

# **Risk Report 2013Q2**

Published 20 August 2013

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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

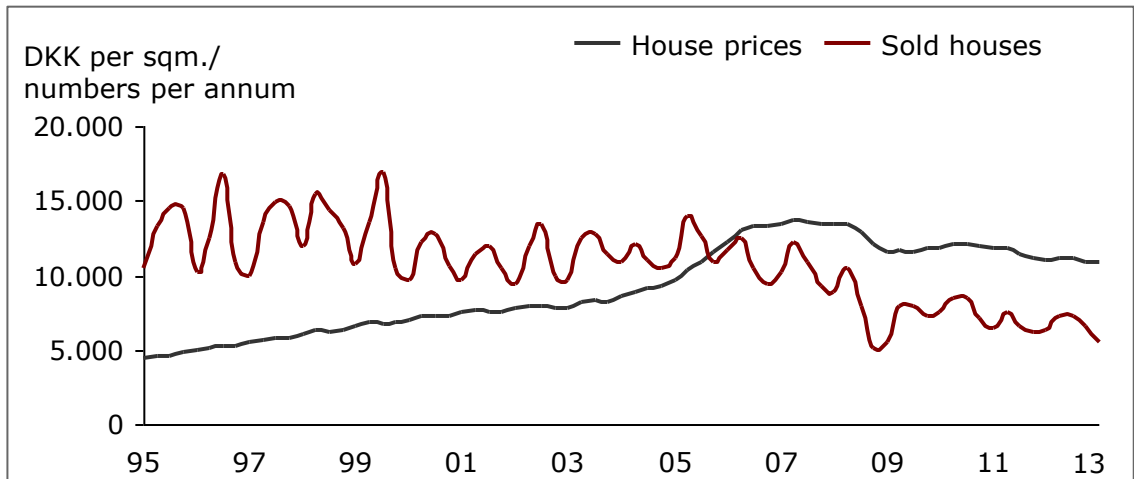
# Key Market Indicators

General Market Information

# 1 House Prices and Homeowners Equity

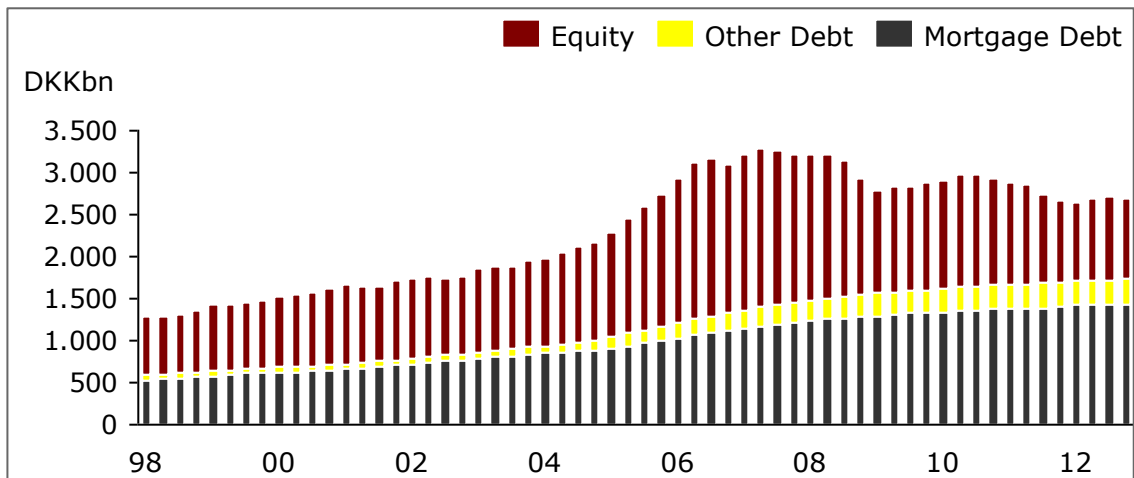
## House Price Trends

- House prices are now stable after falling since early 2011
- House prices are down 20% for detached housing from the peak mid 2007
- Expectations are for house prices to continue the current stabilization yet uncertainty is high
- The number of sold houses is still decreasing



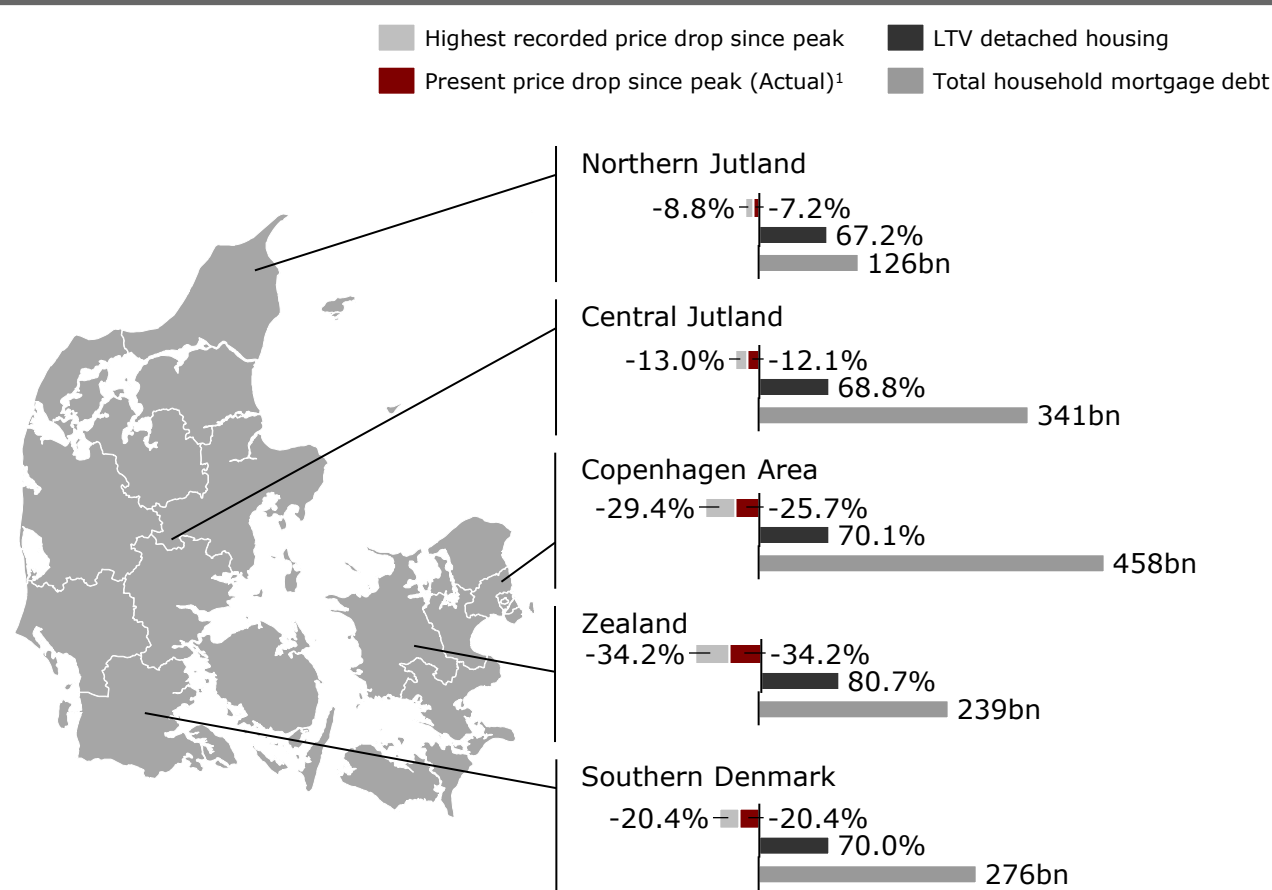
## Homeowners Equity

- Homeowners' equity peaked 2006Q3 at 1,887bn. Since then equity has dropped by 925bn
- 52% of the drop can be explained by house price deflation — 48% is due to additional lending



# 1 Geographical Dispersion

## Private lending in Denmark in total



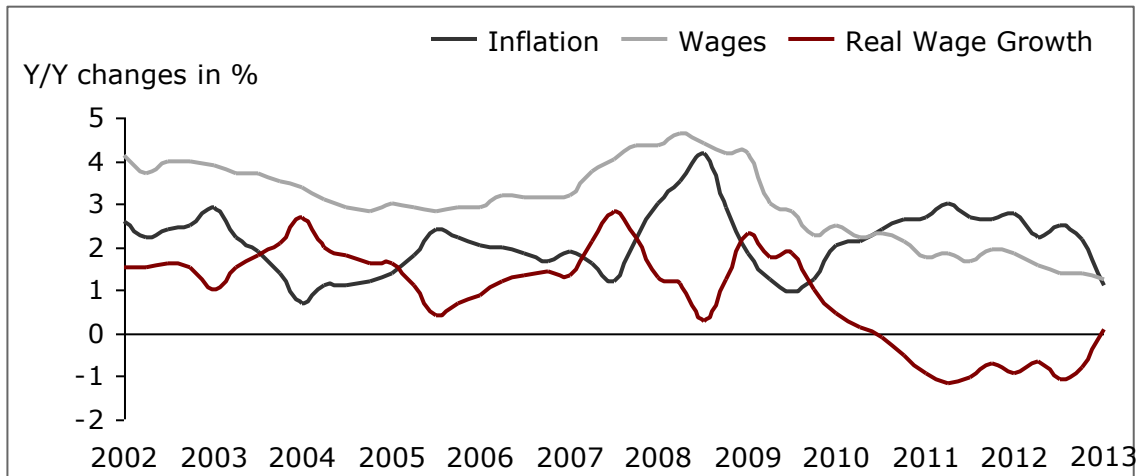
- House prices are now on a 2005 level
- The Copenhagen area was the first to suffer from house price deflation, following a decade of soaring house prices. Prices are now 26% down from the peak in mid 2006
- The recent deflation in the Copenhagen area has reversed the rebound in house prices during 2009 and 2010

<sup>1</sup>. If actual price drop is lower than the highest recorded price drop it means that prices are recovering

# 1 Unemployment and Real Wage Growth

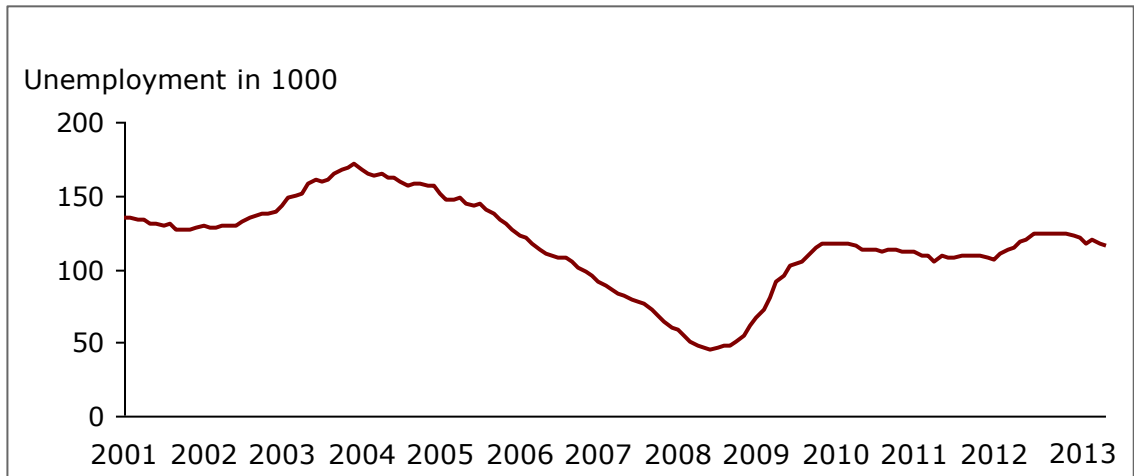
## Real Wage Growth

- Real wage growth is slightly positive in Q1 after a period with negative growth rates
- Wage development is expected to be close to the inflation rate in 2013



## Unemployment

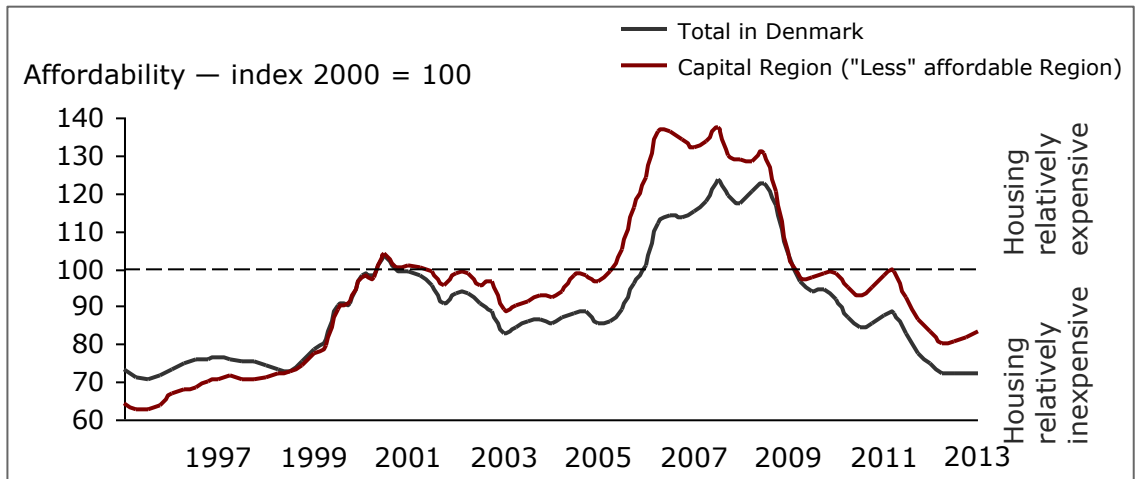
- Net unemployment stood at 115,000 end Q2 2013 up from a historical low of 45,000 in mid 2008
- This is equivalent to an unemployment (net) rate of 4.3%. Gross unemployment rate defined as net unemployment plus persons in activation schemes are at 5.8%
- The unemployment rate is expected to stay at around current levels the coming quarters



# 1 Homeowner Affordability and Foreclosures

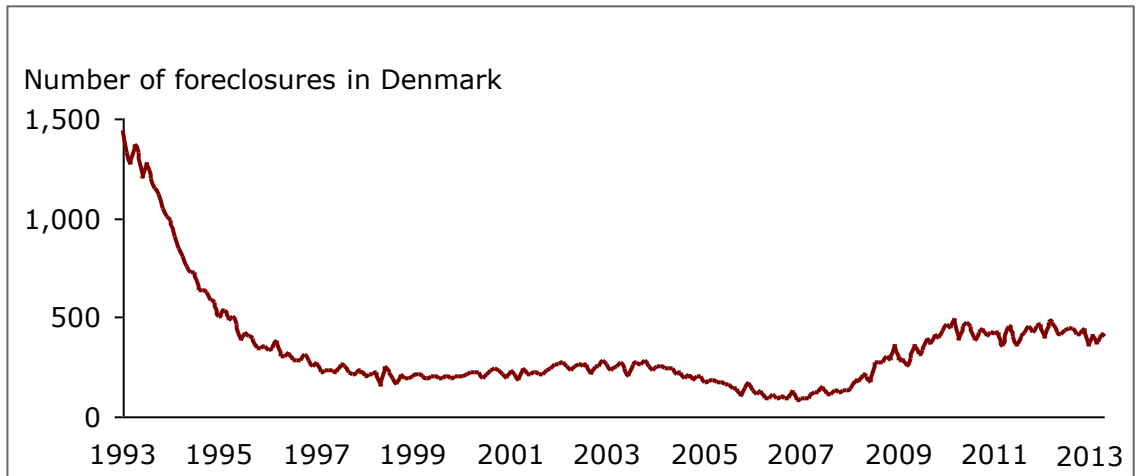
## Homeowner Affordability

- House price deflation and lower interest rates has made housing more affordable even in the Copenhagen area
- Housing costs are now at the lowest level since the middle of the 1990's. The Copenhagen area, however, is showing signs of increasing housing costs



## Foreclosures

- The number of foreclosed properties in Denmark in April 2013 was 402
- We expect the numbers to stay at the current level throughout 2013
- 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>	2012		2013		2014	
GDP	-0.5	-0.5	0.1	-0.6	1.5	1.0
Private Consumption	0.6	-1.2	0.4	-0.7	1.2	0.1
Fixed investments	0.0	-3.9	1.7	-4.5	1.8	1.0
Export	0.9	2.9	-0.8	2.0	3.5	4.4
Unemployment %	6.1	11.4	5.9	12.1	5.9	12.2

## Danish Economy Outlook

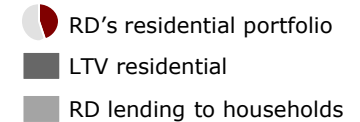
- The growth in the Danish economy is expected to be close to 0 in 2013
- Risk of slower global growth – especially in Europe - is a concern to the Danish economy which is highly dependent on exports
- Interest rates are a key element in the household economy. We still expect very low interest rates in the near future



# Key Collateral Indicators

Realkredit Danmark Specific Information

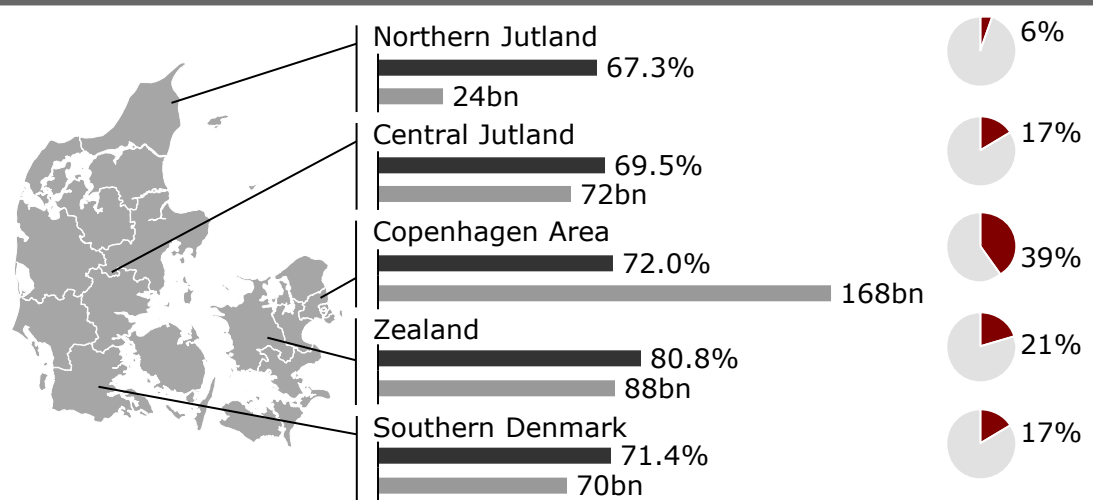
## 2 Dispersion and Loan to Value Ratios



### 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 although LTV ratios have been exposed to a large increase
- Although the affordability ratio in the capital region is expected to rise it is still below index 100
- A minor decrease in the household mortgage debt was recorded in Q2 2013

### Geographical Dispersion in Realkredit Danmark



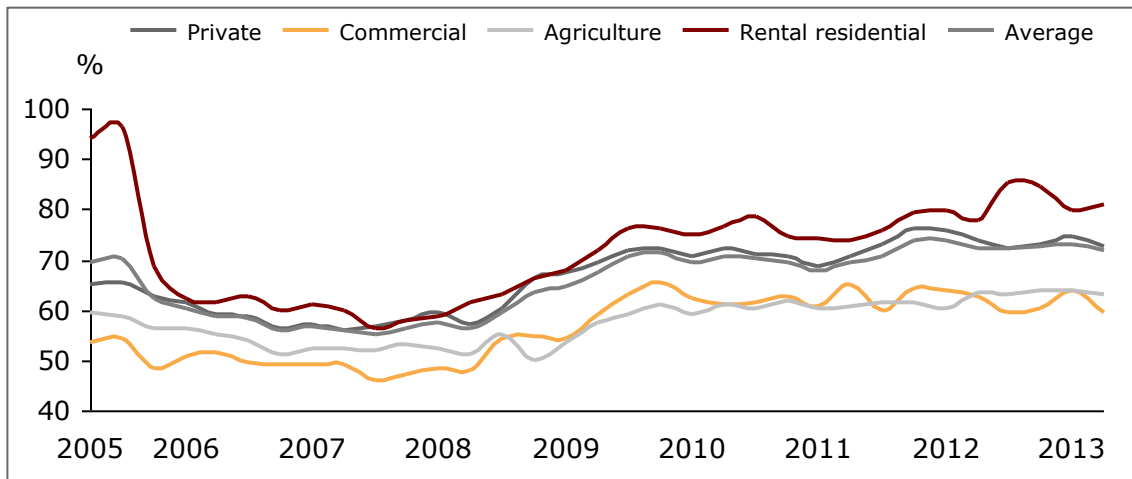
### Loan To Value Ratios

- 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 72% in Q2 2013 compared to 72% in Q2 2012
- LTV's for Commercial and Agriculture are based on few observations to confirm correct price levels



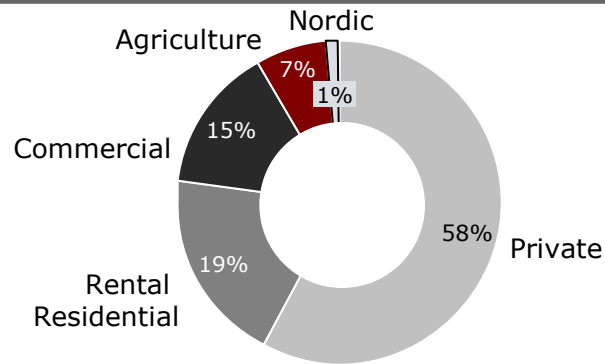
### Borrower Classifications

- Borrowers' financial strength is classified on a scale from 1 to 11, 1 being the highest score
- Approx. 9bn 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 %	48	182	20	250
20-40 %	32	153	19	204
40-60 %	20	113	16	149
60-80 %	10	62	10	82
> 80 %	9	30	9	48
Total	119	539	75	732

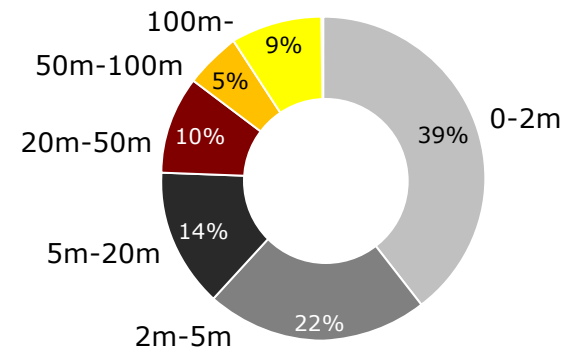
## 2 Collateral Breakdowns — Total portfolio

### Borrower Segmentation



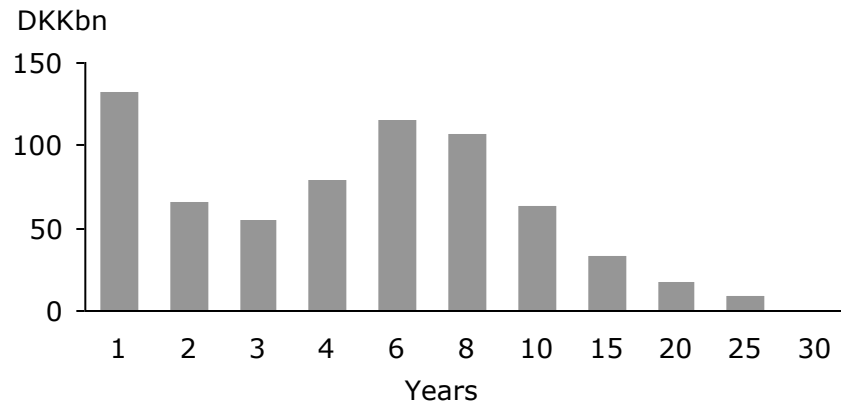
Note: Total lending distributed on segments

### Outstanding Loan Balance



Note: Total lending distributed on outstanding loan balances

### Portfolio Seasoning



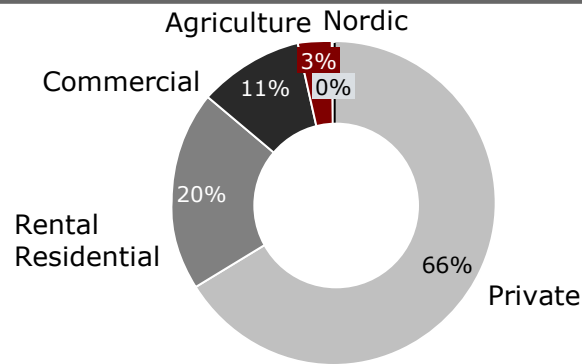
### Outstanding Debt in DKKbn by LTV ratio

Segment	0-20%	20-40%	40-60%	60-80%	>80%	Total DKKbn
Private	135	118	90	55	25	423
Commercial	44	36	24	8	5	118
Agriculture	18	15	10	4	2	50
Rental Residential	52	35	25	15	15	142
Weighted dist.	34%	28%	20%	11%	7%	100%
Total, DKKbn	250	204	149	82	48	732

Average LTV: 71.7%

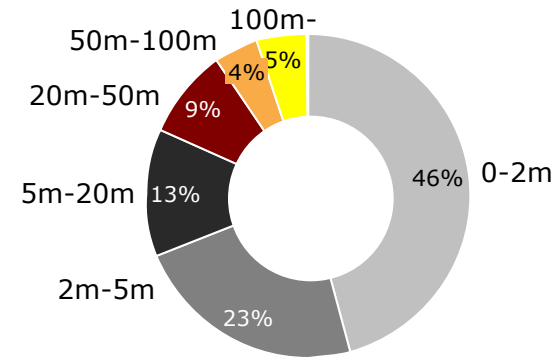
## 2 Collateral Breakdowns — Capital Centre S

### Borrower Segmentation



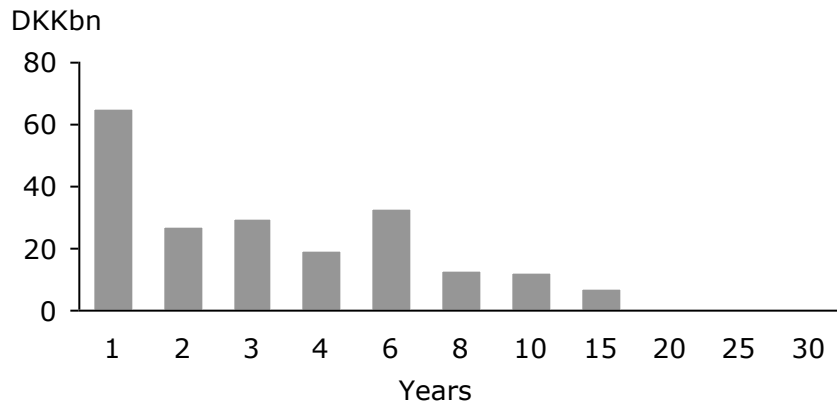
Note: Total lending distributed on segments

### Outstanding Loan Balance



Note: Total lending distributed on outstanding loan balances

### Portfolio Seasoning



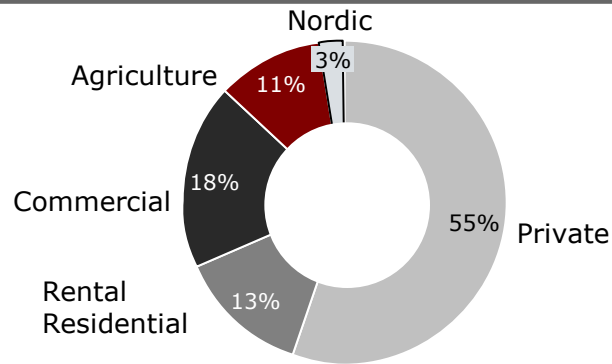
### Outstanding Debt in DKKbn by LTV ratio

Segment	0-20%	20-40%	40-60%	60-80%	>80%	Total DKKbn
Private	47	43	34	21	9	154
Commercial	8	8	5	2	2	25
Agriculture	3	2	1	1	0	7
Rental Residential	18	12	8	4	5	47
Weighted dist.	33%	28%	21%	12%	7%	100%
Total, DKKbn	76	65	48	28	15	232

Average LTV: 69,1%

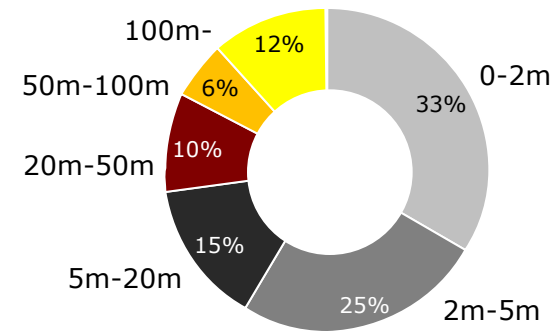
## 2 Collateral Breakdowns — Capital Centre T

### Borrower Segmentation



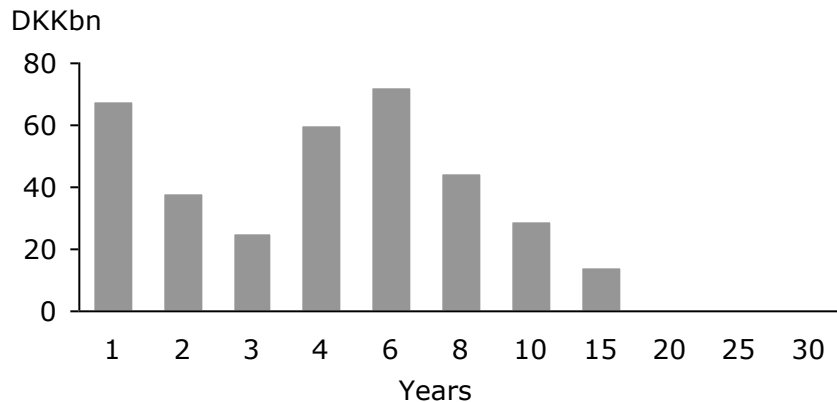
Note: Total lending distributed on segments

### Outstanding Loan Balance



Note: Total lending distributed on outstanding loan balances

### Portfolio Seasoning



### Outstanding Debt in DKKbn by LTV ratio

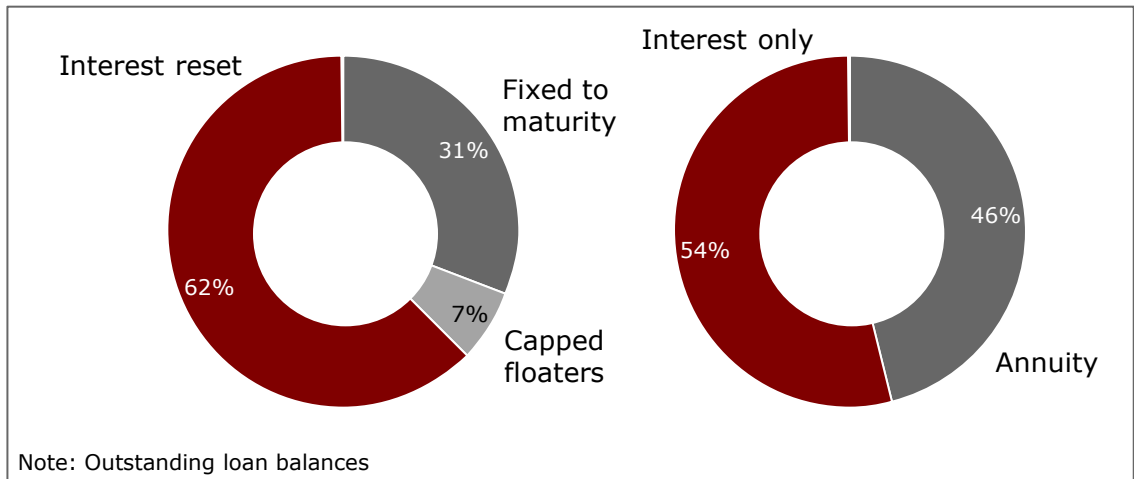
Segment	0-20%	20-40%	40-60%	60-80%	>80%	Total DKKbn
Private	63	56	45	29	13	206
Commercial	30	24	16	5	3	78
Agriculture	14	12	8	3	2	40
Rental Residential	15	13	10	6	5	50
Weighted dist.	33%	28%	21%	12%	6%	100%
Total, DKKbn	122	105	80	43	23	373

Average LTV: 69,6%

## 2 Borrower Exposure to Interest Rates

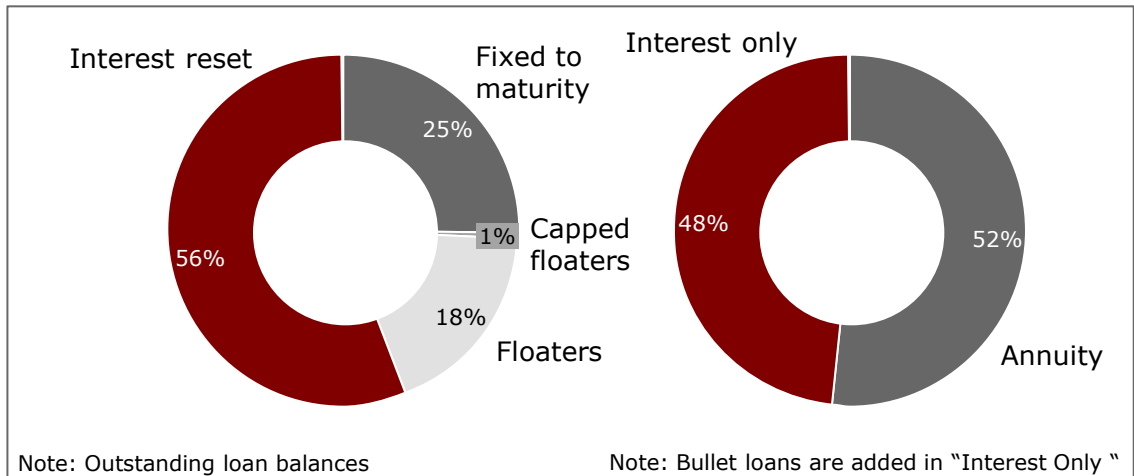
### Private Segment

- Homeowners must be able to service a 30-year fixed rate annuity loan for Realkredit Danmark to underwrite
- For the past decade borrowers have remortgaged from fixed rate into interest reset — now accounting for 62% of the loan book. Expectations are for this trend to reverse since fixed rates are now 3%



### Corporate Segments

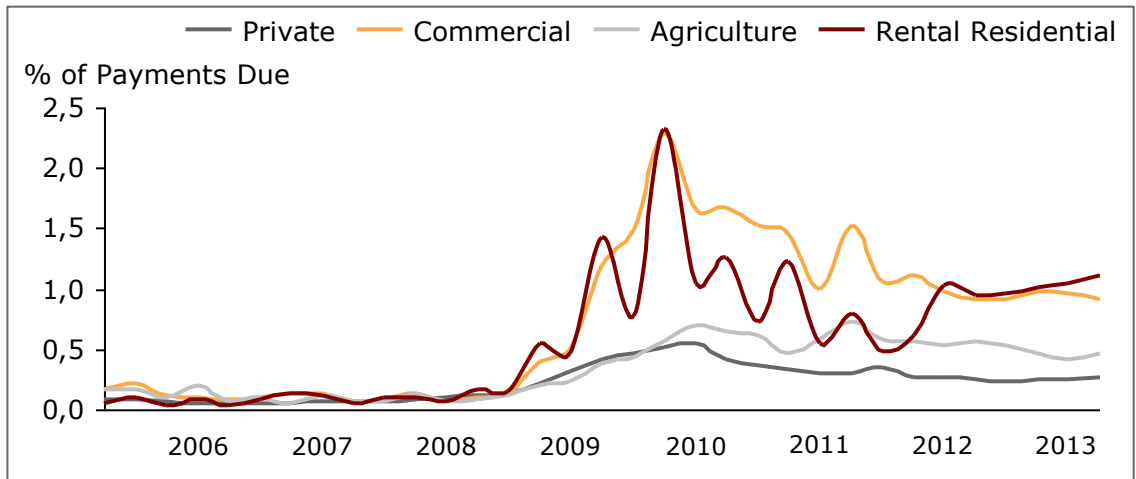
- 26% of all lending in corporate segments is fixed rate to maturity
- More than 74% are either interest reset (typically, rates are reset every year or every third year) or floating rate (base rates are either 6M CIBOR or 3M EURIBOR)
- Bullets and Interest only loans make up 48% of corporate lending



## 2 Arrears and Repossessions

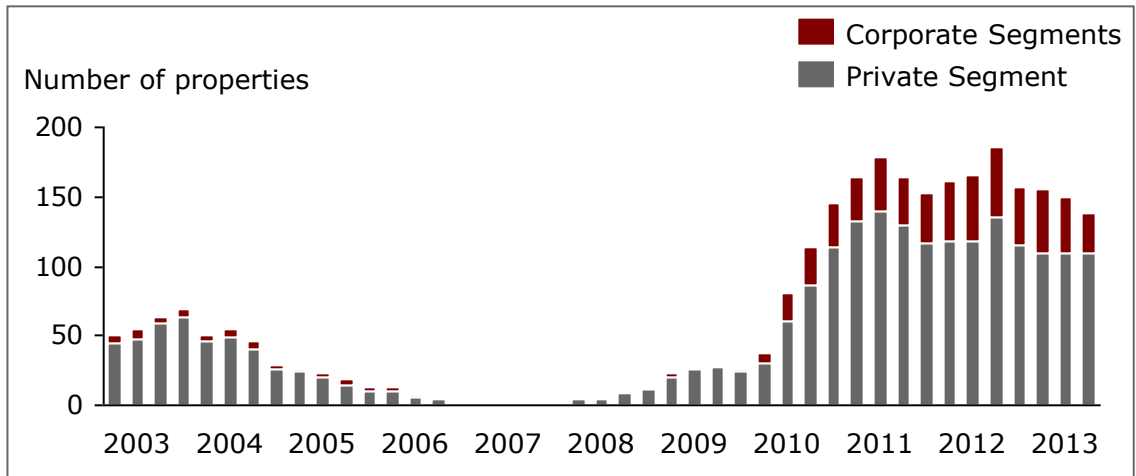
### Arrears (3 months)

- Arrears are down considerably from Q4 2009 in Commercial and Rental Residential
- Arrears in the Private segments and Agriculture are stabilising
- Total arrears stood at 0.52% end Q2 2013



### Repossessions

- The stock of repossessed properties stood at 138 end Q2 2013 — down 11 from Q1 2013
- This compares to a total stock of mortgages collateral at 507,288



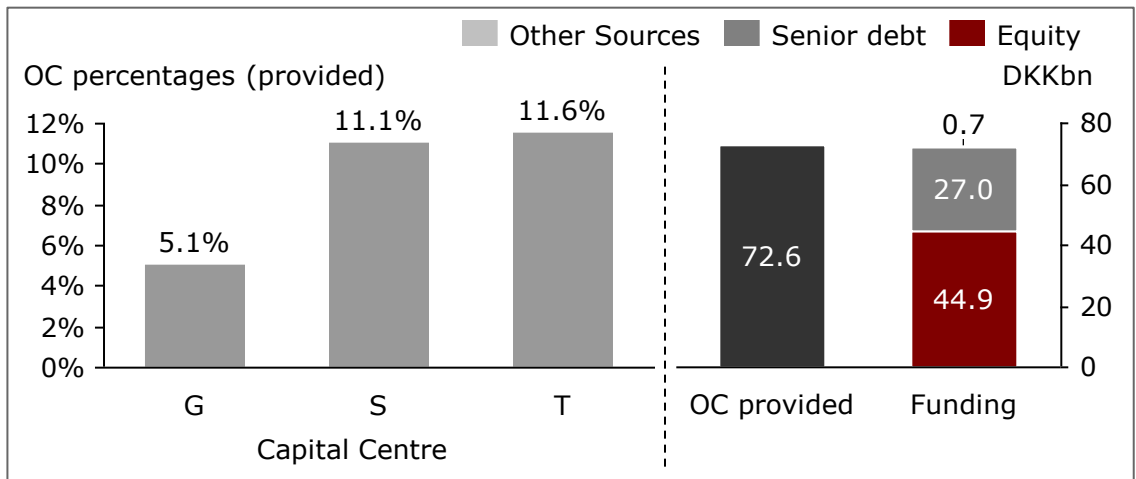


## 2 Over Collateralization and Capitalization

### Over Collateralisation

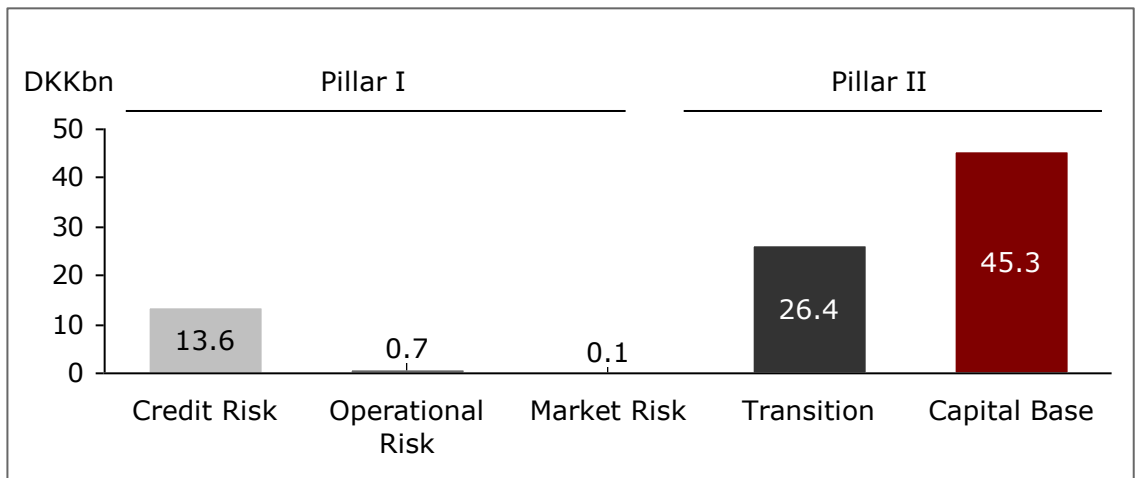
- Covered bonds issued by Realkredit Danmark are secured by mortgage collateral and reserves
- Reserves are invested in government exposures, covered bonds and bank exposures
- In case of bankruptcy Over Collateralisation will also be comprised by bondholders preferential claim

Note: Numbers per 30 June 2013



### Capitalisation

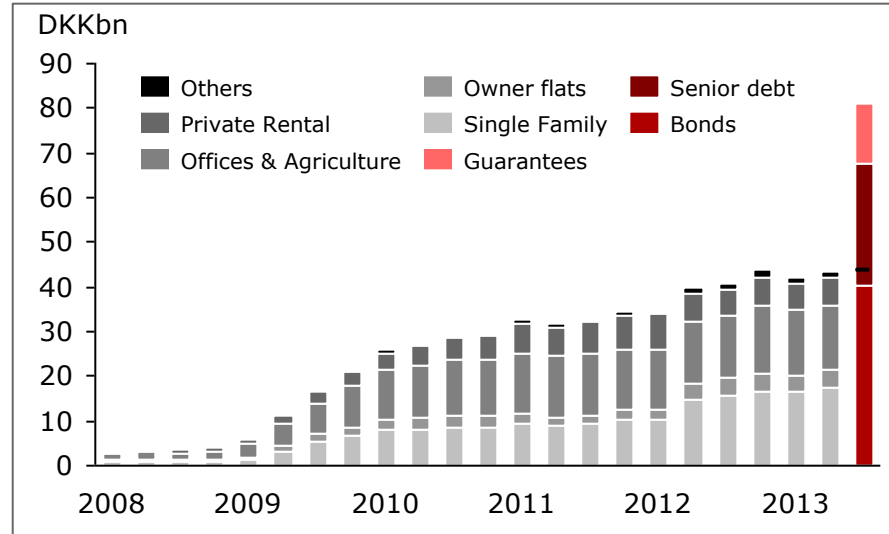
- The solvency ratio stood at 19.9% end Q2 2013 (CRD definition)
- Realkredit Danmark started issuing senior debt in Q1 2012 to strengthen the capital base



# Supplementary Collateral — Total in S and T

## Buffer in Capital Centres S and T

- End Q2 total OC provided was DKK 67.5bn in Capital Centres S and T of which 27.0bn was Senior debt
- Supplementary Collateral of DKK 43.6bn is required end Q2 2013 in Capital Centres S and T
- Loss Guarantees of DKK 13.7bn are utilised
- Buffer for further growth in need for supplementary Collateral in Capital Centres S and T is DKK 37.6bn
- 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



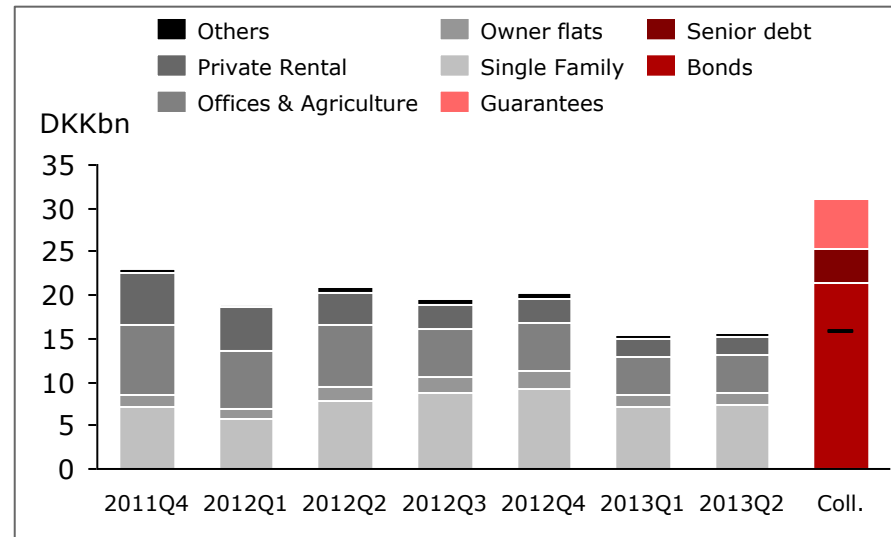
## Supplementary Collateral requirements

- 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

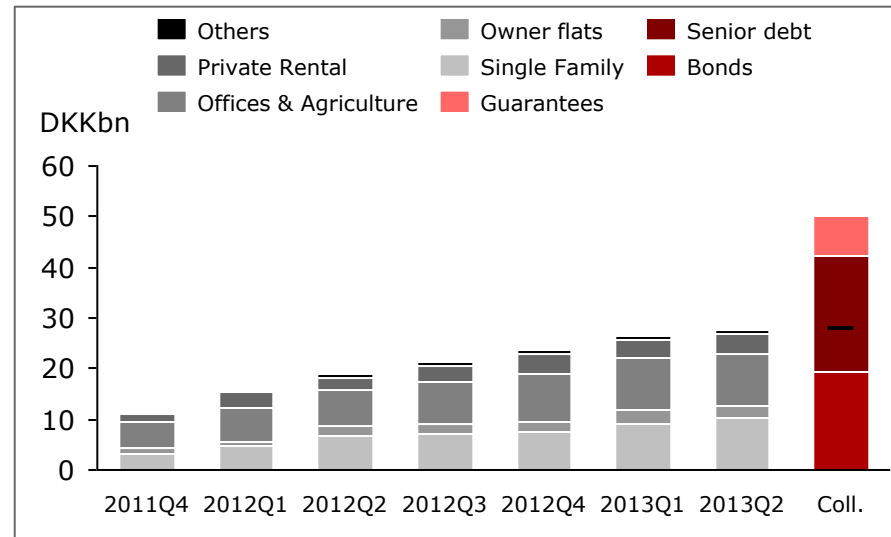
- End Q2 2013 total OC provided was DKK 25.3bn in Capital Centre S of which 4bn was Senior debt
- Supplementary Collateral of DKK 15.8bn is required end Q2 2013 in Capital Centre S
- Loss Guarantees of DKK 5.9bn are utilised
- Buffer for further growth in need for supplementary Collateral in Capital Centre S is DKK 15.4bn
- 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



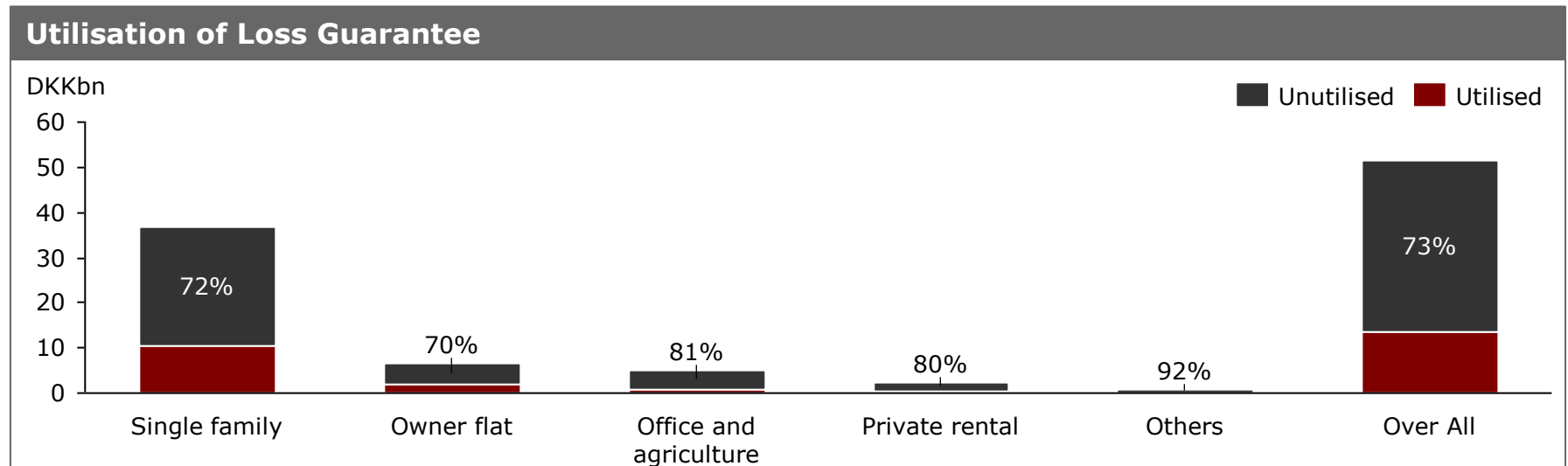
# Supplementary Collateral — T

## Buffer in Capital Centre T

- End Q2 2013 total OC provided was DKK 42.2bn in Capital Centre T of which 23bn was Senior debt
- Supplementary Collateral of DKK 27.8bn is required end Q2 2013 in Capital Centre T
- Loss Guarantees of DKK 7.8bn are utilised
- Buffer for further growth in need for supplementary Collateral in Capital Centre T is DKK 22.3bn
- 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



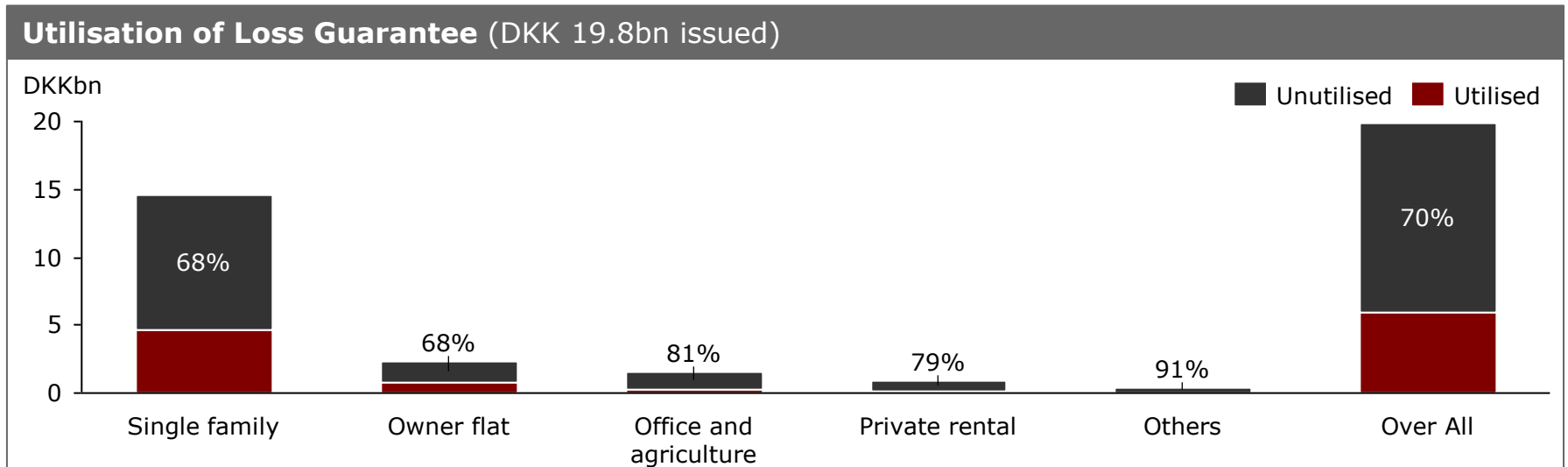
# Guarantees — Total



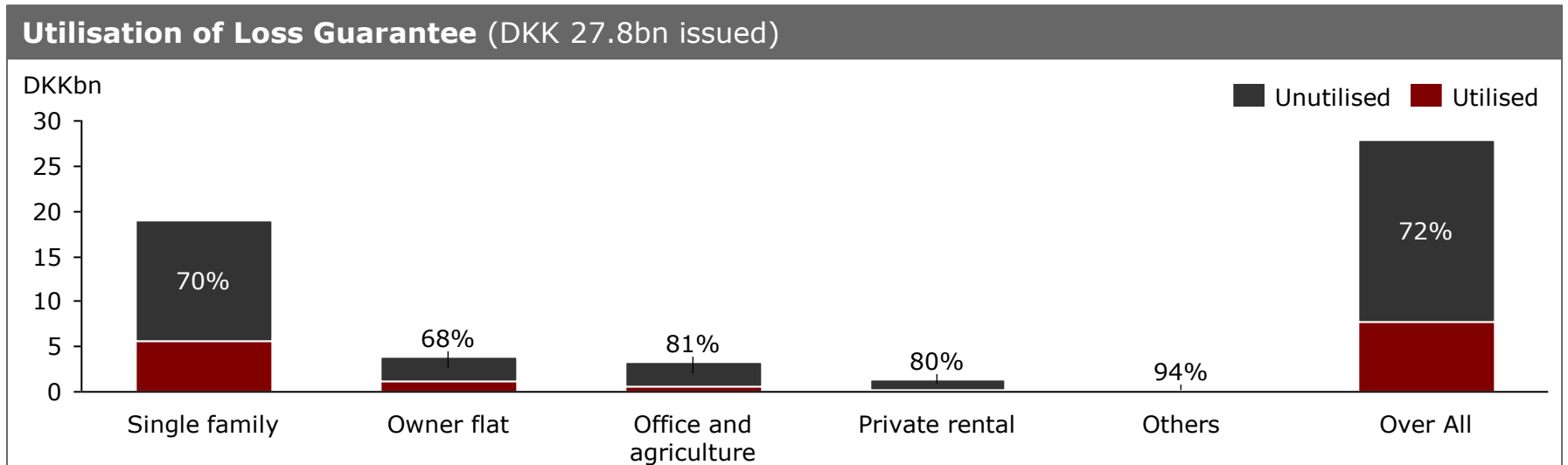
## Loss Guarantees issued by Danske Bank (DKK 51.5bn)

- RD loan 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 cost

# Guarantees — S



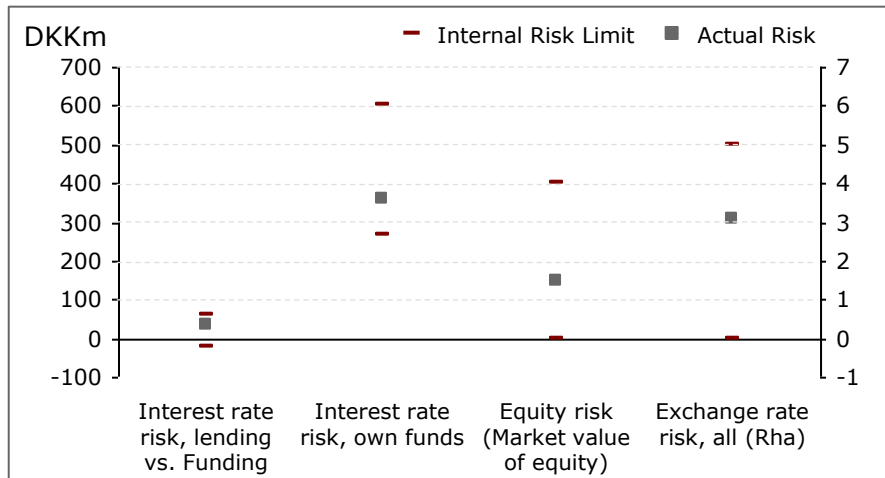
# Guarantees — T



## 2 Market Risk Exposure and Liquidity

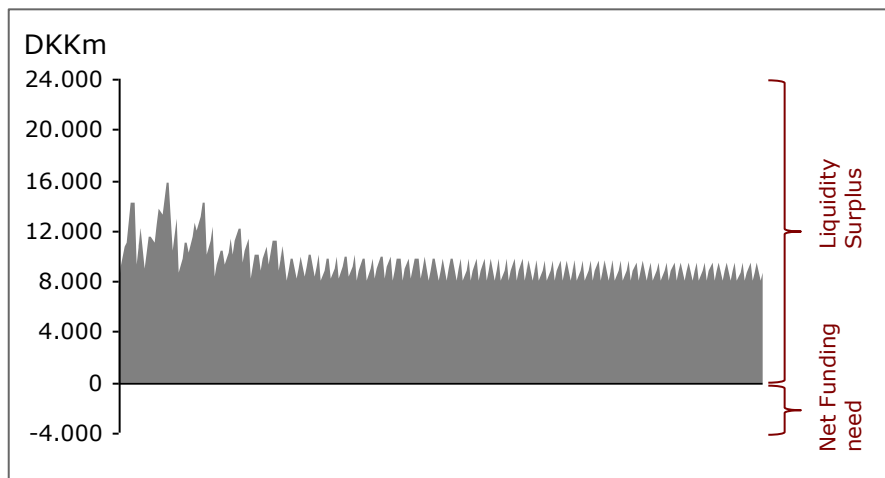
### Market Risk Exposures

- 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 Q2 2013 interest rate risk on lending vs. funding stood at DKK 33.3m
- 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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