

The Balance Principle and the Danish Prepayment System - How Does it Work in Practice?

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REALKREDIT
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Agenda



- The Balance Principle – Background
- The Balance Principle – Key Restrictions
- Mechanics of the Danish Mortgage Market
- Mechanics of the Prepayment System
- Consumer Credit Directive
- Conclusions

The Balance Principle - Background



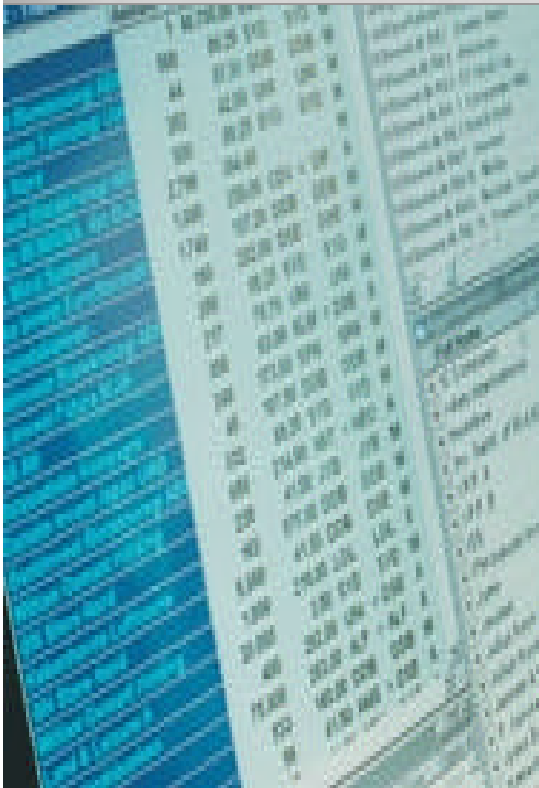
- Legal framework designed to mitigate risk to ensure low funding costs
- Three guiding risk mitigation principles embedded in legislation:
 - Special lender principle
 - Asset eligibility criteria (credit risk)
 - Balance Principle (market risk)
- Trade off for issuers:
 - Comply with strict regulation to obtain issuer privilege

The Balance Principle – Key Restrictions

- The Balance Principles identifies four types of market risk:
 - Interest rate risk
 - Currency risk
 - Funding/liquidity risk
 - Call risk/indexation risk
- Regulation split into two principles:
 - Specific pass through-principle
 - General ALM-principle



Specific Pass-Through Principle

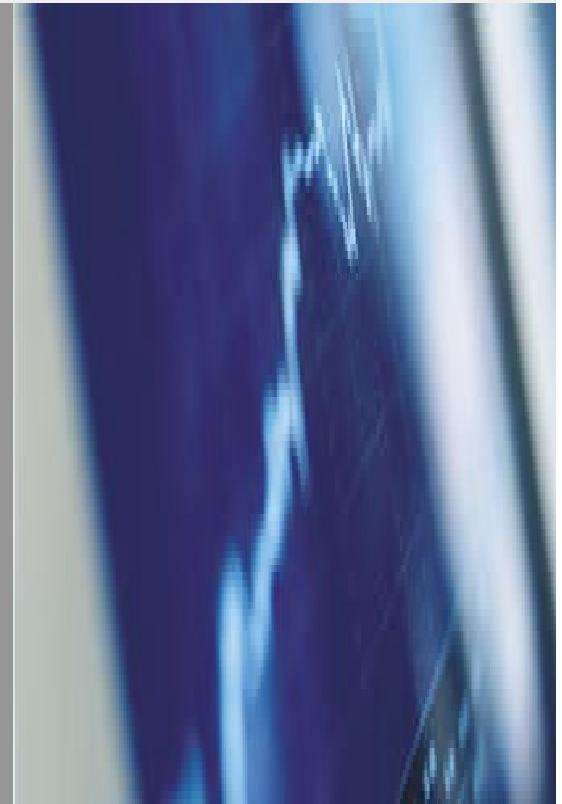


- Callable and index linked loans only
- Call risk and indexation risk must be fully transferred to the bondholders i.e. perfect hedge of call and indexation risk
- Derivatives not eligible as hedging instruments
- Payments on bonds in specific id-codes are linked to payments on specific pools of loans directly and unambiguously
- Each issue, however, is secured by the whole collateral pool

General ALM Principle

- Interest rate risk due to differences in payments from borrowers and payments to bondholders may not exceed 1% of the capital base
- Currency risk may not exceed 0.1% of the capital base
- Funding/Liquidity risk: Future liquidity deficits may not exceed predefined levels of the capital base:
 - 25% in year 1-3
 - 50% in years 4-10
 - 100% from year 11

I.e. all future payments on bonds issued covered by payments on underlying assets or the capital base of the issuer

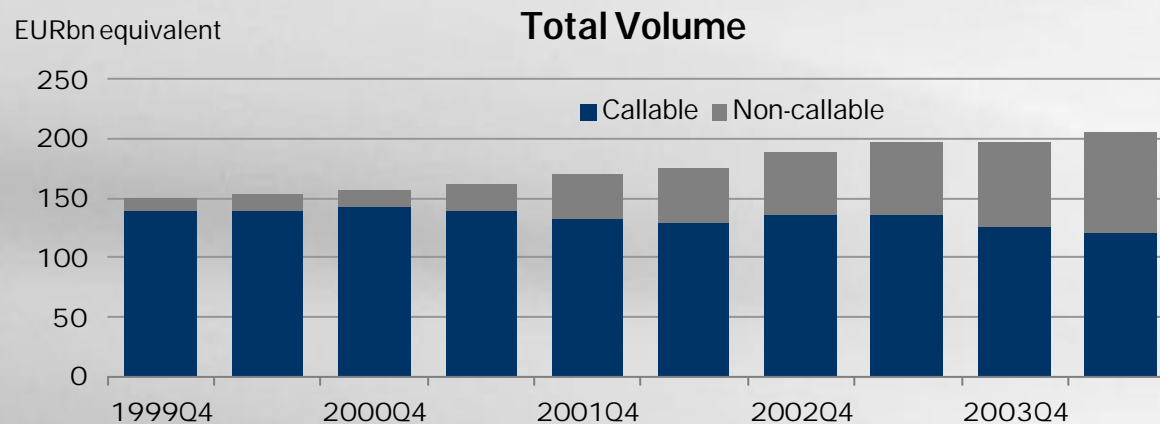
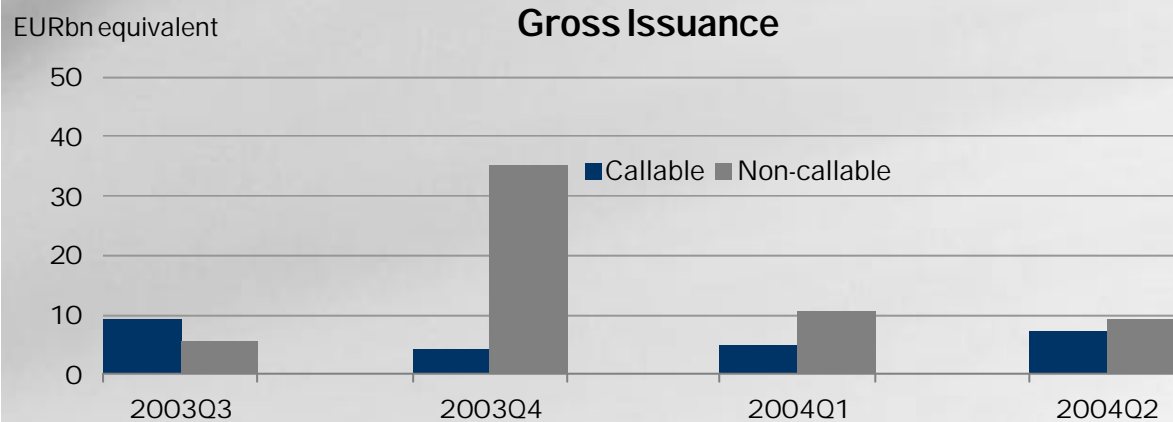


Mechanics of Danish Mortgage Market



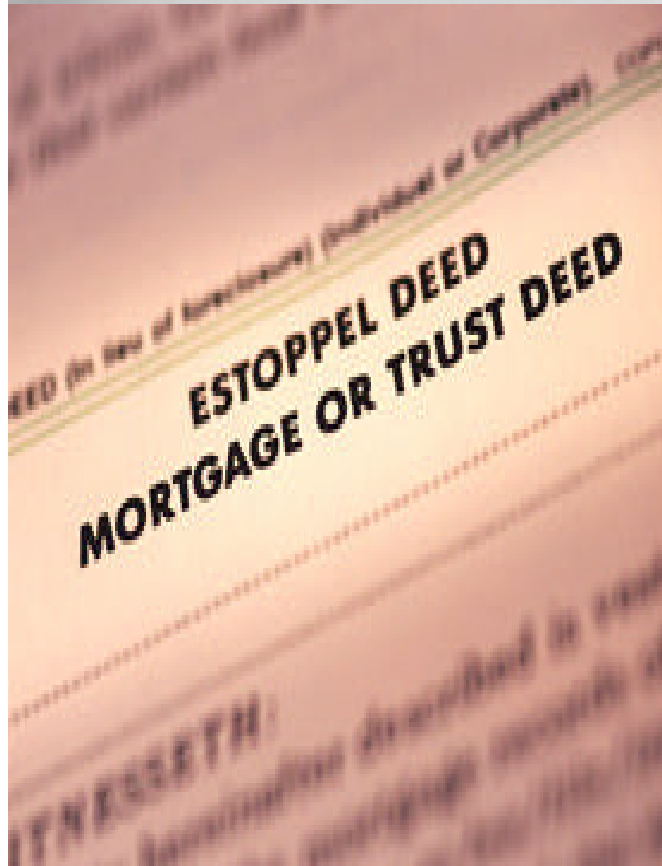
- The Balance Principle embedded in both products and loan processing
- Processing;
 - Bonds issued on tap on daily basis to match loan origination of the day
 - Bonds are redeemed based on redemptions of loans in the underlying pool of mortgages
- Transparent products;
 - Marked-to-market interest rates on loans based on the listed price at CSE of the underlying bonds
 - Marked-to-market redemption costs

Mechanics of the Bond Market



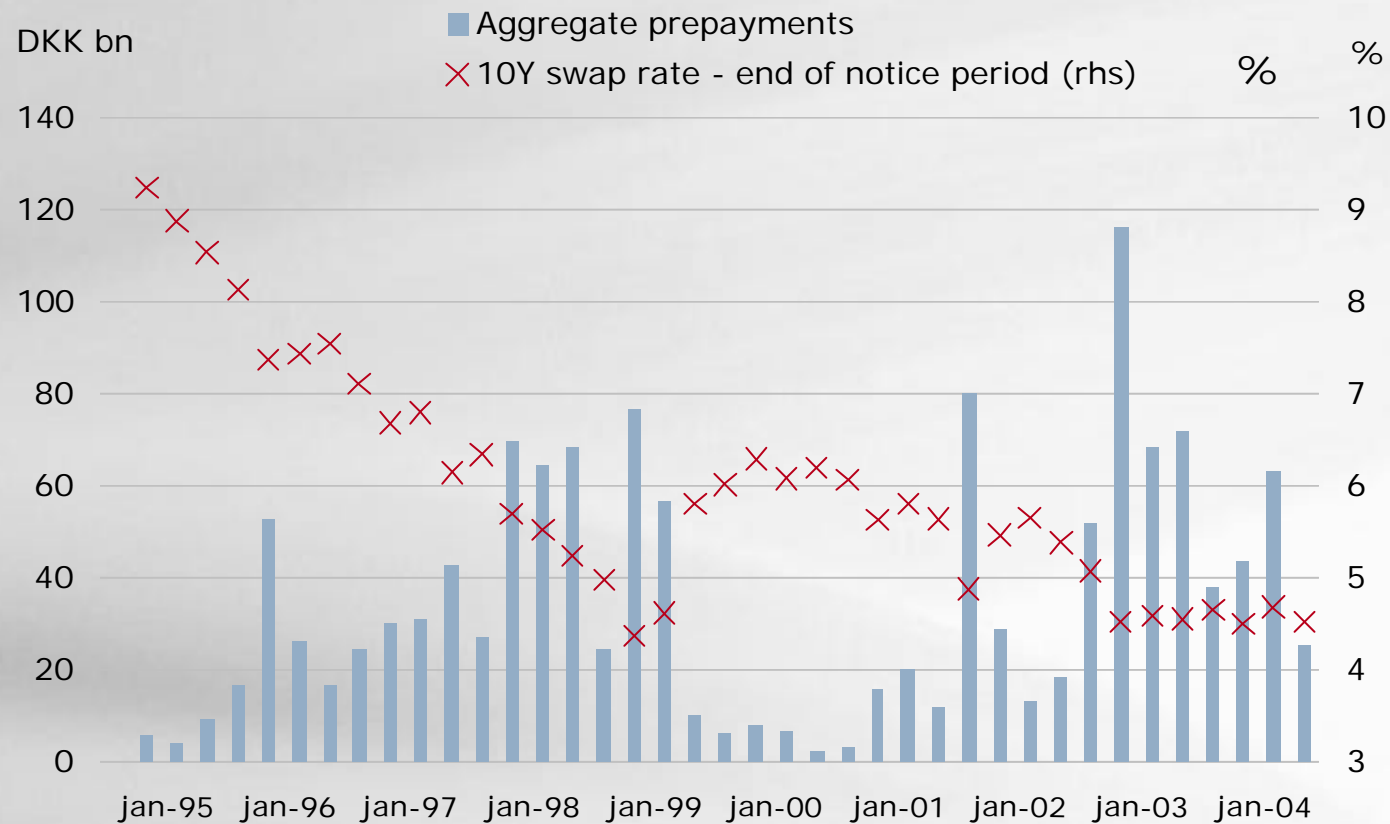
- Mortgage bonds are issued to match loan origination and loan remortgaging
- Extremely liquid market for Danish mortgage bonds
- Average gross issuance per day of €340m
- Rapid transition from callables to non-callable bullets reflecting shift in borrower demand

Mechanics of the Prepayment System

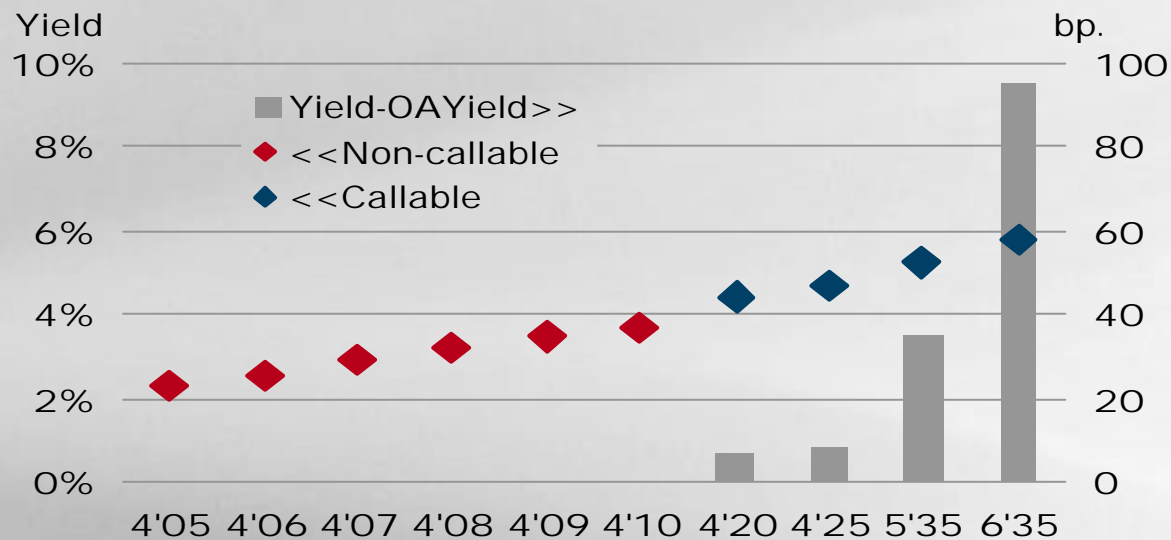


- One or two prepayment options:
 - Call option
 - Prepayment of the remaining debt at par
 - Only callable loans (Approx. 50% of RD's loan portfolio)
 - Delivery option
 - Prepayment by delivering the underlying bonds at market price
 - All types of loans (including callable loans)
- The mortgage bank is obliged to inform the borrower of the cheapest way to prepay
- Minor prepayment fees are added

Do Borrowers Understand the Call Option?



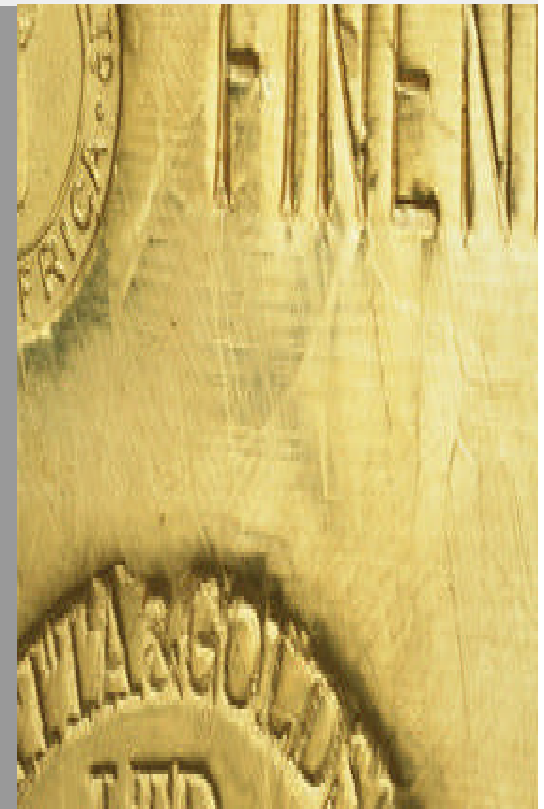
Pricing the Call Option



- Call option priced employing a borrower behaviour model
- Option based models tend to overestimate the value of the option
- Embedded call option premiums in the range from 10bp-100bp reflecting borrowers capital gain from exercising the option

The Future – To Strict or To Lax?

- The Balance Principle fully recognised amongst investors and rating agencies as efficient in mitigating risks
- Similar principle introduced in e.g. German and Irish covered bond legislation
- Transfer of risk to bondholders recognised as improving transparency i.e. investors know what they buy
- No immediate plans to adjust the Balance Principle
- Proposal for Consumer Credit Directive



Consumer Credit Directive

Article 15

Early Repayment

1. The consumer shall be entitled to discharge fully or partially his obligations under a credit agreement at any time. In such cases, he shall be entitled to an equitable reduction in the total cost of the credit
2. Any indemnity claimed by the creditor for early repayment shall be fair and objective. The amount or the calculation method shall be indicated in the credit agreement
No indemnity shall be claimed:
 - a) For credit agreements where the period used to fix the interest rate is less than one year;...



Conclusions

These regulations [The Balance Principle] are the most Detailed and restrictive Moody's has seen so far and therefore provide significant support for the Danish mortgage system.

Moody's, May 2002

...in the Danish case the institutional structure, the regulatory approach and monetary policy together have resulted in a market which, relative to the US market, has shown little or no stress in periods with significant refinancing

BIS, March 2004



More Information

Danish Mortgage Bonds - description of the Danish mortgage bond market:

[http://www.rd.dk/Link/Info13/\\$file/info_13.pdf](http://www.rd.dk/Link/Info13/$file/info_13.pdf)

Moody's report on the Danish mortgage market:

[http://www.rd.dk/Link/Moodysmay2002/\\$file/Moodys_maj2002.pdf](http://www.rd.dk/Link/Moodysmay2002/$file/Moodys_maj2002.pdf)

RD Bonds in Lehman Index:

[http://www.rd.dk/Link/RDBondNewsUK22032004/\\$file/RD_Bond_News_UK_22032004.pdf](http://www.rd.dk/Link/RDBondNewsUK22032004/$file/RD_Bond_News_UK_22032004.pdf)

BIS Report on The Danish Mortgage Market:

http://www.bis.org/publ/qtrpdf/r_qt0403h.pdf

RD's investor website:

<http://www.rd.dk/Investor>

RD on Bloomberg: RKRE <GO>

Prices: RDKRE Corp <GO>