

# **Risk Report 2014Q3**

Published 7 November 2014

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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

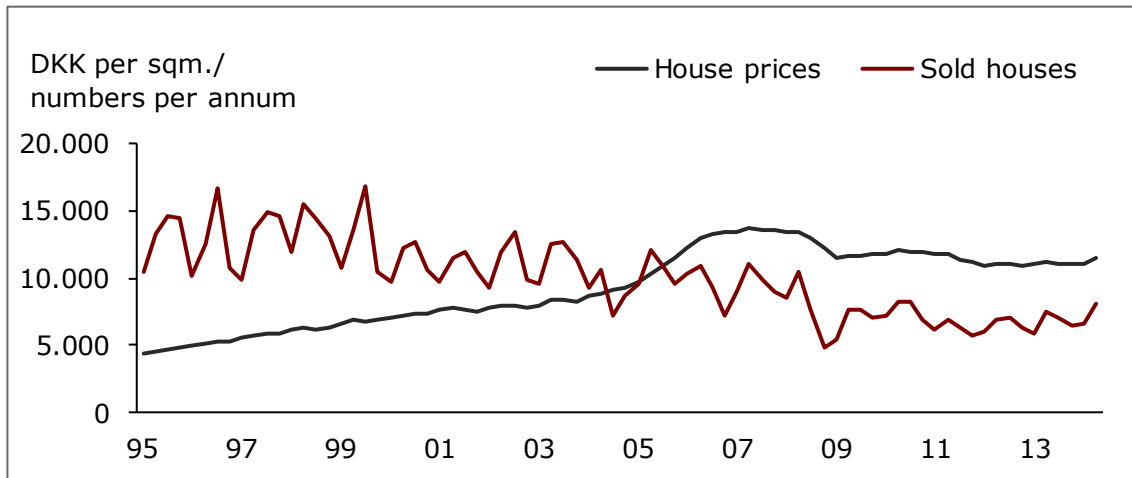
# Key Market Indicators

General Market Information

# 1 House Prices and Homeowners Equity

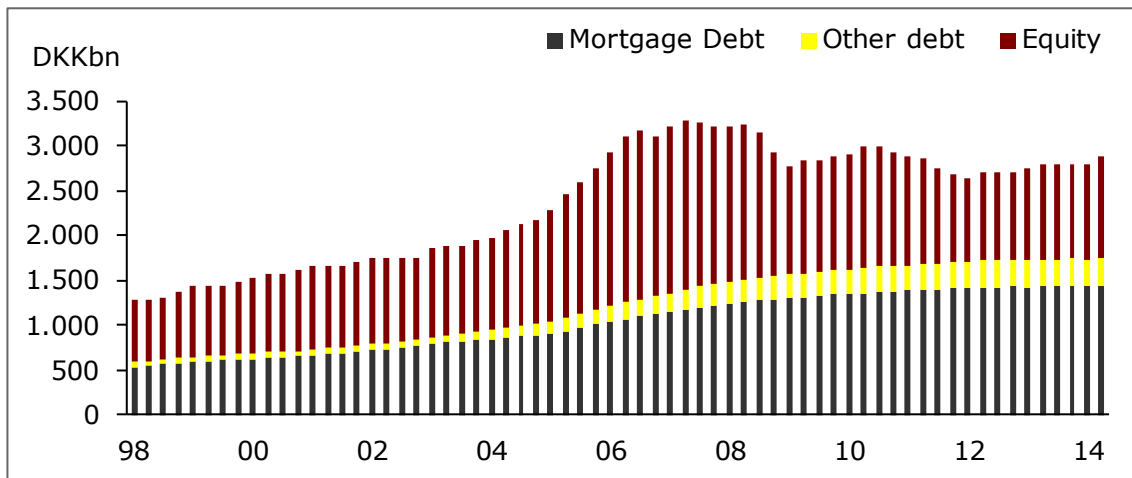
## House Price Trends

- House prices are now stable
- House prices are down 16% for detached housing from the peak mid 2007
- Expectations are for house prices to continue the current stabilization
- Number of houses sold is still low



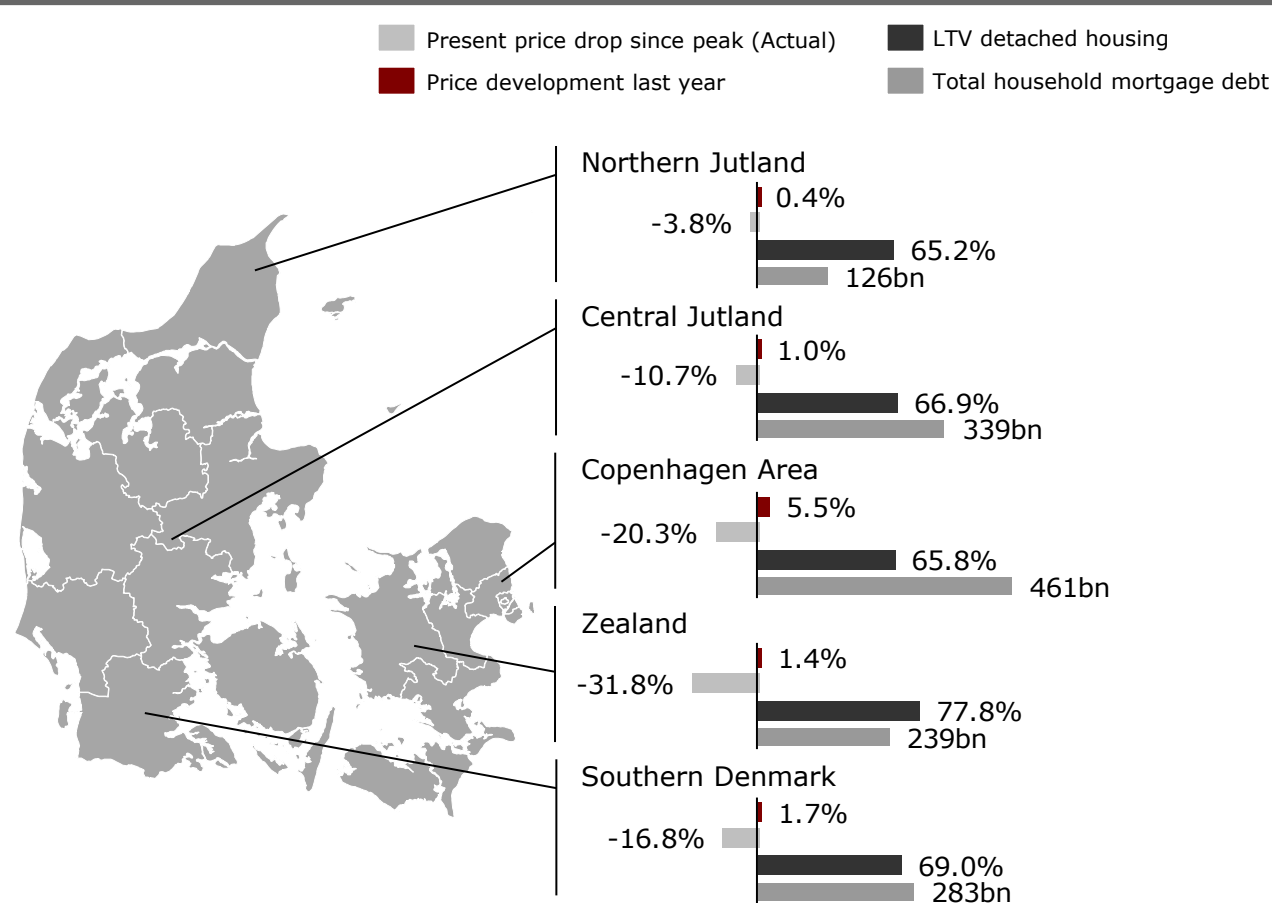
## Homeowners Equity

- Homeowners' equity was 1,148 bn end 2014Q2 – down by 740 bn since the peak in 2006Q3
- In the same period total lending increased by 448 bn
- Hence, 61% of the drop in homeowners' equity can be explained by additional lending. 39% is due to house price deflation



# 1 Geographical Dispersion

## Private lending in Denmark in total

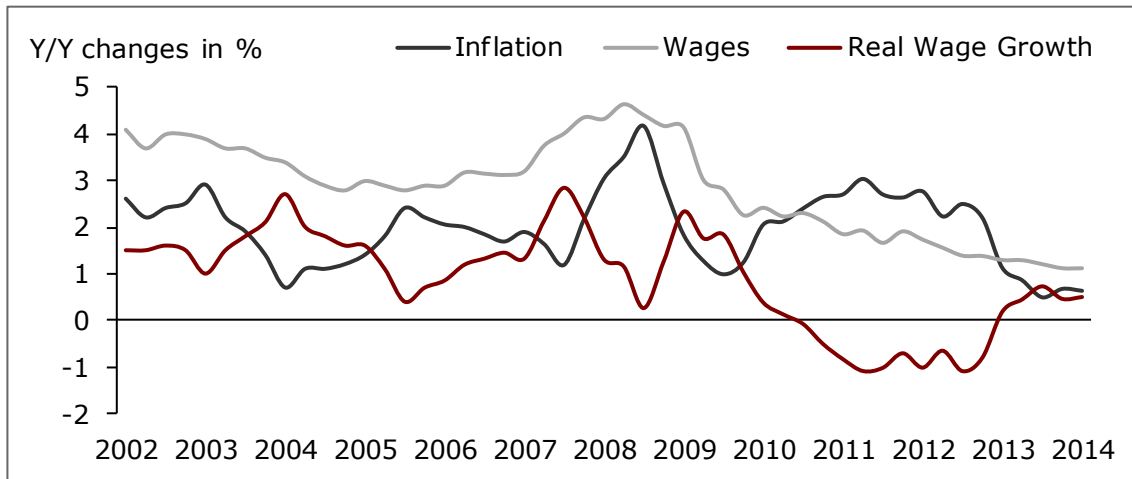


- House prices are now on a 2005 level
- The Copenhagen area was the first to suffer from house price deflation during the crisis in 2008. Prices are now 20% down from the peak in mid 2006
- Total mortgage debt in the Copenhagen area is the highest in the country. However, LTV is only 65.8% and house prices are recovering
- The LTV in Zealand is now below 80% again
- All geographical areas have experienced a positive price development the last year

# 1 Unemployment and Real Wage Growth

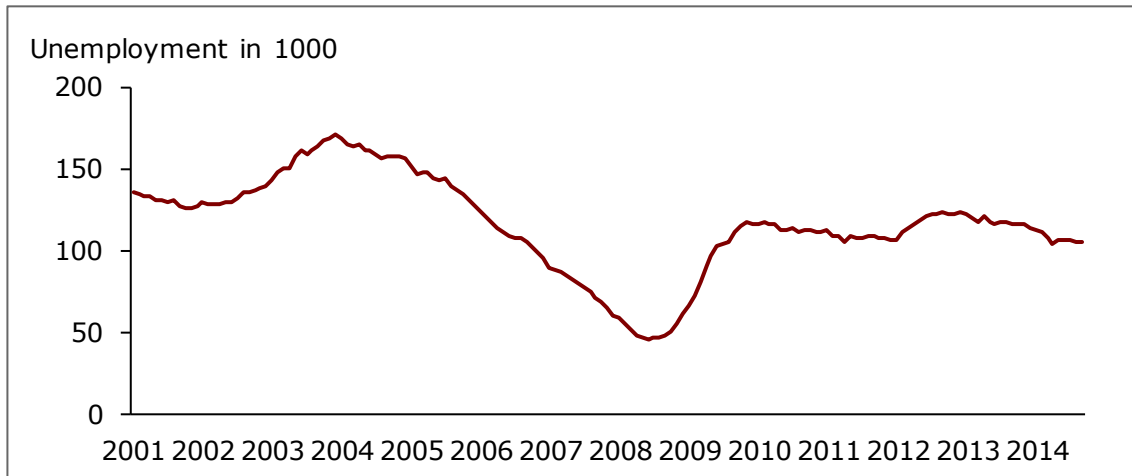
## Real Wage Growth

- Real wage growth in Q1 2014 stood at 0.50%.
- 2013 was the first year with positive real wage growth after a period of 2.5 years with negative growth rates



## Unemployment

- Net unemployment stood at 105,440 end Q3 2014 up from a historical low of 45,000 in mid 2008
- This is equivalent to an unemployment (net) rate of 4.0%. Gross unemployment rate<sup>1</sup> is 5.0% end Q3 2014

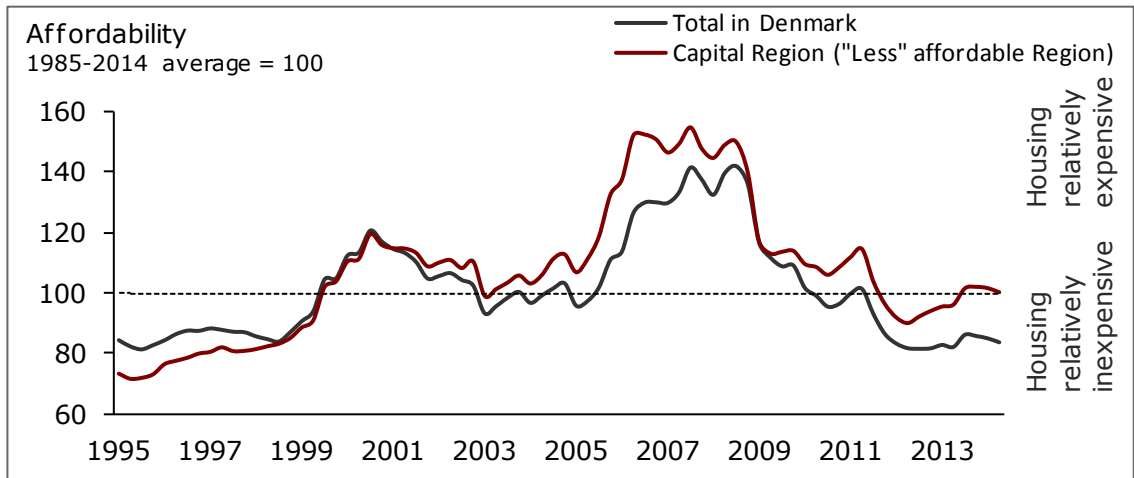


<sup>1</sup>. Gross unemployment rate defined as net unemployment plus persons in activation schemes

# 1 Homeowner Affordability and Foreclosures

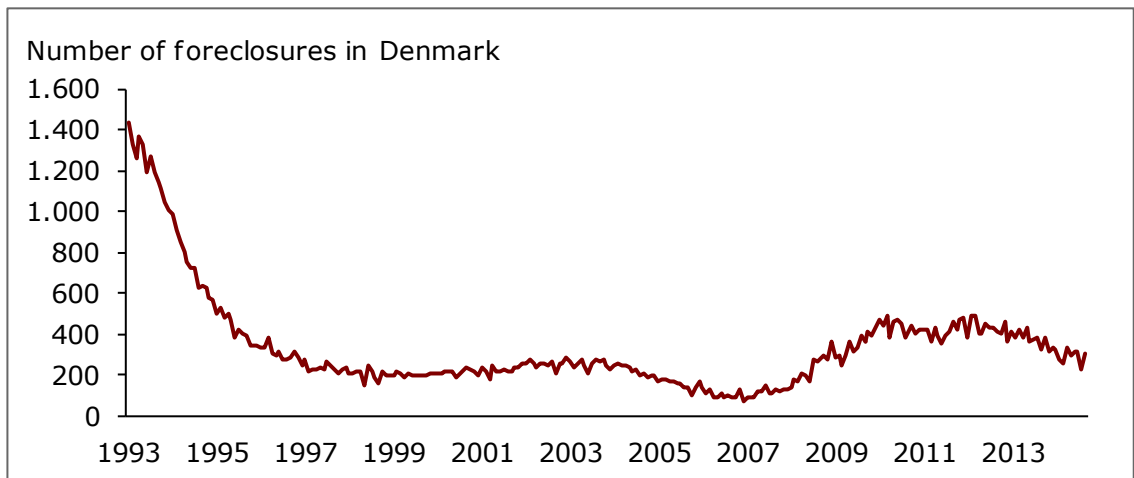
## Homeowner Affordability

- House price deflation and lower interest rates has made housing more affordable
- In Copenhagen, the affordability index is getting very close to 100



## Foreclosures

- The number of foreclosed properties in Denmark in September 2014 was 304
- The duration of a foreclosure is approx. 6 months from missed payments to completion



# 1 Political measures and outlook

Denmark <span style="color: grey;">■</span> Euro Zone <span style="color: blue;">■</span>	2013		2014		2015	
GDP	-0.1	-0.4	0.7	0.9	1.3	1.5
Private Consumption	0.1	-0.6	0.4	1.0	1.5	1.6
Fixed investments	0.6	-2.8	1.5	0.9	1.9	1.8
Export	1.2	1.5	0.8	2.6	2.0	3.1
Unemployment %	5.8	11.9	5.1	11.7	4.8	11.4

## Danish Economy Outlook

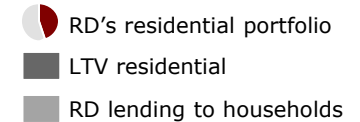
- The growth in the Danish economy has been revised to approx. 0.7 per cent in 2014
- European growth is expected to increase to 0.9 per cent in 2014
- Danish economy is highly dependent on exports which has also had a downward revision to 0.8 per cent in 2014
- Interest rates are a key element in the household economy. We still expect very low interest rates in the near future



# Key Collateral Indicators

Realkredit Danmark Specific Information

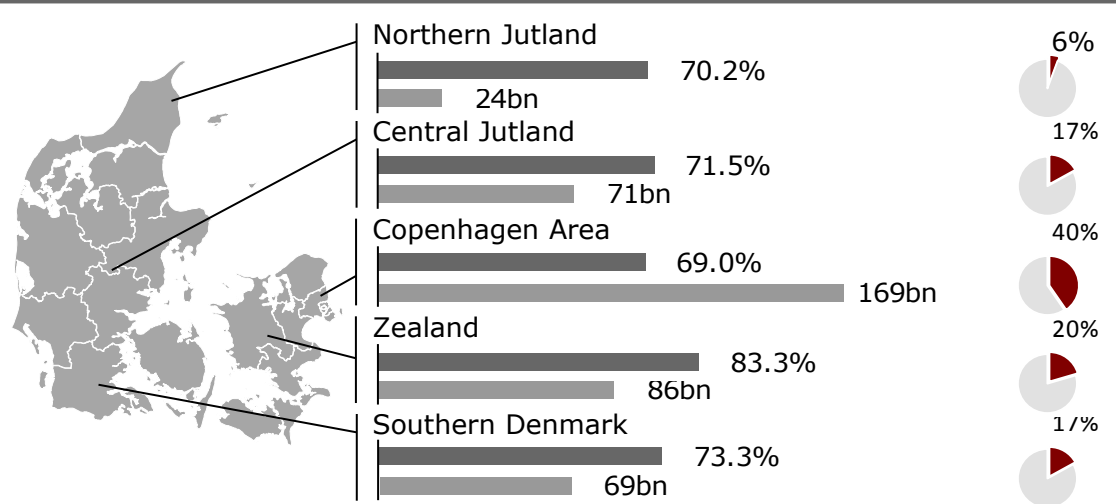
## 2 Dispersion and Loan to Value Ratios



### Dispersion of RD's residential portfolio

- RD's loan portfolio is concentrated in the Copenhagen area and on Zealand where prices have been reduced the most
- 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 rising and is now index 100

### Geographical Dispersion in Realkredit Danmark



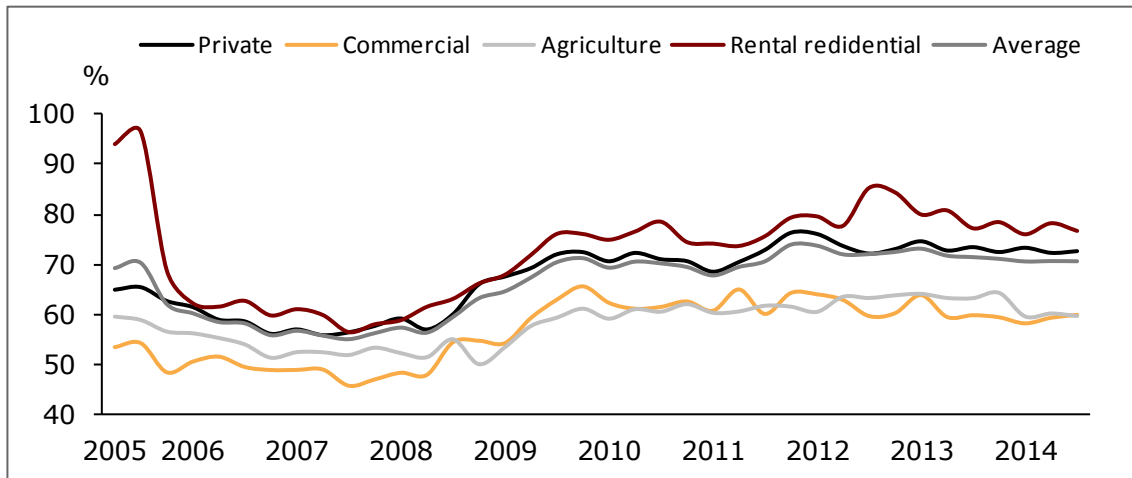
### Loan To Value Ratios

- 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
- 34% of mortgage collateral securing covered bonds issued by Realkredit Danmark has a current LTV ratio of 20% or less. More than 62% 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 71% in Q3 2014 compared to 71% in Q3 2013
- LTV's for Commercial and Agriculture are based on few observations to confirm correct price levels



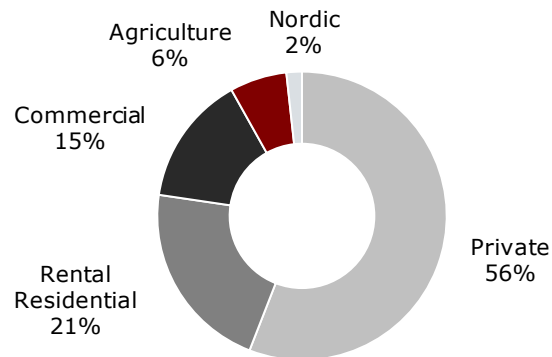
### Borrower Classifications

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

DKKbn	Rating Category (Scaled 1-11)			
	1-3	4-7	8-11	Total
LTV				
0-20 %	54	184	19	257
20-40 %	36	156	18	210
40-60 %	24	117	15	156
60-80 %	12	61	10	83
> 80 %	10	28	8	45
Total	136	546	69	751

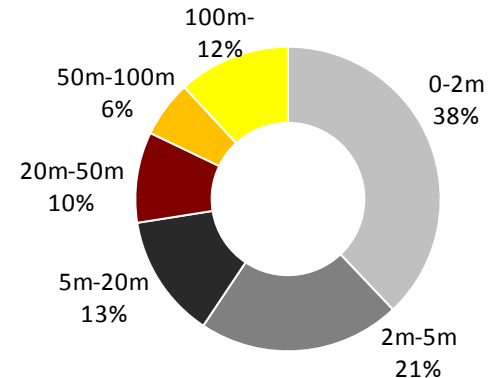
## 2 Collateral Breakdowns — Total portfolio

### Borrower Segmentation



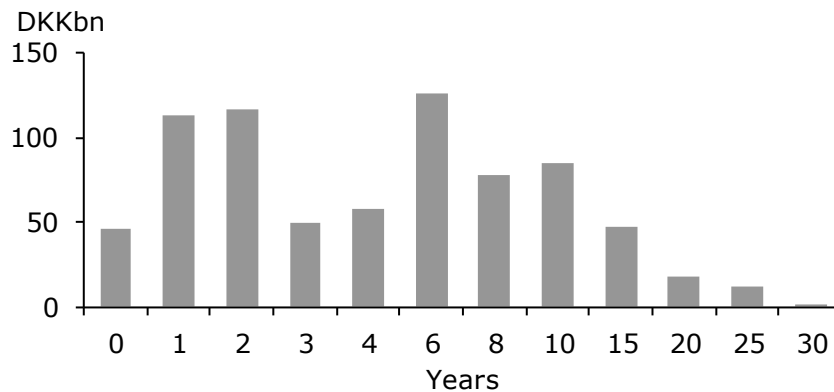
Note: Total lending distributed on segments

### Outstanding Loan Balance



Note: Total lending distributed on outstanding loan balances

### Portfolio Seasoning



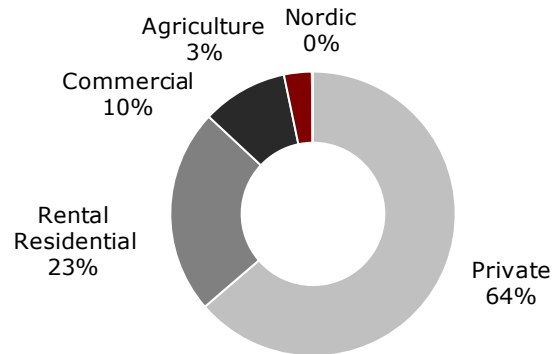
### Outstanding Debt in DKKbn by LTV ratio

Segment	0-20%	20-40%	40-60%	60-80%	>80%	Total DKKbn
Private	134	118	91	54	24	420
Commercial	45	37	27	8	5	121
Agriculture	18	15	10	4	1	48
Rental Residential	59	40	29	17	16	162
Weighted dist.	34%	28%	21%	11%	6%	100%
Total, DKKbn	257	210	156	83	45	751

Average LTV: 70.6%

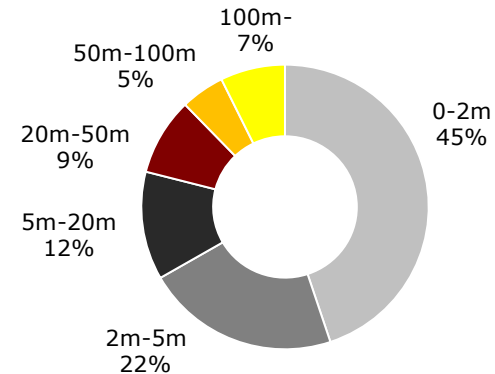
## 2 Collateral Breakdowns — Capital Centre S

### Borrower Segmentation



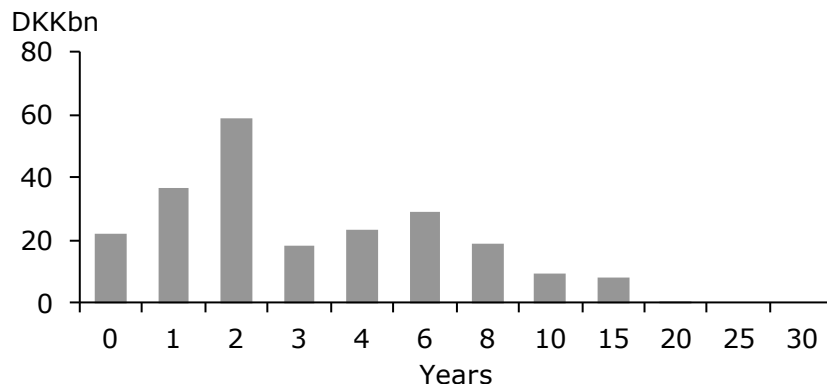
Note: Total lending distributed on segments

### Outstanding Loan Balance



Note: Total lending distributed on outstanding loan balances

### Portfolio Seasoning



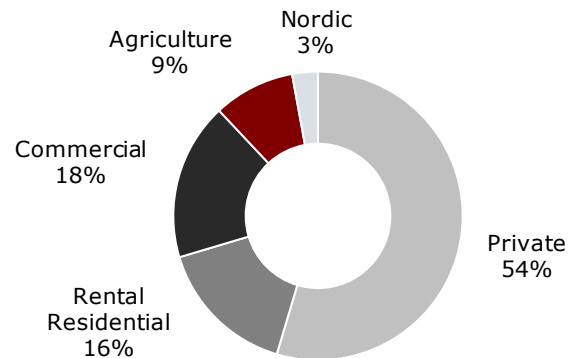
### Outstanding Debt in DKKbn by LTV ratio

Segment	0-20%	20-40%	40-60%	60-80%	>80%	Total DKKbn
Private	44	41	32	19	8	143
Commercial	7	7	5	2	1	22
Agriculture	3	2	1	0	0	7
Rental Residential	22	14	8	5	4	52
Weighted dist.	34%	28%	21%	12%	6%	100%
Total, DKKbn	76	63	46	26	13	224

Average LTV: 68.5%

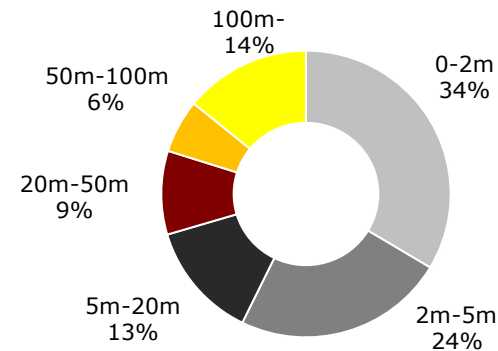
## 2 Collateral Breakdowns — Capital Centre T

### Borrower Segmentation



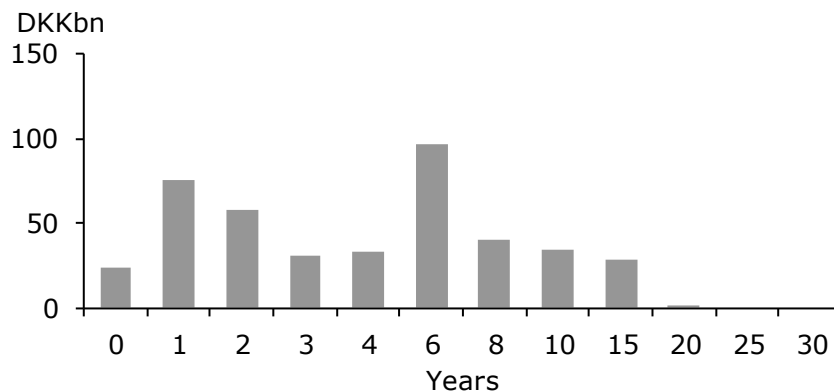
Note: Total lending distributed on segments

### Outstanding Loan Balance



Note: Total lending distributed on outstanding loan balances

### Portfolio Seasoning



### Outstanding Debt in DKKbn by LTV ratio

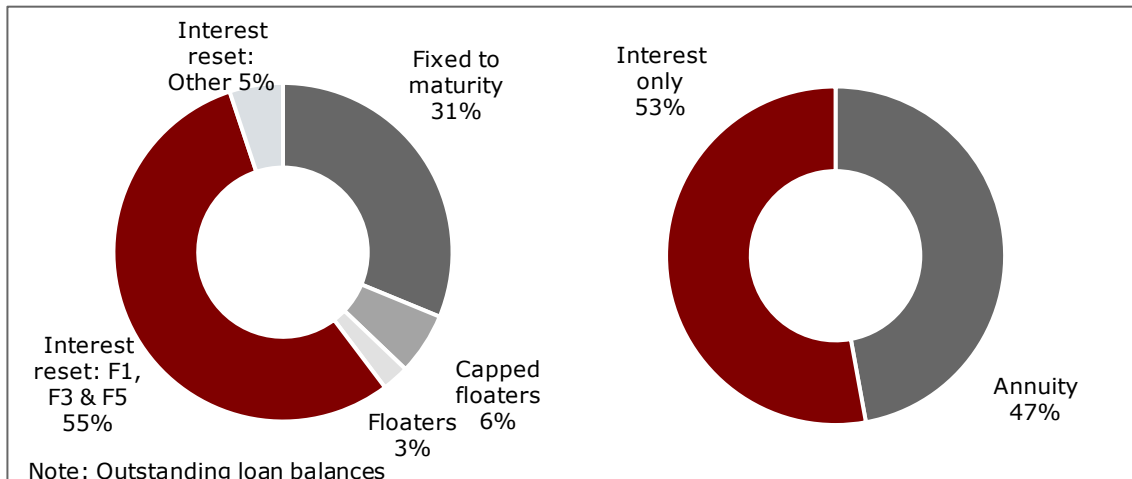
Segment	0-20%	20-40%	40-60%	60-80%	>80%	Total DKKbn
Private	72	64	51	31	14	232
Commercial	33	27	19	5	3	86
Agriculture	14	12	8	3	1	39
Rental Residential	21	18	14	8	6	68
Weighted dist.	33%	29%	22%	11%	5%	100%
Total, DKKbn	140	122	93	47	23	425

Average LTV: 69.3%

## 2 Borrower Exposure to Interest Rates

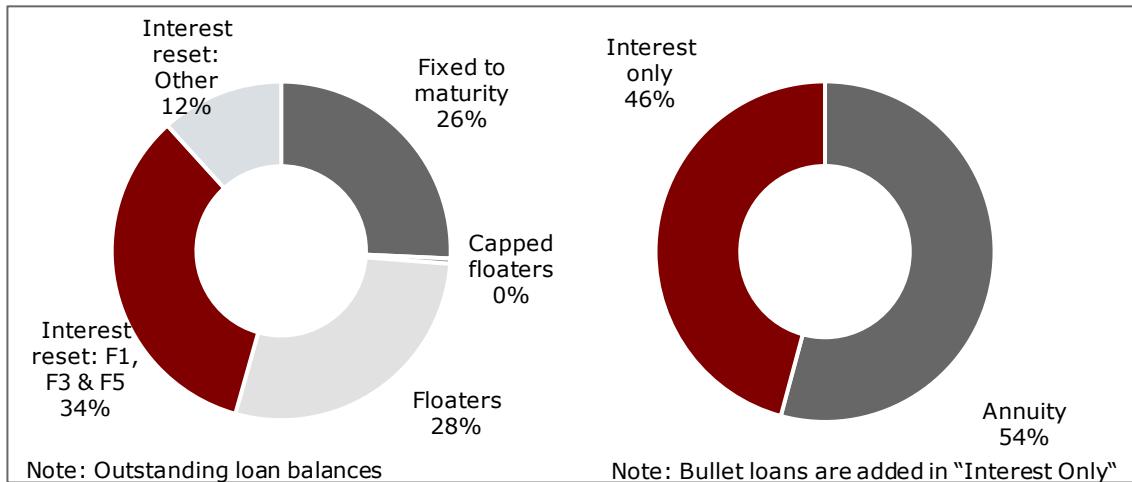
### Private Segment

- Homeowners must be able to service a 30-year fixed rate annuity loan for Realkredit Danmark to underwrite
- Originally, fixed rate mortgages were standard in the Danish market, but now interest reset is accounting for 60% of the loan book – of which 55% is with 1, 3 or 5 year resets
- Expectations are for this percentage to decline since fixed rates are now only 2.5% and FlexKort® (floater) is offered as an alternative to interest reset loans



### Corporate Segments

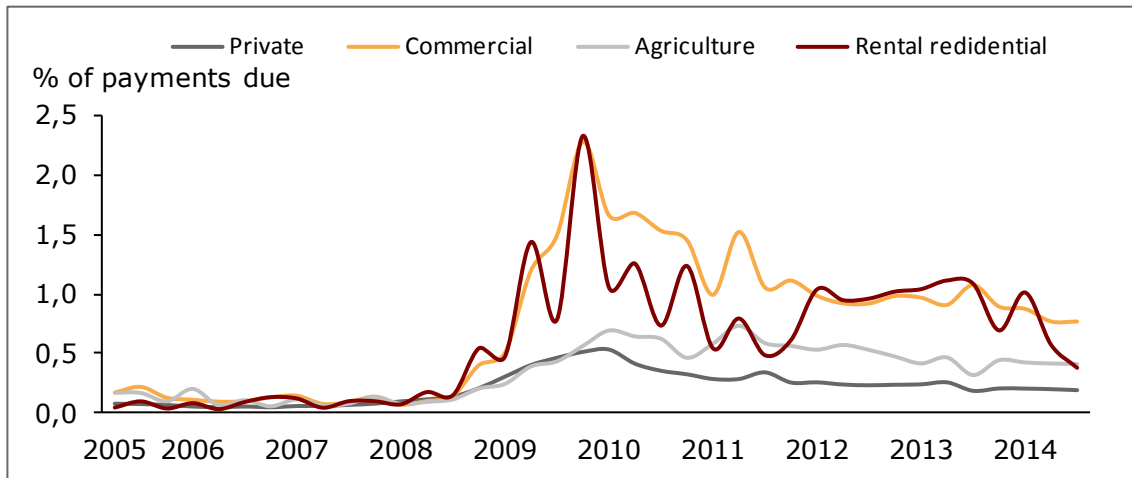
- 26% of all lending in corporate segments is fixed rate to maturity
- More than 74% are either interest reset (typically, rates are reset every year or every third year) or floating rate (base rates are either 6M CIBOR, 3M EURIBOR or 6M CITA)
- Bullets and Interest only loans make up 46% of corporate lending



## 2 Arrears and Repossessions

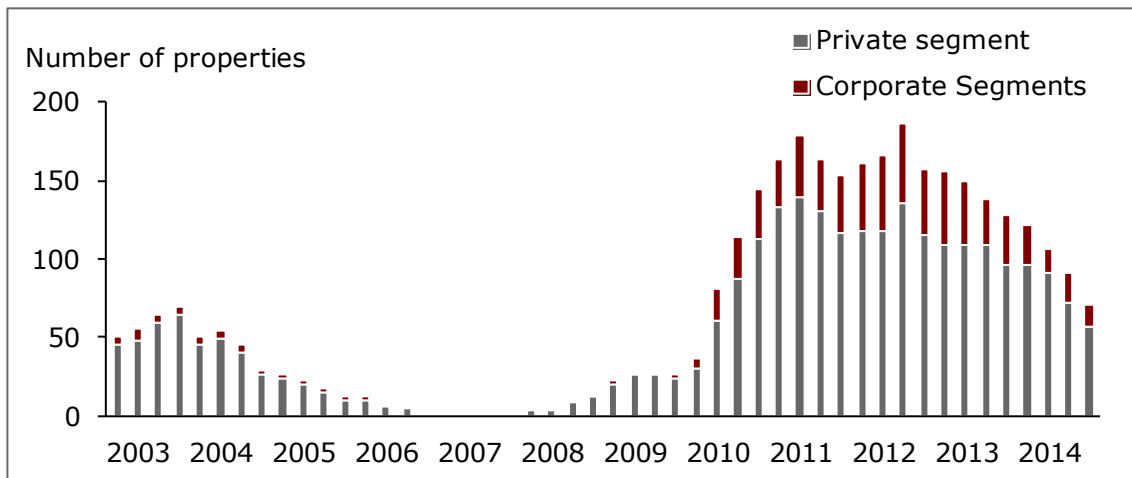
### Arrears (3 months)

- Total arrears stood at 0.33% end Q3 2014
- Arrears are rather volatile in the Rental residential segment. However, arrears are down considerably from Q4 2009
- Arrears in the Commercial segment has declined to 0.8%. Down from 2.3% in 2009, but up from normal levels of around 0.1% before 2009
- Arrears in the Private segments have been rather stable around 0.2% for the last years



### Repossessions

- The stock of repossessed properties stood at 71 end Q3 2014 — down 20 from Q2 2014
- This compares to a total stock of mortgage collateral of 497,413

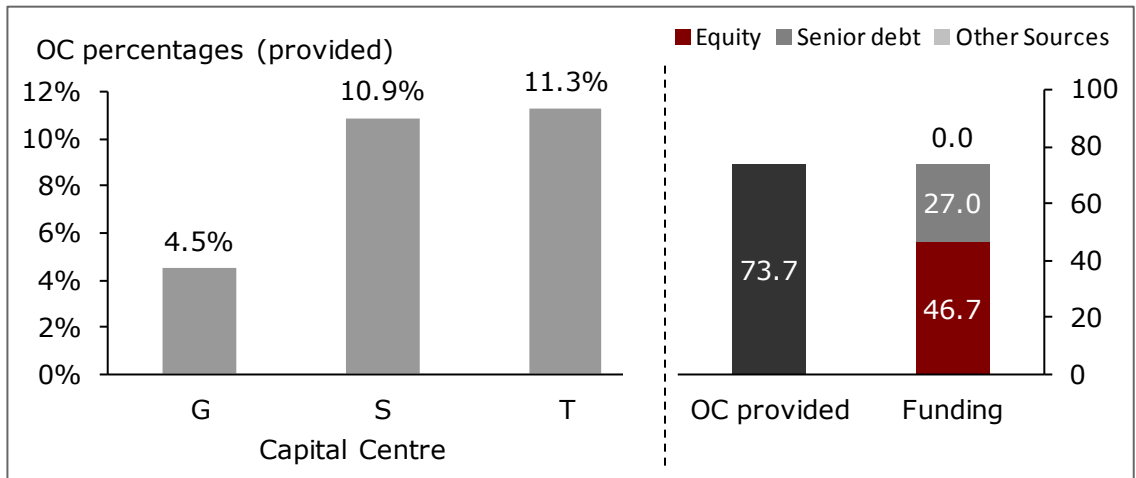




## 2 Over Collateralization and Capitalization

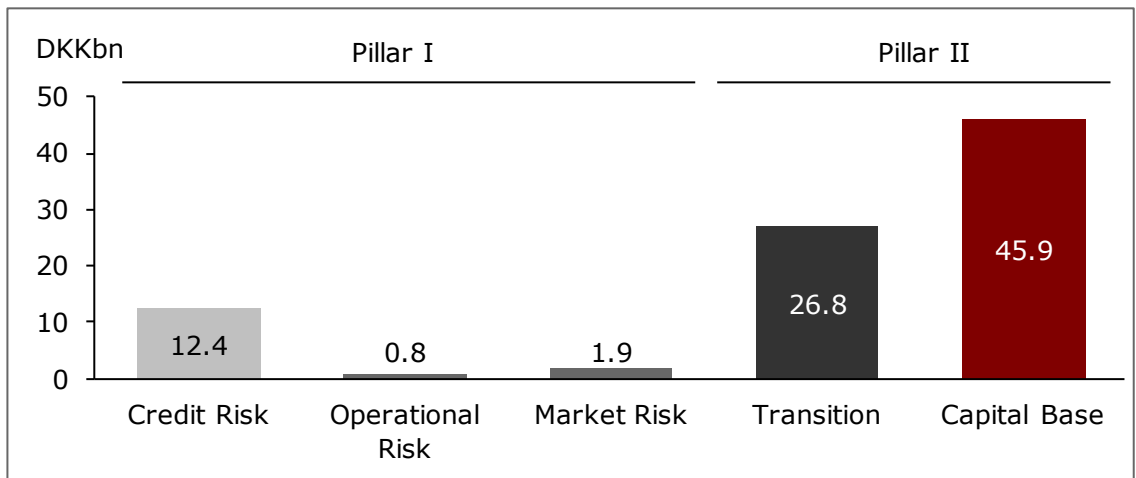
### Over Collateralisation

- 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

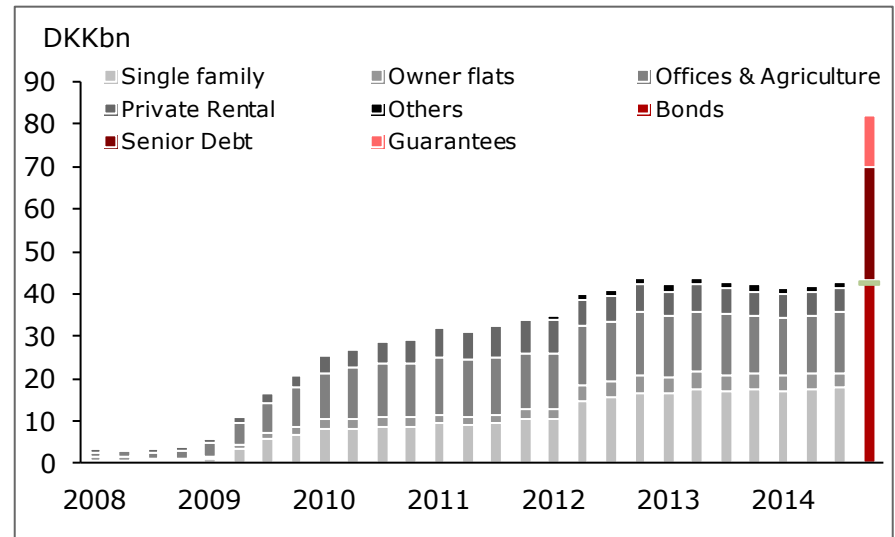
- The solvency ratio stood at 11.8% end Q3 2014 (CRD definition)
- Realkredit Danmark has been issuing senior debt since Q1 2012 to strengthen the capital base



# Supplementary Collateral — Total in S and T

## Buffer in Capital Centres S and T

- End Q3 total OC provided was DKK 70.1bn in Capital Centres S and T of which 27.0bn was funded by Senior debt
- Supplementary Collateral of DKK 42.9bn is required end Q3 2014 in Capital Centres S and T
- Loss Guarantees of DKK 11.9bn are utilised
- Buffer for further growth in need for supplementary Collateral in Capital Centres S and T is DKK 39.1bn
- If the OC is insufficient to comply with Supplementary Collateral requirements, RD can transfer OC from the General Capital Centre or write Loss Guaranties within the 15% limitation of issued bonds



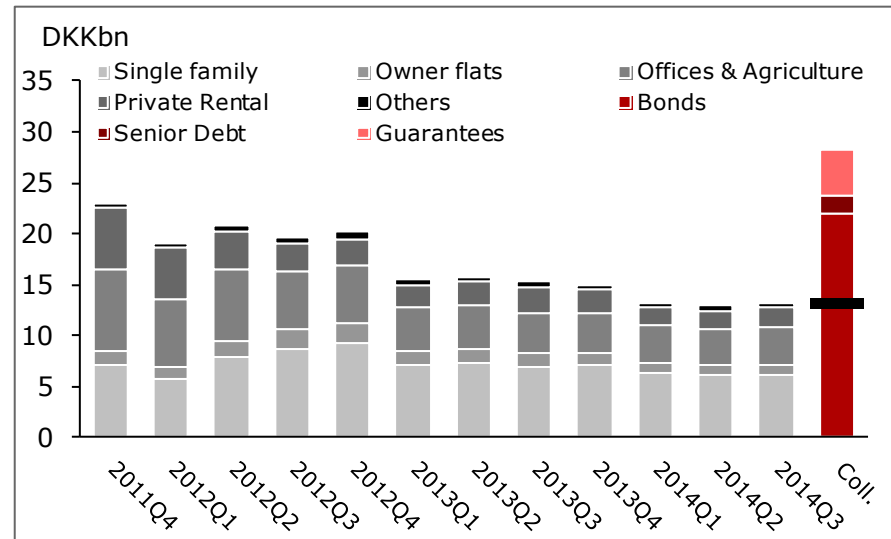
## Supplementary Collateral requirements

- 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

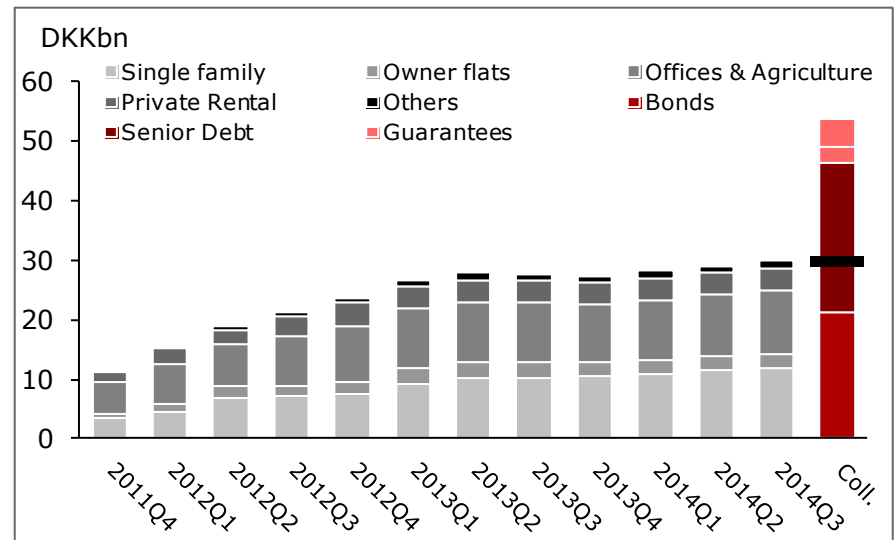
- End Q3 2014 total OC provided was DKK 23.8bn in Capital Centre S of which 1.9bn was funded by Senior debt
- Supplementary Collateral of DKK 13.1bn is required end Q3 2014 in Capital Centre S
- Loss Guarantees of DKK 4.4bn are utilised
- Buffer for further growth in need for supplementary Collateral in Capital Centre S is DKK 15.0bn
- 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 Guaranties within the 15% limitation of issued bonds



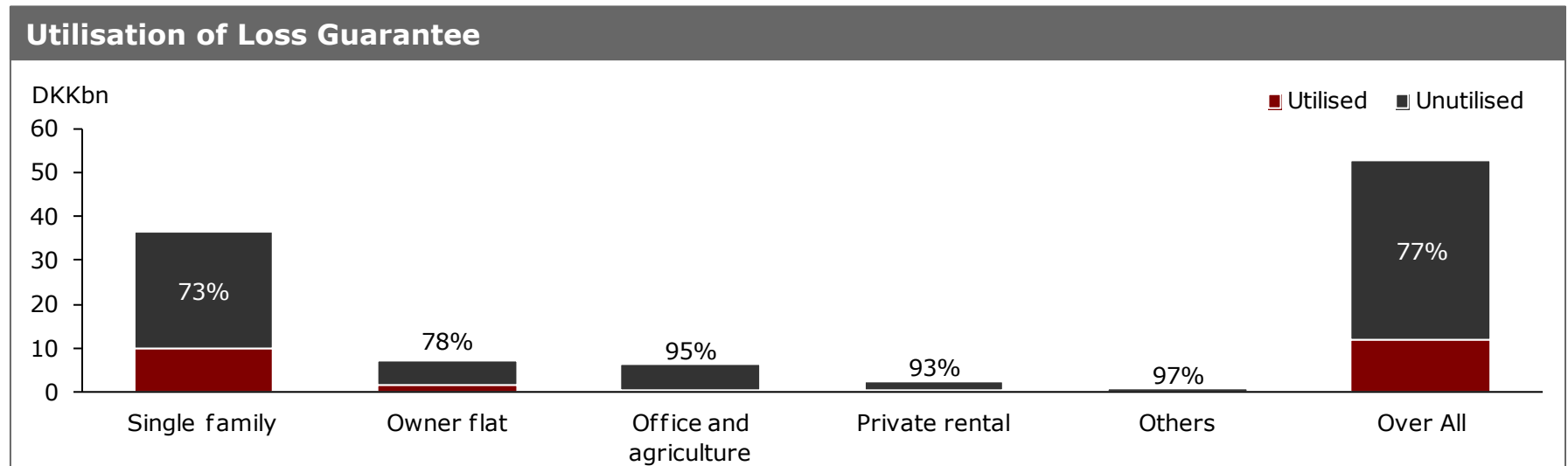
# Supplementary Collateral – T

## Buffer in Capital Centre T

- End Q3 2014 total OC provided was DKK 46.3bn in Capital Centre T of which 25.1bn was funded by Senior debt
- Supplementary Collateral of DKK 29.8bn is required end Q3 2014 in Capital Centre T
- Loss Guarantees of DKK 7.6bn 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 Guaranties within the 15% limitation of issued bonds



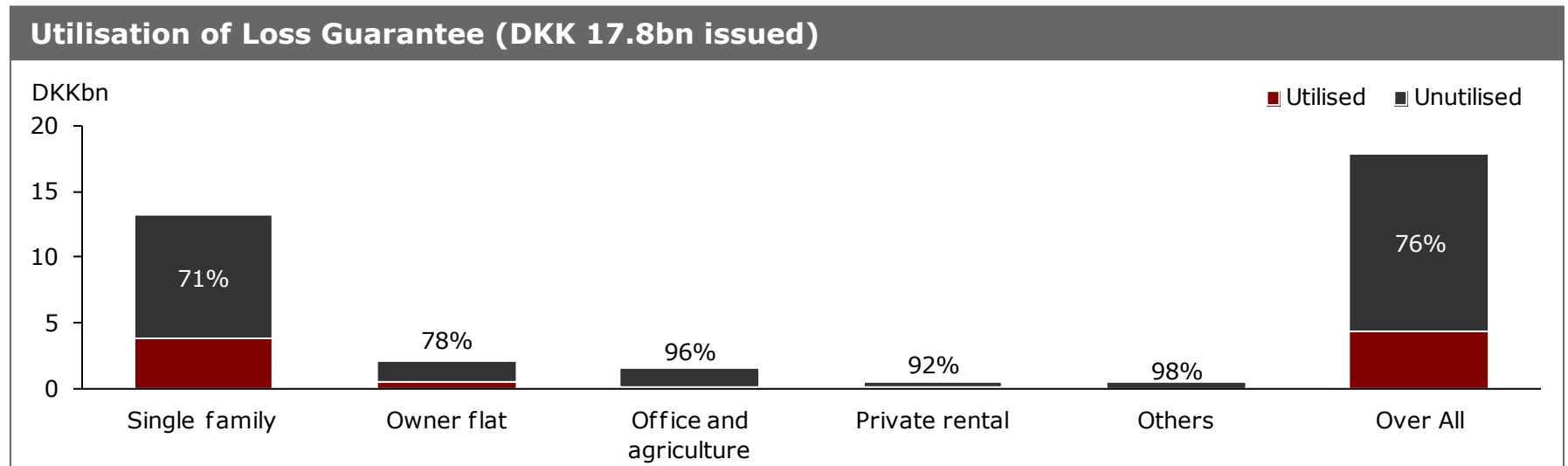
# Guarantees — Total



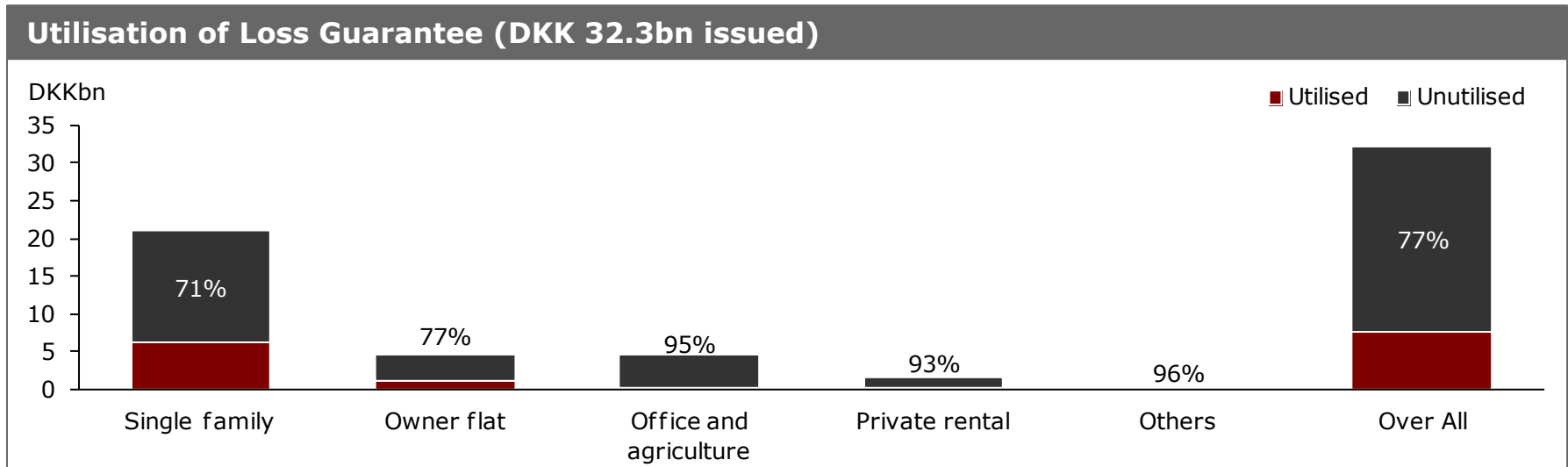
## Loss Guarantees issued by Danske Bank (DKK 52.8bn)

- 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



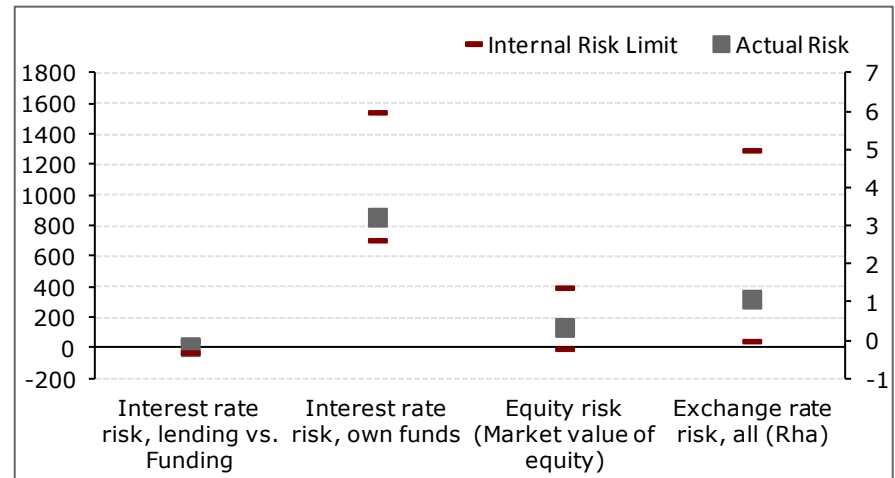
# Guarantees — T



## 2 Market Risk Exposure and Liquidity

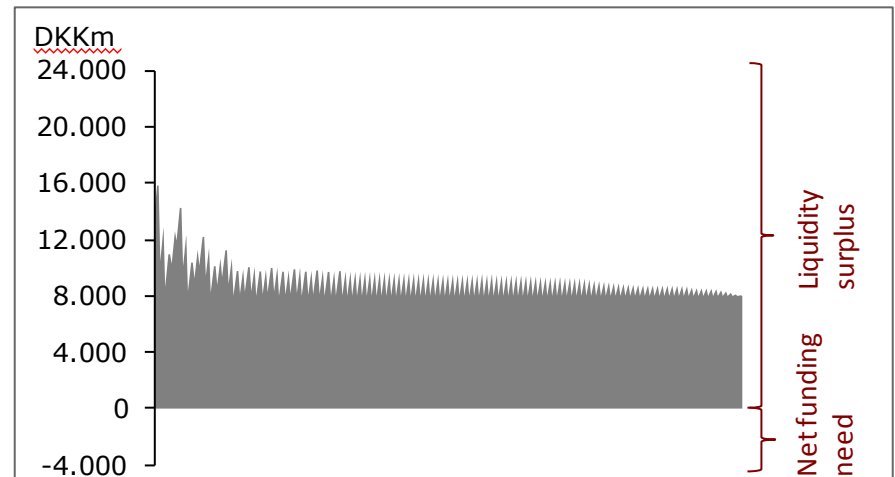
### Market Risk Exposures

- 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 Q3 2014 interest rate risk on lending vs. funding stood at DKK 13.6m
- Derivatives are not employed for hedging imbalances on lending and funding



### Liquidity

- The pass through structure ensures a net inflow of liquidity from lending vs. Funding, i.e. Realkredit Danmark will not encounter a net funding need
- The liquidity inflow depicted in the chart does not include margin payments





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