures in accordance with Article 429(7) and (14) of Regulation (EU) No 575/2013 (on and off balance sheet)		
EU-19a	(Intragroup exposures (solo basis) exempted in accordance with Article 429(7) of Regulation (EU) No 575/2013 (on and off balance sheet))	-
EU-19b	(Exposures exempted in accordance with Article 429(14) and (575/2013) of Regulation (EU) No 575/2013 (on and off balance sheet))	-

Capital and total exposure measure		
20	Tier 1 capital	11,722,360,440
21	Leverage ratio total exposure measure (sum of lines 3, 11, 16, 19, EU-19a and EU-19b)	168,010,038,25 9
Leverage ratio		
22	Leverage ratio	6.98%
Choice on transitional arrangements and amount of derecognised fiduciary items		
EU-23	Choice on transitional arrangements for the definition of the capital measure	-
	Amount of derecognised fiduciary items in accordance with Article 429(11) of Regulation (EU)	
EU-24	No	575/2013 -

Table A3. LRSpl: Split-up of on-balance sheet exposures  
(excluding derivatives, SFTs and exempted exposures)

		CRR leverage ratio exposures
EU-1	Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:	163,049,322,691
EU-2	Trading book exposures	11,809,787,988
EU-3	Banking book exposures, of which	151,931,948,440
EU-4	Covered bonds	-
EU-5	Exposures treated as sovereigns	6,099,679,843
EU-6	Exposures to regional governments, MDB, international organisations and PSE not treated as sovereigns	-
EU-7	Institutions	1,936,410,717
EU-8	Secured by mortgages of immovable properties	33,249,967,779
EU-9	Retail exposures	103,890,154
EU-10	Corporate	105,817,349,861
EU-11	Exposures in default	4,328,384,198
EU-12	Other exposures (eg equity, securitisations, and other non-credit obligation assets)	396,265,888



Table A4. LRQua: Free format text boxes for disclosure on qualitative items

		Free format
1	Description of the processes used to manage the risk of excessive leverage	DLR operates with a significant capital surplus in relation to the leverage requirement. Moreover, a number of parameters are constantly monitored with a view to DLR avoiding coming into conflict with the leverage ratio target set by the Board of Directors.
2	Description of the factors that had an impact on the leverage Ratio during the period to which the disclosed leverage Ratio refers	Several factors have an impact on DLR's leverage ratio, including developments in DLR's capital situation and any growth in lending. DLR's capital base increased slightly in 2017, while lending growth was positive.

## APPENDIX B

Table B1. Principal characteristics of capital instruments issued by DLR

1	Issuer	DLR Kredit A/S
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	DK0030403480
3	Governing law(s) of the instrument	Danish law
4	Regulatory treatment Transitional CRR rules	Supplementary capital
5	Post-transitional CRR rules	Supplementary capital
6	Eligible at solo/(sub-)consolidated/ solo & (sub-) consolidated	
7	Instrument type (types to be specified by each jurisdiction)	Supplementary capital
8	Amount recognised in regulatory capital (currency in million, as of most recent reporting date)	DKK 650m
9	Nominal amount of instrument	DKK 650m
9 a	Issue price	100
9 b	Redemption price	100
10	Accounting classification	Liability – amortised cost
11	Original date of issuance	29 August 2017
12	Perpetual or dated	Dated
13	Original maturity date	29 August 2017
14	Issuer call subject to prior supervisory approval	Yes
15	Optional call date, contingent call dates and redemption amount	29 August 2022
16	Subsequent call dates, if applicable	Ongoing with 30 bank days' notice
	Coupons/dividends	
17	Fixed or floating dividend/coupon	Floating
18	Coupon rate and any related index	Cibor 6 + 250 bps.
19	Existence of a dividend stopper	No
20 a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Mandatory
20 b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Mandatory
21	Existence of step-up or other incentive to redeem	No
22	Noncumulative or cumulative	Cumulative
23	Convertible or non-convertible	Non-convertible
24	If convertible, conversion trigger (s)	
25	If convertible, fully or partially	
26	If convertible, conversion rate	
27	If convertible, mandatory or optional conversion	
28	If convertible, specify instrument type convertible to	

29	If convertible, specify issuer of instrument it converts into	
30	Write-down features	No
31	If write down, write-down trigger(s)	
32	If write-down, full or partial	
33	If write-down, permanent or temporary	
34	If temporary write-down, description of write-up mechanism	
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	At present Senior Resolution Notes
36	Non-compliant transitioned features	No
37	If yes, specify non-compliant features	

## APPENDIX C

### EBA guidelines – Guidelines on disclosure requirements under Part Eight of Regulation (EU) No 575/2013

#### Table overview:

Template 1	EU LI1	Differences between accounting and regulatory scopes of consolidation and the mapping of financial statement categories with regulatory risk categories
Template 2	EU LI2	Main sources of differences between regulatory exposure amounts and carrying values in financial statements
Template 4	EU OV1	Overview of RWAs
Template 7	EU CRB-B	Total and average net amount of exposures
Template 11	EU CR1-A	Credit quality of exposures by exposure class and instrument
Template 12	EU CR1-B	Credit quality of exposures by industry or counterparty types
Template 14	EU CR1-D	Ageing of past-due exposures
Template 15	EU CR1-E	Non-performing and forbore exposures
Template 16	EU CR2A	Changes in the stock of general and specific credit risk adjustments
Template 17	EU CR2-B	Changes in the stock of defaulted and impaired loans and debt securities
Template 18	EU CR3	CRM techniques – Overview
Template 21	EU CR6	IRB approach – Credit risk exposures by exposure class and PD range
Template 24	EU CR9	IRB approach – Backtesting of PD per exposure class
Template 26	EU CCR2	CVA capital charge
Template 34	EU MR1	Market risk under the standardised approach

Template 1: EU L11 - Differences between accounting and regulatory scopes of consolidation and the mapping of financial statement categories with regulatory risk categories

	a	b	c	d	e	f	g
	Carrying values as reported in published financial statements (DKKm)	Carrying values under scope of regulatory consolidation (DKKm)	Subject to the credit risk framework	Subject to the ccr framework	Subject to the securitisation framework	Subject to the market risk framework	Not subject to capital requirements or subject to deduction from capital
<b>Assets</b>							
Cash and demand deposits at central banks	50	50					
Due from credit institutions and central banks	7,951	7,951					
Loans, advances and other receivables at fair value	143,042	143,042	-504				
Loans, advances and other receivables at amortised cost	19	19	-5				
Bonds at fair value	11,810	11,810				-174	
Shares	46	46					
Land and buildings, domicile properties	97	97					
Other property, plant and equipment	4	4					
Current tax assets	27	27					
Deferred tax assets	0	0					
Assets held temporarily	35	35	-16				
Other assets	272	272					
Prepayments	22	22					
<b>Total assets</b>	163,375	163,375	-524	0	0	-174	0
<b>Liabilities</b>							
Issued bonds at fair value	139,972	139,972					

Issued bonds at amortised cost	9,000	9,000	9,000						
Current tax liabilities	0	0	0						
Other liabilities	1,331	1,331	1,331						
Deferred income	4	4	4						
Total liabilities	150,307	150,307	150,307	0	0	0	0	0	0
Provisions for deferred tax	3	3	3						
Total provisions	3	3	3	0	0	0	0	0	0
Subordinated debt	650	650	650						
Total subordinated debt	650	650	650						
Share capital	570	570	570						
Revaluation reserve	43	43	43						
Undistributable reserve	2,338	2,338	2,338						
Retained earnings	9,464	9,464	9,464						
Additional (hybrid) tier 1 capital	0	0	0						
Total equity	12,415	12,415	12,415	0	0	0	0	0	0
<b>Total equity and liabilities</b>	163,375	163,375	163,375	0	0	0	0	0	0

Template 2: EU LI2 - Main sources of differences between regulatory exposure amounts and carrying values in financial statements

	a	b	c	d	e
	Total (DKKm)	Credit risk framework	CCR framework work	Securitisation framework work	Market risk framework
1	Assets carrying value amount under the scope of regulatory consolidation (as per template EU LI1)				
2	Liabilities carrying value amount under the regulatory scope of consolidation (as per template EU LI1)				
3	Total net amount under the regulatory scope of consolidation				
4	Off-balance-sheet amounts	4,960			
5	Differences in valuations				
6	Differences due to different netting rules, other than those already included in row 2				
7	Differences due to consideration of provisions				
8	Differences due to prudential filters				
10	Exposure amounts considered for regulatory purposes	4,960	0	0	0

Template 4: EU OV1 - Overview of RWAs

	RWAs (DKKm)		Minimum capital re- quirements (DKKm)
	T	T-1	
1	71,804	75,327	5,744
2	37,242	35,982	2,979
3			
4	34,562	39,345	2,765
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19	3,667	2,892	293
20	3,667	2,892	293
21			
22			



23	Operational risk		2,401	2,456	192
24	- Of which basic indicator approach		2,401	2,456	192
25	- Of which standardised approach				
26	- Of which advanced measurement approach				
27	Amounts below the thresholds for deduction (subject to 250% risk weight)				
28	Floor adjustment				
29	<b>Total</b>		77,872	80,674	6,230

Template 7 : EU CRB-B - Total and average net amount of exposures

	a	b
	Net value of exposures at the end of the period (DKKm)	Average net exposures over the period (DKKm)
1	Central governments or central banks	
2	Institutions	
3	Corporates	34,562
4	- Of which: Specialised lending	
5	- Of which: SMEs	4,847
6	Retail	
7	- Secured by real estate property	
8	- SMEs	
9	- Non-SMEs	
10	- Qualifying revolving	
11	- Other retail	
12	- SMEs	
		36,954
		21,525

13	- Non-SMEs		
14	Equity		
15	<b>Total IRB approach</b>	34,562	36,954
16	Central governments or central banks		
17	Regional governments or local authorities		
18	Public sector entities		
19	Multilateral development banks		
20	International organisations		
21	Institutions	4,031	4,099
22	Corporates	22,290	21,222
23	- Of which: SMEs	13,913	13,581
24	Retail	87	85
25	- Of which: SMEs	4	4
26	Secured by mortgages on immovable property	9,220	8,748
27	Of which: SMEs	4,474	4,190
28	Exposures in default	1,217	2,019
29	Items associated with particularly high risk		
30	Covered bonds	0	3
31	Claims on institutions and corporates with a short-term credit assessment		
32	Collective investments undertakings		
33	Equity exposures	46	52
34	Other exposures	351	383
35	<b>Total standardised approach</b>	37,242	36,612
36	<b>Total</b>	71,804	73,565

Template 11 : EU CR1 - Credit quality of exposures by exposure class and instrument

		(DKKm)								
	a	b		c	d	e	f	g		
		Gross carrying values of								
	Defaulted ex- posures	Non-defaulted exposures		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk ad- justment for the period	Net values (a+b-c-d)		
1										
2										
3	3,122	69,886		139	200	339		72,670		
4										
5	167	22,578		0	63	63		22,683		
6										
7										
8										
9										
10										
11										
12										
13										
14										
15	3,122	69,886		139	200	339		72,670		
16	0	6,909		0	0	0		6,909		
17	0	92		0	0	0		92		
18										
19										



Template 12: EU CR1-B - Credit quality of exposures by industry or counterparty types

	a		b		c	d	e	f	g				
	Gross carrying values of		Non-defaulted exposures	Specific credit risk adjustment						General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges	Net values (a+b-c-d)
	Defaulted exposures												
1	2,423	75,507	123	124	247		77,684						
2	184	1,830	2	3	6		2,008						
3	29	2,167	2	3	5		2,190						
4	0	1,079	0	2	2		1,077						
5	0	33	0	0	0		33						
6	45	3,688	1	6	7		3,726						
7	101	4,341	12	7	20		4,422						
8	4	817	0	1	2		819						
9	19	1,333	2	2	4		1,348						
10	0	123	0	0	0		123						
11	510	32,775	52	53	105		33,179						
12	14	1,022	1	2	2		1,034						
13	43	1,199	3	2	5		1,238						
14	0	1	0	0	0		1						
15	4	336	0	1	1		340						
16	6	730	0	1	2		735						
17	13	422	0	1	1		434						
18	1,113	22,807	80	38	118		23,803						
19	4,509	150,210	272	246	524		154,195						

Template 14: EU CR1-D - Ageing of past-due exposures

	Gross carrying values (DKKm)					
	Total	<=30 days	>30 days <=60 days	>30 days <=180 days	>180 days <= 1 year	> 1 year
Loans	4,708	3,675	0	681	231	121
Debt securities	0	0	0	0	0	0
Total	4,708	3,675	0	681	231	121

Template 15: EU CR1-E - Non-performing and forborne exposures

	Gross carrying values of performing and non-performing exposures (DKKm)										Accumulated impairment and provisions and negative fair value adjustments due to credit risk		Collaterals and financial guarantees received (DKKm)	
	Performing					Non-performing					Performing	Non-performing	Of which performing	Of which non-performing
	Of which past due >30 <=90 days	Of which forborne	Total	Of which defaulted	Of which impaired	Of which forborne	Of which forborne	Total	Of which forborne	Total	Of which forborne	Total	Of which performing	Of which non-performing
Debt securities	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Loans and advances	139,152	0	343	4,340	2,029	731	4,340	2,029	731	0	0	139,152	4,340	
Off-balance sheet exposures	3,726	0	0	31	0	0	31	0	0	0	0	1,074	31	
Total	142,878	0	343	4,371	2,029	731	4,371	2,029	731	0	0	140,226	4,371	

Template 16: EU CR2-A - Changes in the stock of general and specific credit risk adjustments

	a		b
	Accumulated specific credit risk adjustment (DKKm)	Accumulated general credit risk adjustment (DKKm)	
1	Opening balance	411	190
2	Increases due to amounts set aside for estimated loan losses during the period	62	56
3	Decreases due to amounts reversed for estimated loan losses during the period	-39	
4	Decreases due to amounts taken against accumulated credit risk adjustments	-156	
5	Transfers between credit risk adjustments		
6	Impact of exchange rate differences		
7	Business combinations, including acquisitions and disposals of subsidiaries		
8	Other adjustments		
9	Closing balance	278	246
10	Recoveries on credit risk adjustments recorded directly to the statement of profit or loss		
11	Specific credit risk adjustments directly recorded to the statement of profit or loss		

Template 17: EU CR2-B - Changes in the stock of defaulted and impaired loans and debt securities

	Gross carrying value de-faulted exposures (DKKm)
Defaulted loans	
Opening balance	8,431
Loans and debt securities that have defaulted or impaired since the last reporting period	1,238
Returned to non-defaulted status	-5,170
Amounts written off	-24
Other changes	-121
Closing balance	4,354

Template 18: EU CR3 - CRM techniques – Overview

		(DKKm)				
		a	b	c	d	e
		Exposures unsecured – Carrying amount	Exposures secured – Carrying amount	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1	Total loans		16,572	16,572		
2	Total debt securities					
3	Total exposures		16,572	16,572		
4	Of which defaulted		341	341		



Template 21: EU CR6 - IRB approach – Credit risk exposures by exposure class and PD range

Exposures under IRB approach (full-time agriculture) by exposure class and PD range												
	a	b	c	d	e	f	g	h	i	j	k	l
PD scale	Original on-balance-sheet gross exposures (DKKm)	Off-balance-sheet exposures pre-CCF (DKKm)	Average CCF	EAD post CRM and post CCF (DKKm)	Average PD %	Number of obligors	Average LGD %	Average Maturity Years	RWAs (DKKm)	RWA density (DKKm)	EL (DKKm)	Value adjustments and provisions (DKKm)
0.00 to <0.15	8,317	12	0.5	8,323	3.04	1,295	6.88	4.97	1,488	18%	17	
0.15 to <0.25	4,756	4	0.5	4,758	3.1	602	7.33	4.97	917	19%	11	
0.25 to <0.50	7,038	16	0.5	7,046	3.19	770	9.46	4.98	1,842	26	21	
0.50 to <0.75	6,364	43	0.5	6,386	3.31	577	9.39	4.98	1,653	26%	20	
0.75 to <2.50	12,619	92	0.5	12,665	3.74	1,230	9.92	4.97	3,512	28%	47	
2.50 to <10.0	8,553	118	0.5	8,612	5.65	984	10.17	4.96	2,760	32%	50	
10.0 to <100	22,021	150	0.5	22,096	23.92	1,925	13.06	4.97	14,269	65%	700	
100 (Default)	2,783	0	0.5	2,783	100	173	28.29	4.99	8,120	292%	139	139
Total	72,453	434	0.5	72,670	13.58	7,556	11	4.97	34,562	48%	1,006	139

Exposures are divided into reporting groups according to Point-in-Time PD, while the group's average PD is based on Through-the-Cycle PD. Consequently, the group's average PD may be above the group's upper PD limit.

Average LGD is based on the Down-Turn estimate.

**Template 24: EU CR9 - IRB approach – Backtesting of PD per exposure class**

Range for PD (External PD band)	Equivalent to external rating (S&P)	Weighted average PD	Arithmetic average PD by obligors	Number of obligors		Defaulted obligors in the year	Of which new obligors	Average historical annual default rate
				End of previous financial year (2016)	End of financial year (2017)			
0% to <0.15%	BBB+/AA	3.5%	3.5%	1,157	1,108	0	0	0.0%
0.15% to < 0.25%	BBB/BBB	4.3%	4.2%	673	655	1	0	0.2%
0.25% to < 0.50%	BBB-/BB	4.1%	4.2%	1,023	1,016	3	0	0.4%
0.50% to < 0.75%	BB+/BBB	5.1%	5.1%	556	560	4	0	0.7%
0.75% to < 2.50%	BB-/BB+	5.6%	6.0%	1,099	1,139	12	0	1.5%
2.50% to < 10.0%	B-/BB-	8.8%	8.5%	1,017	1,076	11	0	2.4%
10.0% to < 100%	CCC/C/B	23.2%	22.0%	1,761	1,767	120	1	10.8%
100 % (Default)	Default	69.5%	70.3%	264	211	26	26	0.0%
Total (full-time agriculture)		13.8%	11.1%	7,550	7,532	177	27	3.4%

**Template 26: EU CCR2 - CVA capital charge**

	a	b
	Exposure value (DKKm)	RWA (DKKm)
1	Total portfolios subject to the advanced method	
2	(i) VaR component (including the 3x multiplier)	
3	(i) SVaR component (including the 3x multiplier)	
4	All portfolios subject to the standardised method	2,897
EU4	Based on the original exposure method	
5	Total subject to the CVA capital charge	2,897

**Template 34: EU MR1 - Market risk under the standardised approach**

	a	b
	RWA (DKKm)	Capital require- ments (DKKm)
Outright products		
1 Interest rate risk (general and specific)	2,897	232
2 Equity risk (general and specific)		
3 Exchange rate risk	770	62
4 Commodity risk		
Options		
5 Simplified approach		
6 Delta-plus method		
7 Scenario approach		
8 Securitisation (specific risk)		
9 Total	3,667	293