

Risk Report 2018Q4

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Contents

The Risk Report has been prepared by Realkredit Danmark's analysts for information purposes only. Realkredit Danmark will publish an updated Risk Report quarterly.

The Risk Report offers an update on the performance of mortgage collateral supporting mortgage bonds and mortgage covered bonds (covered bonds) issued by Realkredit Danmark.

Contents of the report falls into two parts. The first part contains general market information relevant to the performance of mortgage collateral. The second part contains Realkredit Danmark specific information. Contents of the report are:

1 Key Market Indicators

- House Prices
- Homeowners Equity
- Geographical Dispersion
- Unemployment and Real Wage Growth
- Homeowner Affordability
- Foreclosures
- Danish economic outlook

2 Key Collateral Indicators

- Dispersions Loan to Value Ratios
- Loan to Value Ratios and Borrower Classifications
- Mortgage Collateral Breakdowns — Total, Capital Centre S and Capital Centre T
- Borrower Exposure to Interest Rates
- Arrears and Repossessions
- Over Collateralisation and Capitalisation
- Supplementary Collateral
- Guarantees
- Market Risk Exposures and Liquidity

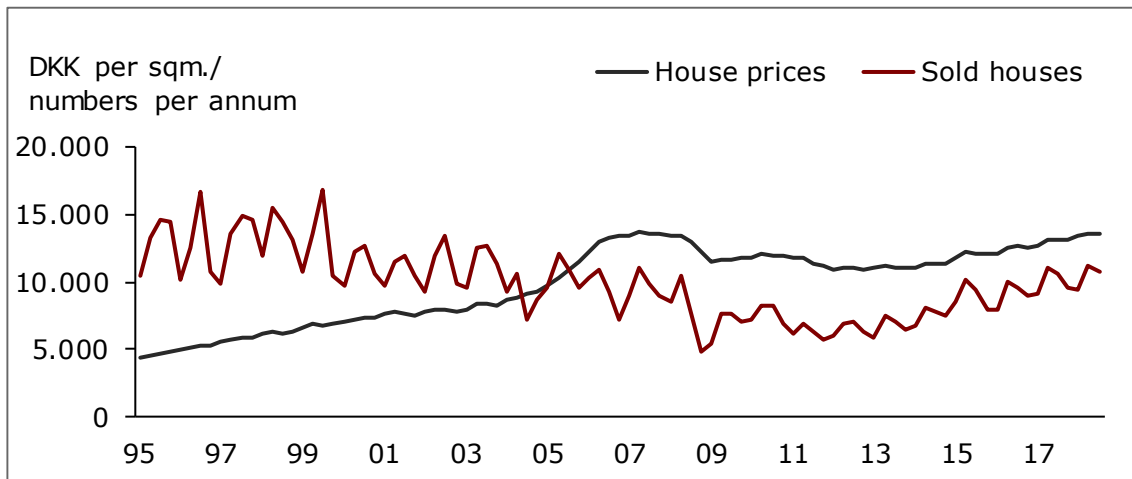
Key Market Indicators

General Market Information

1 House Prices and Homeowners Equity

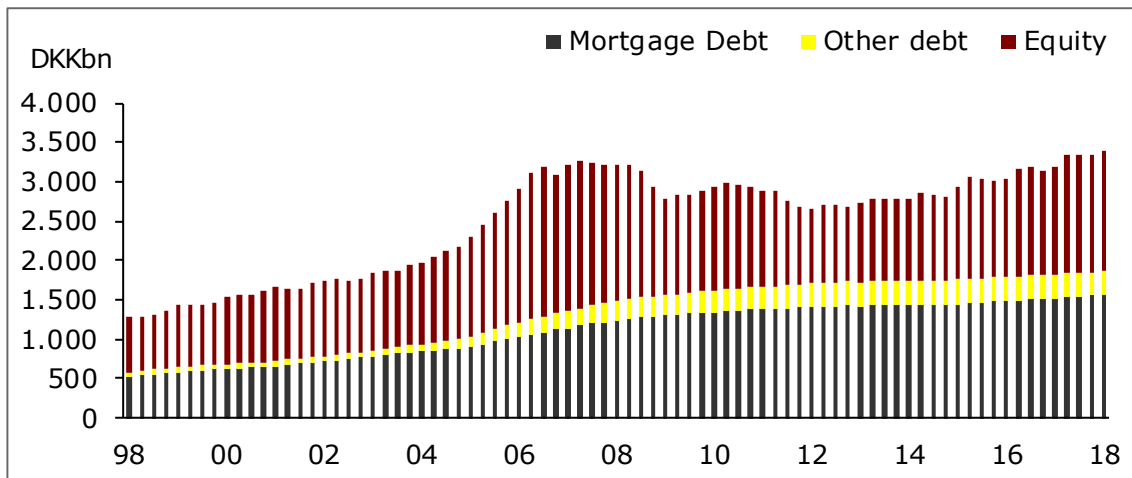
House Price Trends

- House prices on the rise have been driven by historically low interest rates in combination with an economic upswing
- The Danish Central Bank expects an increase in house prices of around 3.1 per cent per annum in 2019
- Number of houses sold is back to more "normal" levels



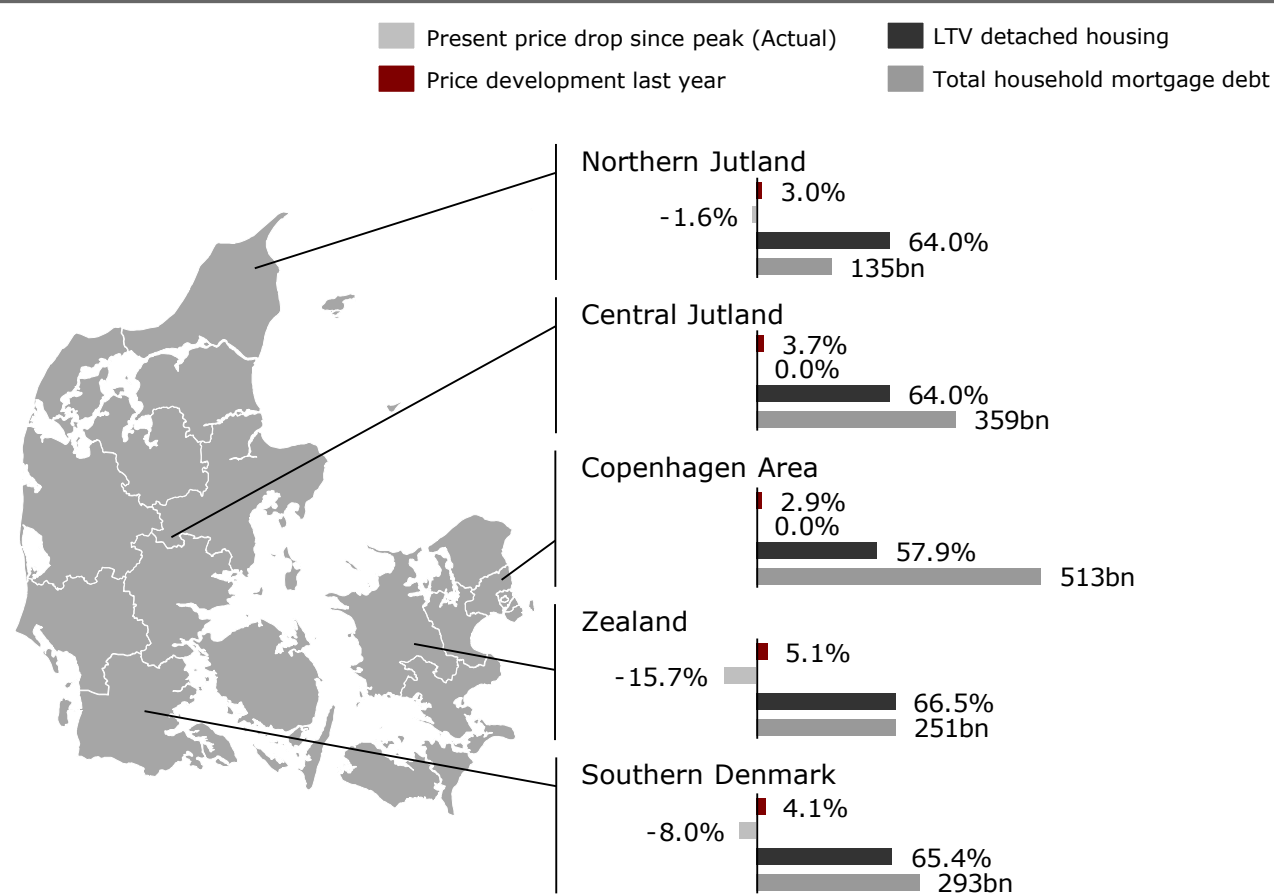
Homeowners Equity

- Homeowners' equity was DKK 1,543bn end 2018Q1
- Since the beginning of 2012 homeowners' equity has risen by DKK 606bn
- In the same period total lending increased by DKK 148bn and thus the total value of the housing stock has increased by DKK 755bn



1 Geographical Dispersion

Private lending in Denmark in total

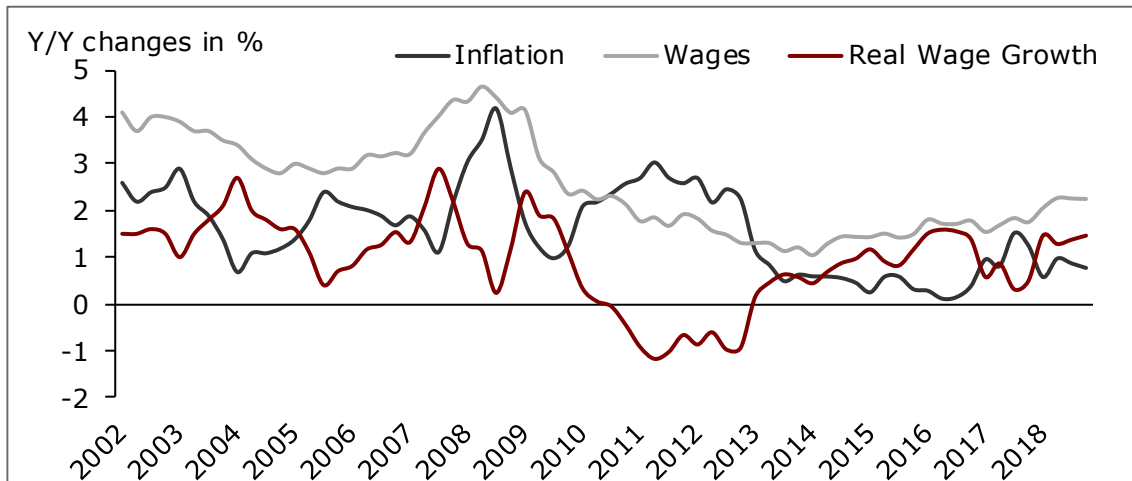


- House prices are generally increasing
- Total mortgage debt in the Copenhagen area is the highest in the country. However, LTV is only 57.9% and house prices are on the rise

1 Unemployment and Real Wage Growth

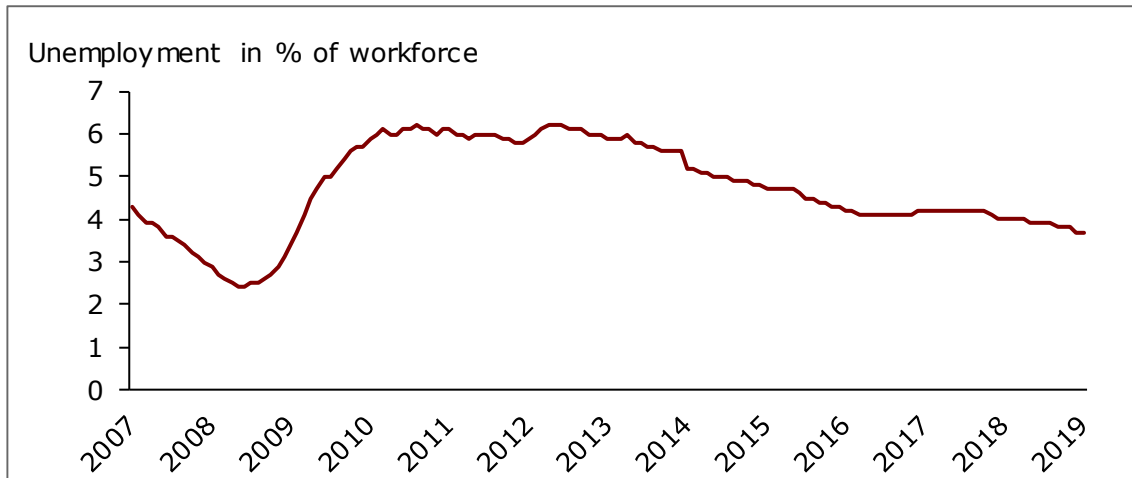
Real Wage Growth

- Real wage growth in Q4 2018 stood at 1.46%.



Unemployment

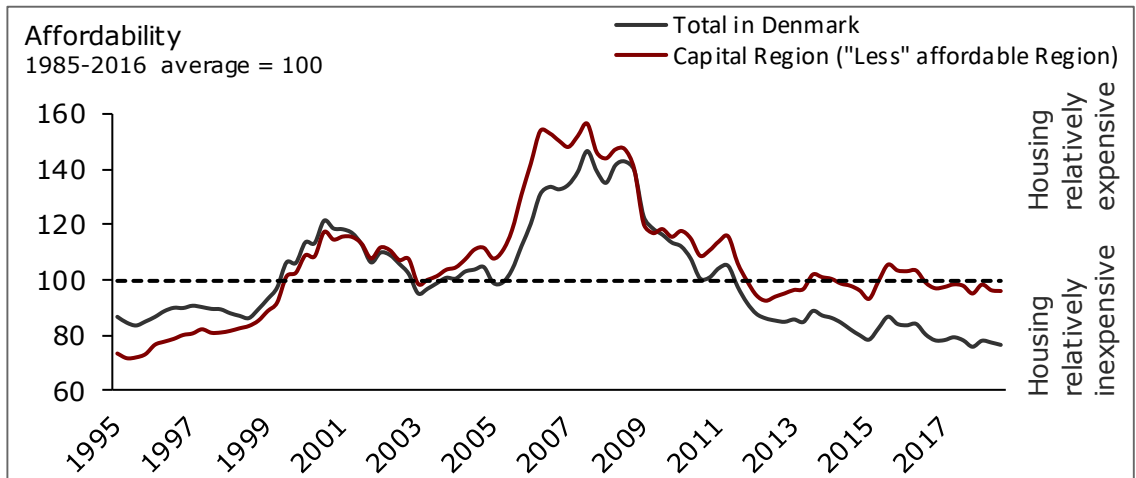
- Gross unemployment rate has declined over the past years and stood at 3.7 per cent end Q4 2018
- In a historical perspective unemployment is on a low level



1 Homeowner Affordability and Foreclosures

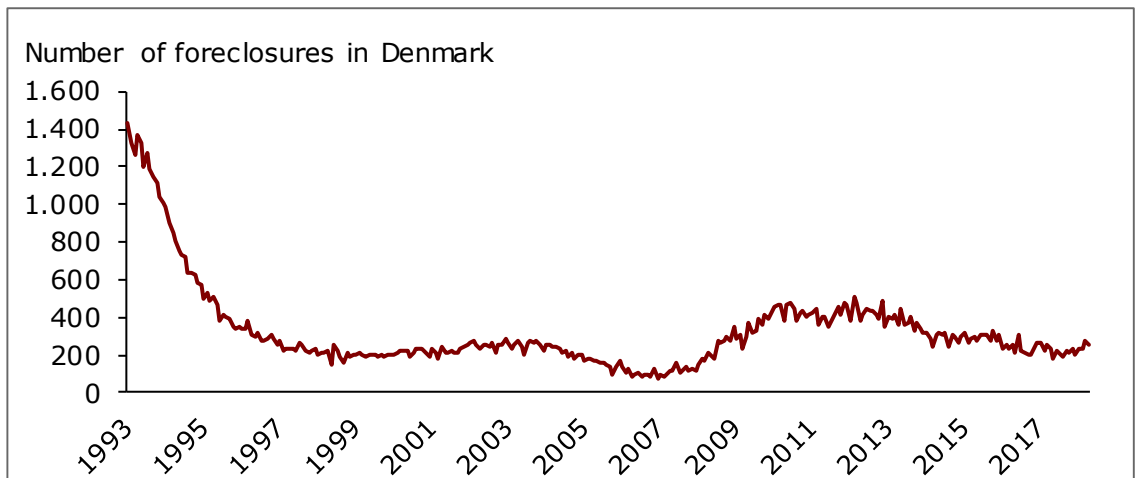
Homeowner Affordability

- Housing remains affordable compared to a 30 year average. However, the Capital region is very close to average (index 100)
- Recent house price inflation is off-set by low interest rates
- The likely impact of interest rate hikes would be a downward trend in house prices.



Foreclosures

- The number of foreclosed properties in Denmark in December 2018 was 195
- The number of foreclosures is at "normal levels"
- The duration of a foreclosure is approx. 6 months from missed payments to completion



1 Political measures and outlook

Denmark ■ Euro Zone ■	2018		2019		2020	
GDP	1.2	1.8	2.0	1.4	1.6	1.5
Private Consumption	2.4	1.3	1.9	1.3	2.3	1.6
Fixed investments	5.9	3.2	0.7	2.6	3.6	2.0
Export	0.2	2.9	2.7	2.6	2.0	2.7
Unemployment %	3.9	8.2	3.9	7.8	3.8	7.5

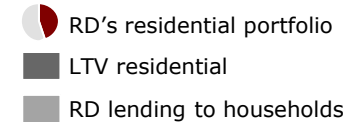
Danish Economy Outlook

- The growth in the Danish and European economy is expected to be 1.6 and 1.9 percent, respectively, in 2018
- Interest rates are a key element in the household economy
- Certificates of deposit rate currently stands at -0.65% p.a.
- We expect the ECB to hike its interest rate in December 2019. The Danish Central bank is expected to follow the ECB due to the fixed exchange rate regime vis-à-vis the euro

Key Collateral Indicators

Realkredit Danmark Specific Information

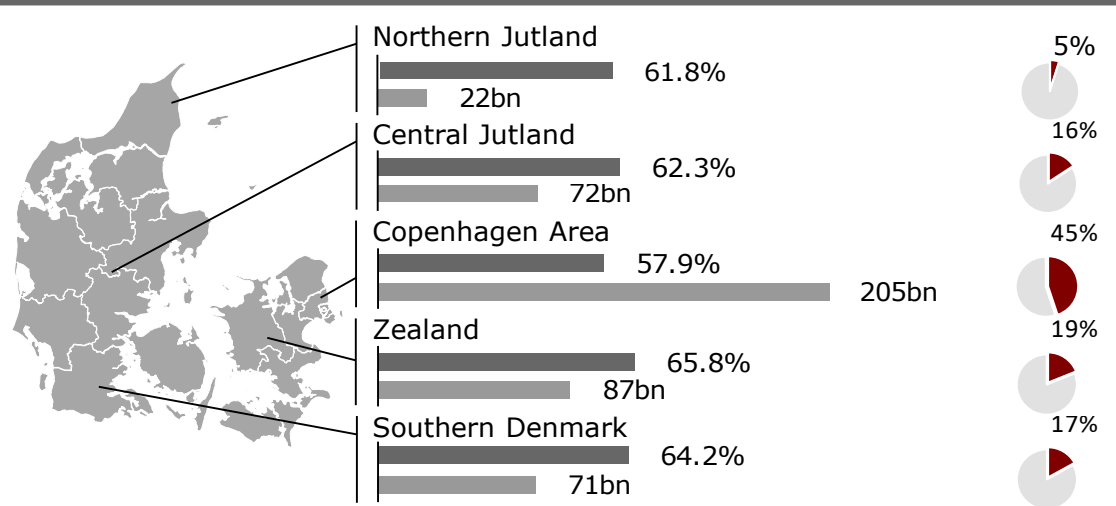
2 Dispersion and Loan to Value Ratios



Dispersion of RD's residential portfolio

- RD's loan portfolio is concentrated in the Copenhagen area and on Zealand
- Homeowner equity remains highest in the Copenhagen area which also is the region with the smallest LTV
- The affordability ratio in the capital region is now very close to index 100

Geographical Dispersion in Realkredit Danmark



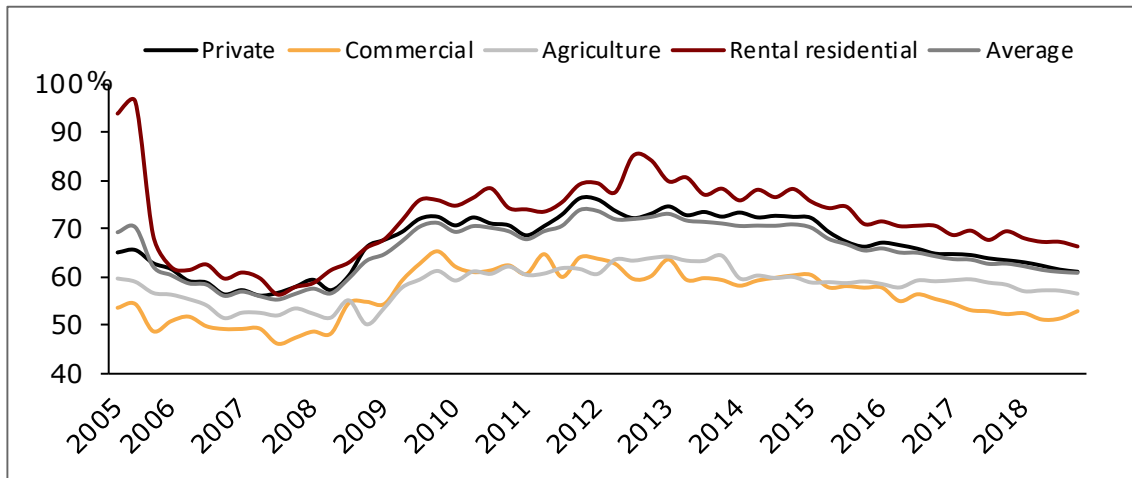
Loan To Value Ratios

- Covered bonds are secured by a first claim on the mortgage collateral and the reserves of the issuer
- LTV ratios of the mortgage collateral are maximised by legislation at 80% in residential segments and 60% in commercial segments (70% if the outmost 10% are secured by additional collateral). Lending beyond these limits is prohibited
- LTV ratios are monitored on an ongoing basis based on current market values of the property and current prepayment value of the mortgages
- 39% of mortgage collateral securing covered bonds issued by Realkredit Danmark has a current LTV ratio of 20% or less. More than 70% has a current loan to value ratio lower than 40%
- Foreclosure costs are typically less than 15% of the outstanding loan balance

2 Loan To Value and Borrower Classifications

Loan to Value

- Average loan to value ratios across market segments are 60.7% in Q4 2018 compared to 63% in Q4 2017
- LTV's for Commercial and Agriculture are based on few observations to confirm correct price levels



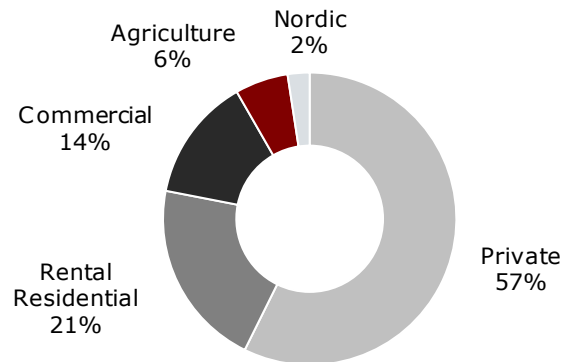
Borrower Classifications

- Borrowers' financial strength is classified on a scale from 1 to 11, 1 being the highest score
- Approx. 3bn of total lending is secured by mortgages above the 80% LTV limit for which the borrowers' financial strength is classified 8-11 — equivalent to 0.3% of the portfolio

DKKbn	Rating Category (Scaled 1-11)			
	1-3	4-7	8-11	Total
LTV				
0-20 %	84	218	12	314
20-40 %	56	182	11	249
40-60 %	31	119	9	159
60-80 %	11	43	5	59
> 80 %	6	10	3	18
Total	188	573	38	799

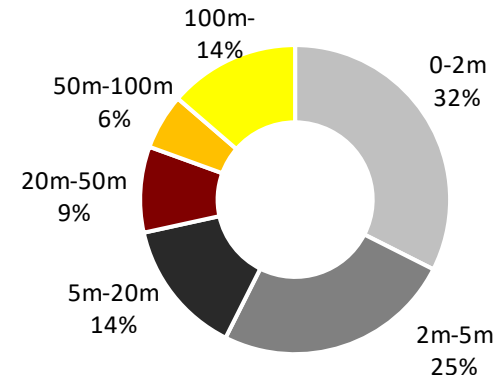
2 Collateral Breakdowns — Total portfolio

Borrower Segmentation



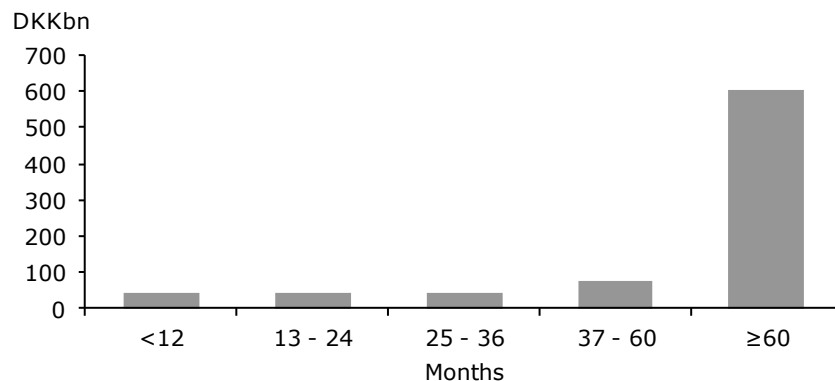
Note: Total lending distributed on segments

Outstanding Loan Balance



Note: Total lending distributed on outstanding loan balances

Portfolio Seasoning *defined by duration of customer relationship*



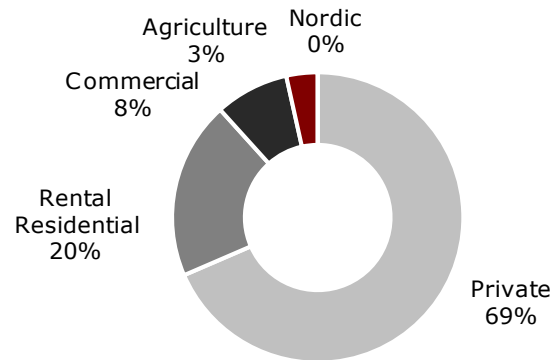
Outstanding Debt in DKKbn by LTV ratio

Segment	0-20%	20-40%	40-60%	60-80%	>80%	Total DKKbn
Private	172	144	96	39	6	458
Commercial	52	43	24	4	2	125
Agriculture	19	16	10	2	0	47
Rental Residential	72	46	29	13	9	169
Weighted dist.	39%	31%	20%	7%	2%	100%
Total, DKKbn	314	249	159	59	18	799

Average LTV: 60.7%

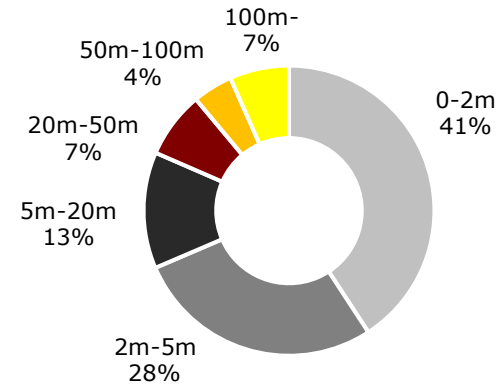
2 Collateral Breakdowns — Capital Centre S

Borrower Segmentation



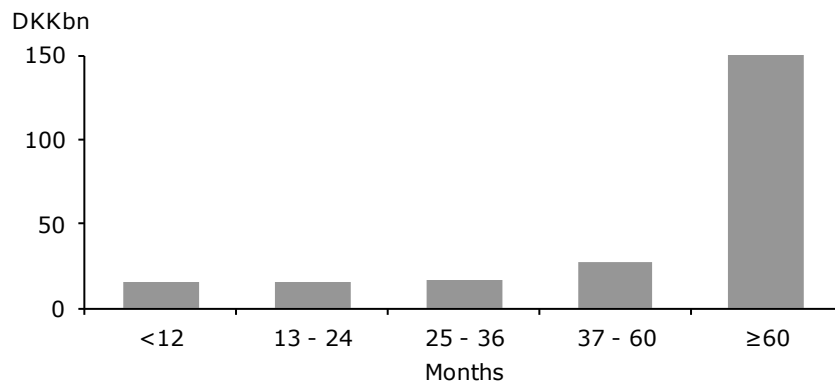
Note: Total lending distributed on segments

Outstanding Loan Balance



Note: Total lending distributed on outstanding loan balances

Portfolio Seasoning *defined by duration of customer relationship*



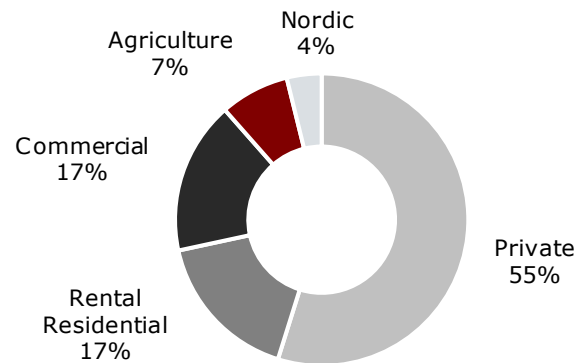
Outstanding Debt in DKKbn by LTV ratio

Segment	0-20%	20-40%	40-60%	60-80%	>80%	Total DKKbn
Private	64	55	38	17	2	176
Commercial	7	8	5	1	0	21
Agriculture	3	3	2	0	0	9
Rental Residential	25	13	7	3	3	51
Weighted dist.	39%	31%	20%	8%	2%	100%
Total, DKKbn	100	78	52	21	6	257

Average LTV: 58.2%

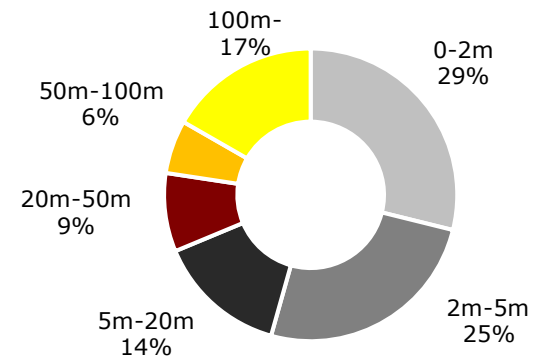
2 Collateral Breakdowns — Capital Centre T

Borrower Segmentation



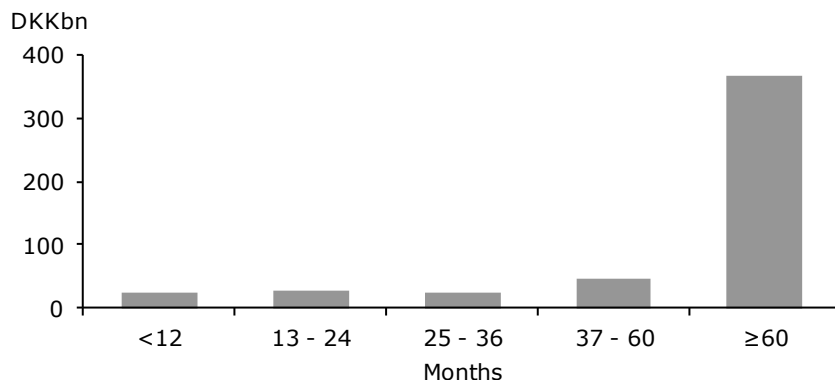
Note: Total lending distributed on segments

Outstanding Loan Balance



Note: Total lending distributed on outstanding loan balances

Portfolio Seasoning *defined by duration of customer relationship*



Outstanding Debt in DKKbn by LTV ratio

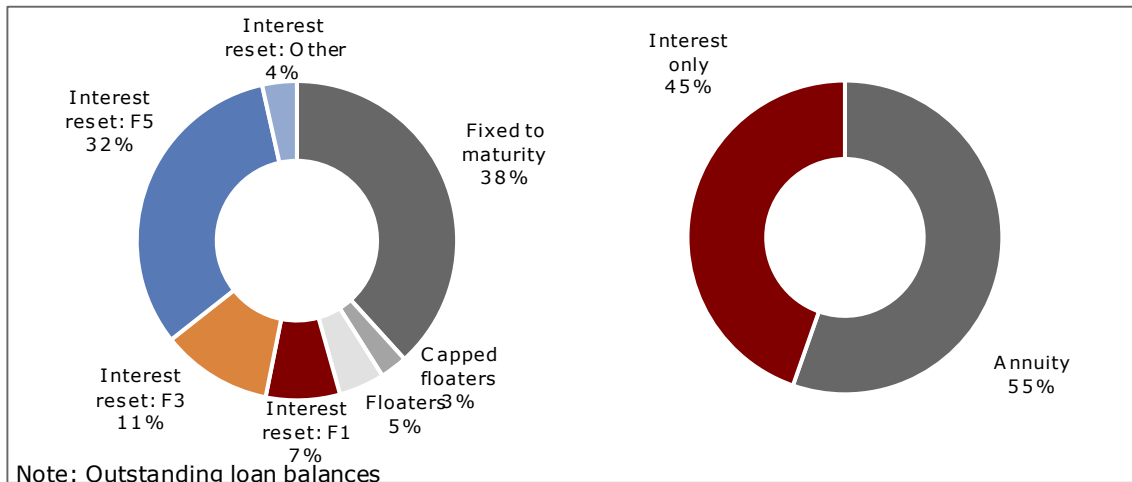
Segment	0-20%	20-40%	40-60%	60-80%	>80%	Total DKKbn
Private	101	85	57	22	4	269
Commercial	43	34	18	3	1	99
Agriculture	15	12	8	2	0	37
Rental Residential	33	25	17	7	4	85
Weighted dist.	39%	32%	20%	7%	2%	100%
Total, DKKbn	192	157	99	33	9	490

Average LTV: 59.0%

2 Borrower Exposure to Interest Rates

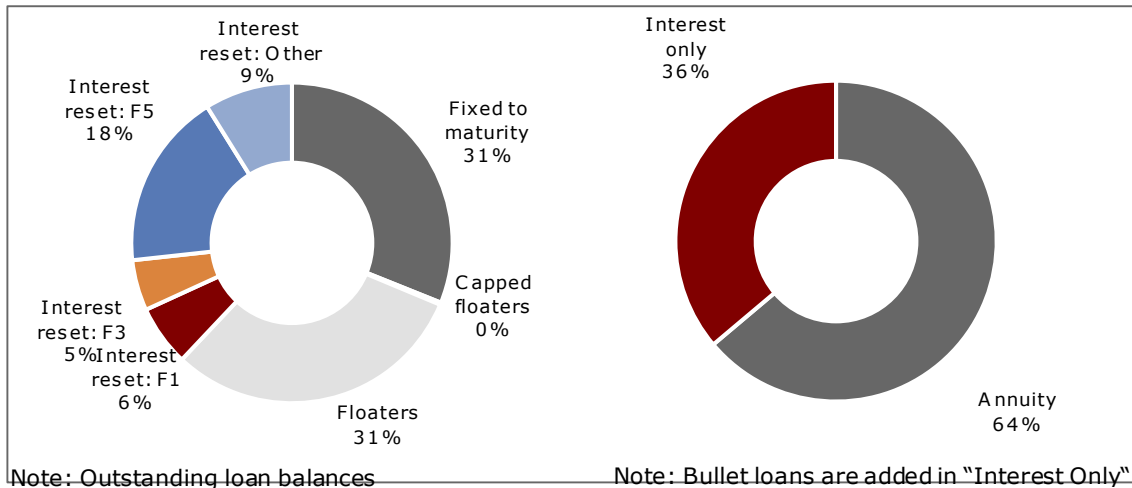
Private Segment

- Homeowners must be able to service a 30-year fixed rate annuity loan of 4% for Realkredit Danmark to underwrite
- Originally, fixed rate mortgages were standard in the Danish market, but now interest reset accounts for 54%
- Expectations are for this percentage to decline since 30Y fixed rates are now only 1.5%
- Negative interest rates has been a reality for a while now



Corporate Segments

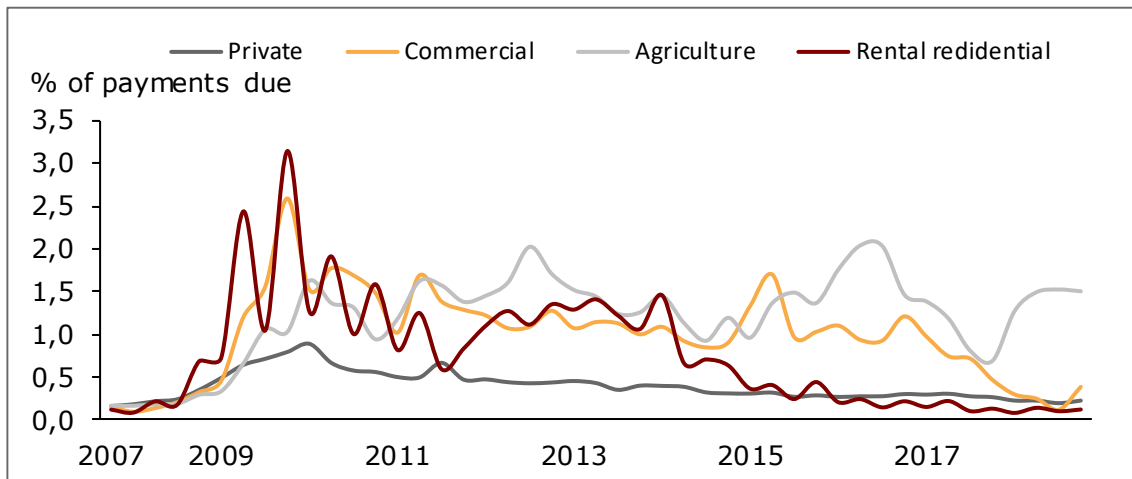
- 31% of all lending in corporate segments is fixed rate to maturity
- 69% are either interest reset (typically, rates are reset every 1, 3 or 5 years) or floating rate (base rates are either 6M CIBOR, 3M EURIBOR or 6M CITA)
- Bullets and Interest only loans make up 36% of corporate lending



2 Arrears and Repossessions

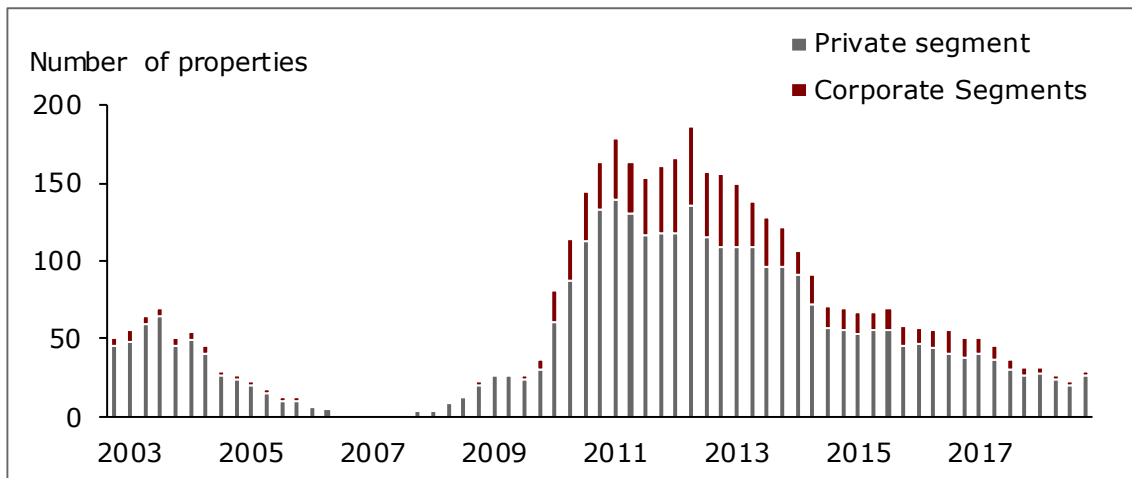
Arrears (3 months)

- Total arrears stood at 0.33% end Q4 2018
- Arrears are rather volatile in the Rental residential segment. However, down considerably from Q4 2009
- Arrears in the Commercial segment is now 0.38%. The segment is sensitive to the development in few individual loans
- Arrears in agriculture has increased to 1.50 % in Q4 2018
- The Private segment is rather stable - now 0.22%



Repossessions

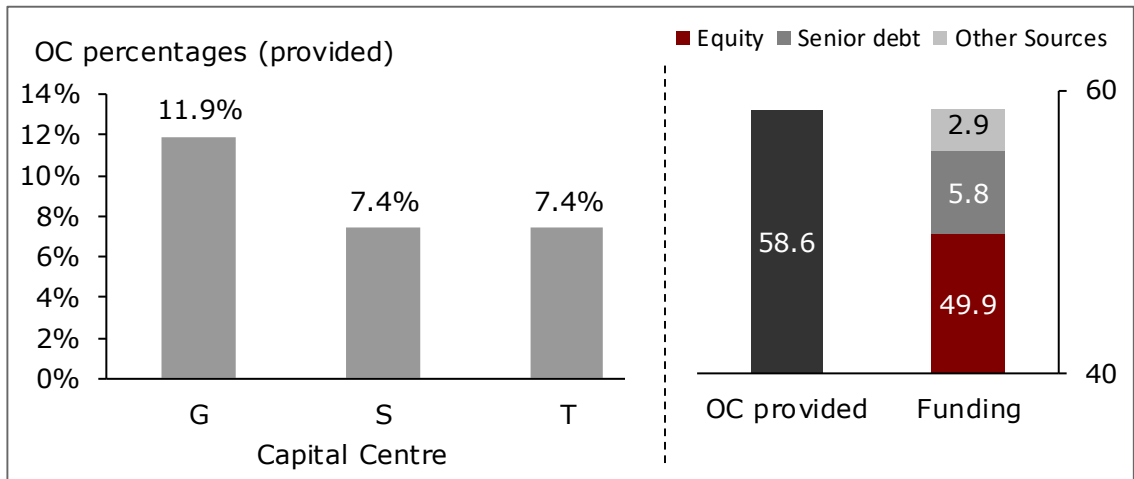
- The stock of repossessed properties stood at 29 end Q4 2018 — up by 6 since Q3 2018
- This compares to a total stock of mortgage collateral of 464,260



2 Over Collateralization and Capitalization

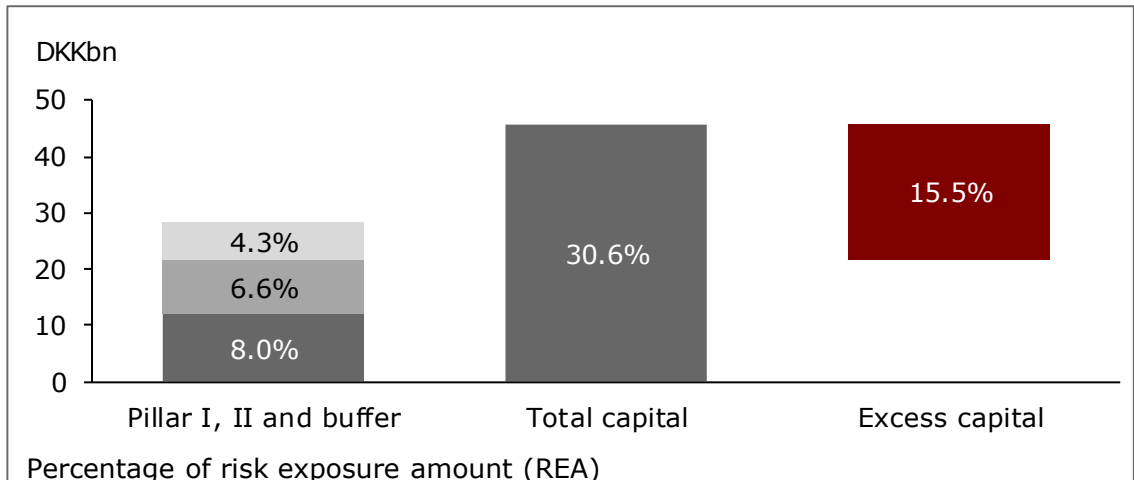
Over Collateralisation

- Covered bonds issued by Realkredit Danmark are secured by mortgage collateral and reserves
- Reserves are invested in government exposures, covered bonds and bank exposures
- In case of bankruptcy Over Collateralisation will also be comprised by bondholders preferential claim



Capitalisation

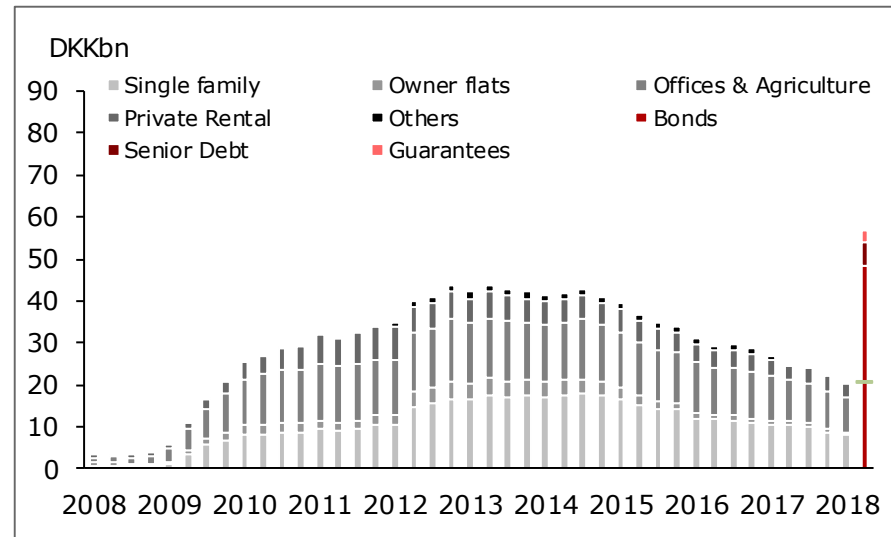
- End Q4 2018, Realkredit Danmark's solvency need was calculated at 15.2bn
- Including the combined buffer requirement, the capital need was 21.8bn
- With total capital of 45.8bn, Realkredit Danmark had 24.0bn in excess of the requirement including combined buffers



Supplementary Collateral — Total in S and T

Buffer in Capital Centres S and T

- End Q4 total OC provided was DKK 54.1bn in Capital Centres S and T of which 5.9bn was funded by Senior debt
- Supplementary Collateral of DKK 20.5bn is required end Q4 2018 in Capital Centres S and T
- Loss Guarantees of DKK 2.6bn are utilised
- Buffer for further growth in need for supplementary Collateral in Capital Centres S and T is DKK 36.2bn
- If the OC is insufficient to comply with Supplementary Collateral requirements, RD can transfer OC from the General Capital Centre or write Loss Guarantees within the 15% limitation of issued bonds



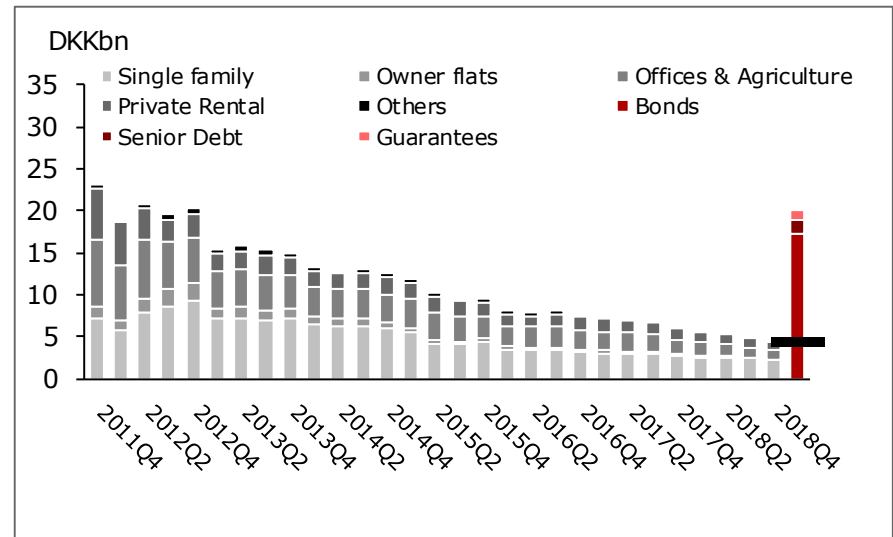
Supplementary Collateral requirements

- If LTV limits are breached during the term of the loan the mortgage loan will only be eligible with the part that comply with the LTV limits. If eligible collateral is insufficient, Supplementary Collateral must be provided
- Increased need for Supplementary Collateral is due to
 - House price deflation
 - Properties selected for supervision
 - Refinancing and remortgaging of loans
 - Increased market value on bonds
- Loss Guaranties and eligible bonds can be used as Supplementary Collateral (bonds which also are used to comply with the solvency requirement) but no other asset types are eligible

Supplementary Collateral — S

Buffer in Capital Centre S

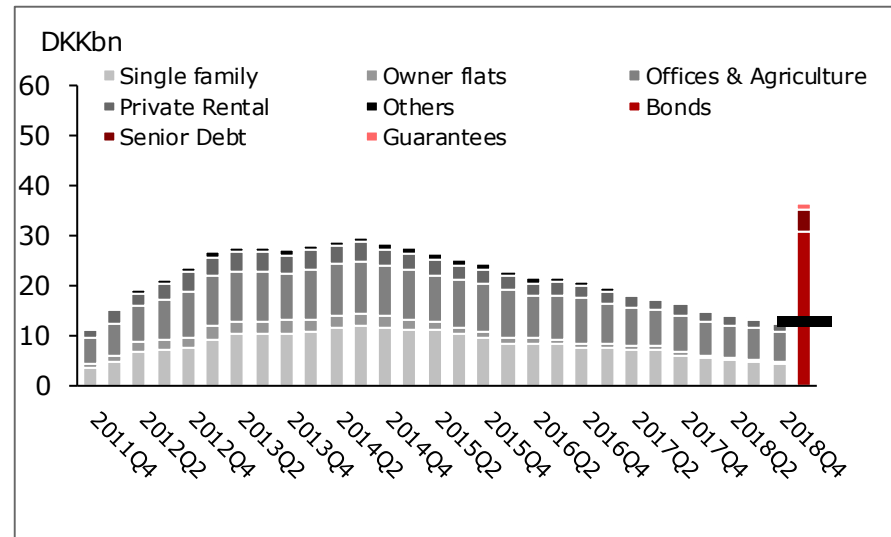
- End Q4 2018 total OC provided was DKK 18.8bn in Capital Centre S of which 1.6bn was funded by Senior debt
- Supplementary Collateral of DKK 4.3bn is required end Q4 2018 in Capital Centre S
- Loss Guarantees of DKK 1.4bn are utilised
- Buffer for further growth in need for supplementary Collateral in Capital Centre S is DKK 15.9bn
- If the OC is insufficient to comply with Supplementary Collateral requirements, RD can transfer OC from the General Capital Centre or Capital Centre T or write Loss Guarantees within the 15% limitation of issued bonds



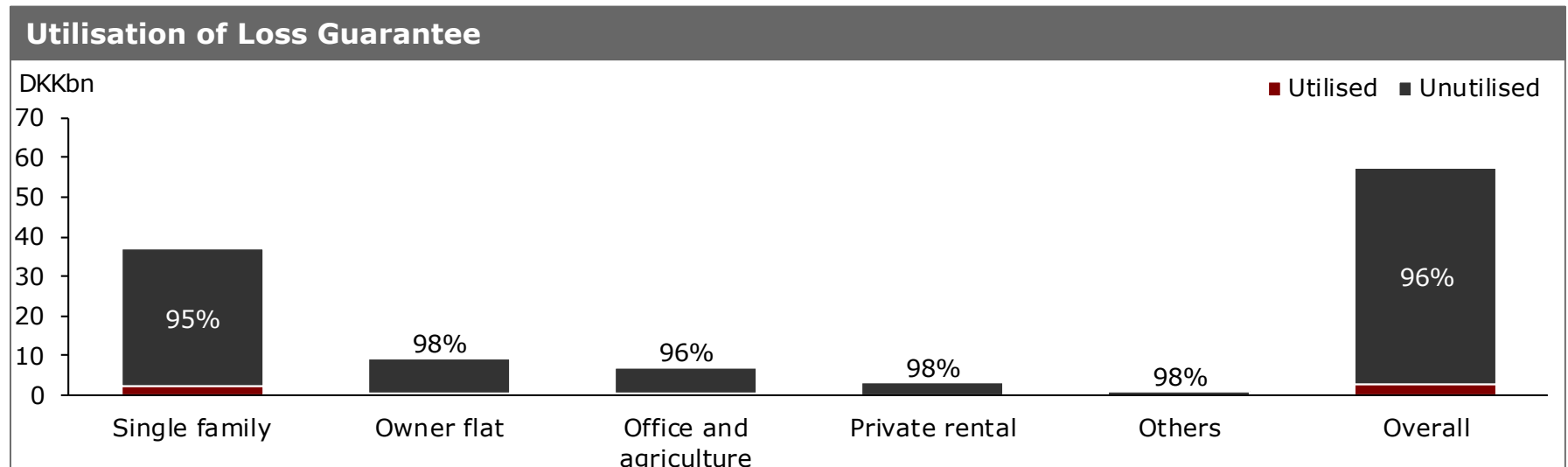
Supplementary Collateral — T

Buffer in Capital Centre T

- End Q4 2018 total OC provided was DKK 35.3bn in Capital Centre T of which 4.3bn was funded by Senior debt
- Supplementary Collateral of DKK 12.3bn is required end Q4 2018 in Capital Centre T
- Loss Guarantees of DKK 1.2bn are utilised
- Buffer for further growth in need for supplementary Collateral in Capital Centre T is DKK 24.1bn
- If the OC is insufficient to comply with Supplementary Collateral requirements, RD can transfer OC from the General Capital Centre or Capital Centre S or write Loss Guarantees within the 15% limitation of issued bonds



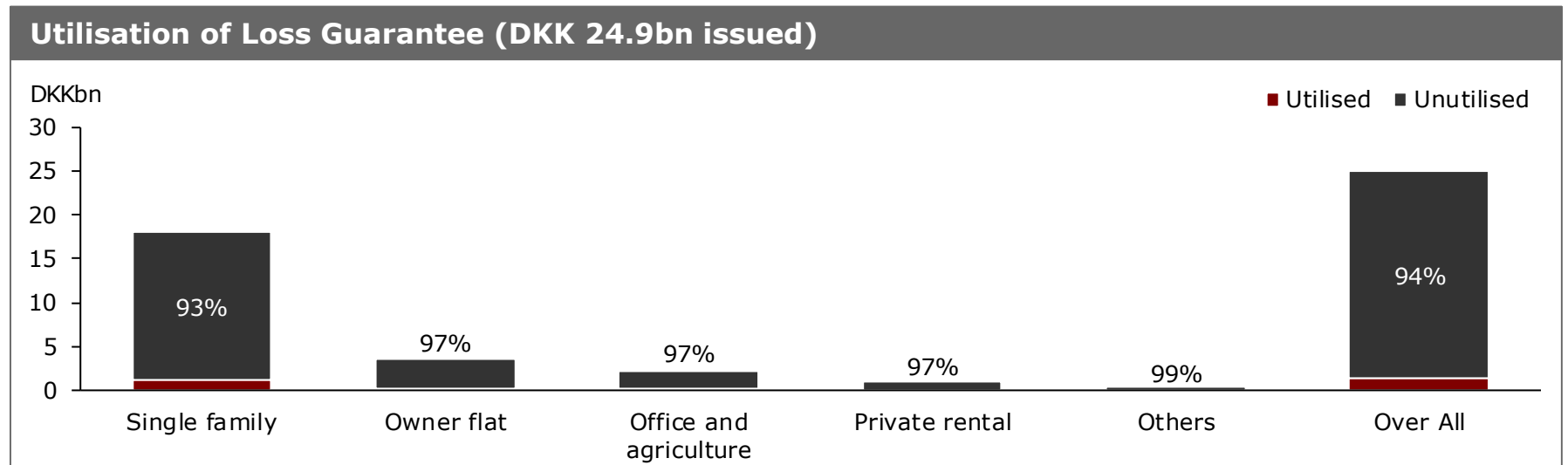
Guarantees — Total



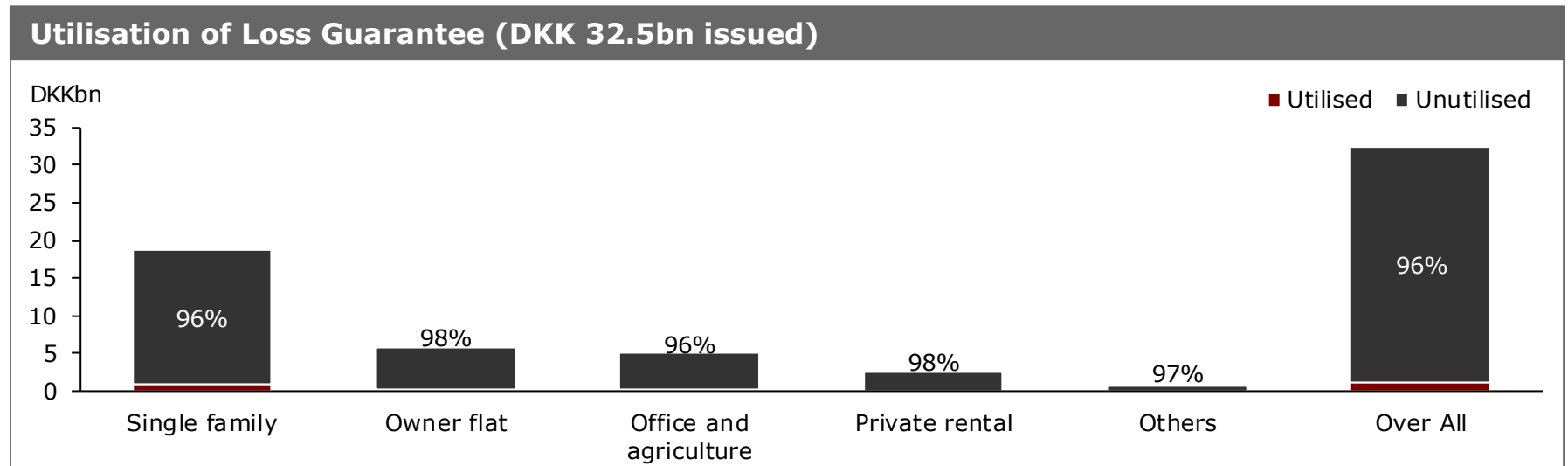
Loss Guarantees issued by Danske Bank (DKK 57.5bn)

- RD loans disbursed through Danske Bank has a Loss Guarantee
- Loss Guarantees covers the outmost LTV limited to 20% of the maximum lending corresponding to LTV from 60–80% for Single Family Housing and 40–60% for Corporate and Holiday Housing
- Maturity of 8 years with an amortization equivalent to the covered loan
- Loss Guarantee covers losses obtained from forced sales including costs

Guarantees — S



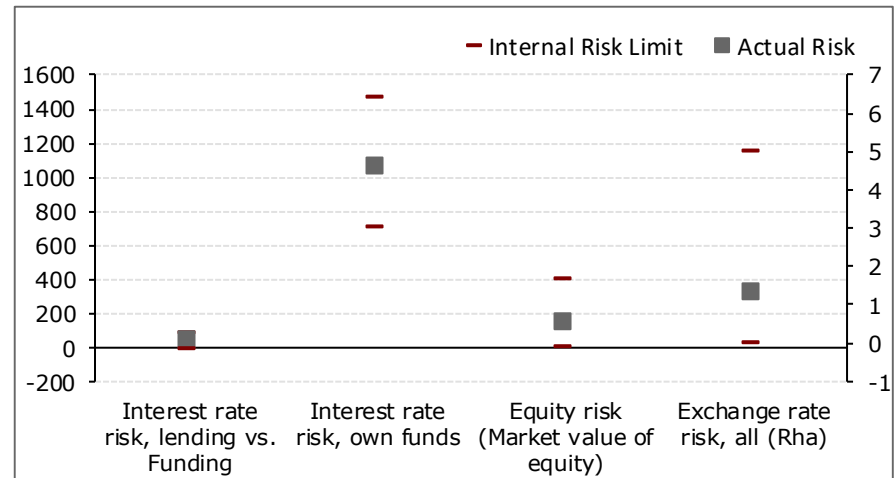
Guarantees — T



2 Market Risk Exposure and Liquidity

Market Risk Exposures

- Realkredit Danmark operates subject to the specific balance principle
- In adherence with the principle Realkredit Danmark issues covered bonds on a daily basis to match loan origination and employs a pass through structure i.e. bond terms mirror loan terms
- Market risk exposures are, therefore, limited. End Q4 2018 interest rate risk on lending vs. funding stood at DKK 31.3m
- Derivatives are not employed for hedging imbalances on lending and funding



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