

# DANMARKS NATIONALBANK

03. APRIL 2018

SECURITIES, FEBRUARY 2018

## Increased interest rate sensitivity in the mortgage market

By the end of February, an interest rate increase of 1 per cent would result in an estimated depreciation of kr. 60 billion in the market of fixed mortgage bonds with an embedded option. This was the highest interest rate sensitivity in over two years.

During the first two months, the interest rate sensitivity increased by kr. 14 billion. The increasing interest rates and the resulting depreciations in bond prices reduced the likelihood of the bonds' embedded options being exercised at par value. This increased the expected lifespan of the bonds, and as a result, their interest rate sensitivity increased.

The insurance and pension sector's portfolio of fixed mortgage bonds with embedded options had the largest interest rate sensitivity of kr. 25 billion. This is, among other things, because the sector's portfolio is larger than that of other sectors. The portfolios of investment funds and other Danish investors had interest rate sensitivities of kr. 9 and 7 billion, respectively. Foreign investors' interest rate sensitivity was kr. 18 billion.

Professional investors often use a measure of interest rate sensitivity when managing their portfolio. If the sensitivity becomes too high, some investors may be deterred from purchasing additional bonds with long maturities. This could potentially lead to further interest rate increase for bonds with long maturities. Investors can hedge their interest rate sensitivity by using financial instruments, and losses due to price depreciations are only realised if the bonds are sold.

Changes in the interest rate sensitivity depend on, among other things, the interest rate level<sup>1</sup>. The interest rate level was close to the average coupon-rate of fixed mortgage bonds at the beginning of the year. Interest rate hikes in January and February resulted in a reduction of the likelihood of the embedded option being exercised for a large number of bonds. The significant increases in the interest rate sensitivity in January and February should be considered in the light of this.

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**Interest rate sensitivity of fixed mortgage bonds with an embedded option**

Chart



Note: Interest rate sensitivity is measured as the option-adjusted duration for an interest rate increase of 1 per cent.  
Source: Scanrate and Danmarks Nationalbank.

<sup>1</sup> See box 1, Danmarks Nationalbank, Optimism in the banking sector provides breeding ground for increased risk-taking, *Financial Stability* – 1st half, no. 11, June 2017.