

**Subject:**

Q&A Valuation of mortgage loans in the adequacy test

*This document describes what aspects De Nederlandsche Bank (DNB) takes into account when assessing the valuation of mortgage loans and the process of valuation (in accordance with Section 17(3) of the Decree on Prudential Rules (Besluit prudentiële regels – Bpr).*

For the purposes of the adequacy test, insurers take the difference between the fair value and the balance sheet value of the assets that serve as cover for the technical provisions (in accordance with Section 121(3) of the *Bpr*). In assessing the fair value of mortgage loans, DNB uses the definition of the term market value in Section 4 of the Fair Value Decree (*Besluit actuele waarde – Baw*) (in accordance with Section 1 of that Decree), which corresponds to the definition of fair value in IFRS 13.9. Market value means the price for which an asset could be sold or a liability settled between knowledgeable and willing, independent parties in an arm's length transaction.

**Date**

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**Importance of correct valuation of mortgage loans**

The fair value of mortgage loans is relevant when implementing the adequacy test (Section 121(3) of the *Bpr*) and, for insurers in possession of an excess value ruling (Section 97(1) of the *Bpr*), when calculating the insurer's solvency. An incorrect calculation of the fair value may lead to incorrect outcomes for the adequacy test and possibly an inaccurate representation of the insurer's solvency.

**Market data**

If no observable prices for the mortgage loans on its balance sheet are available, the insurer is required, in accordance with IFRS 13.3, to make as much use as possible of relevant information from the market when determining the fair value of the mortgage loans. IFRS 13 stipulates that if the fair value cannot be determined on the basis of quoted prices in an active market (Level 1), as in the case of mortgage loans, it should be determined on the basis of observable market data of comparable market instruments (Level 2). The Level 3 valuation method should only be applied when insufficient observable and relevant market data are available to perform a full valuation based on observable inputs.

**Solvency II**

Article 75 of the Solvency II Directive (2009/138/EC) will apply to the valuation of mortgage loans from 1 January 2016. This article provides that assets (including mortgage loans) of insurance undertakings are valued at the amount for which they could be exchanged between knowledgeable and willing independent parties in an arm's length transaction.

Insurers use a valuation method to value their mortgage loans. This method comprises determining cash flows and deciding on an appropriate discount rate. At this, insurers take into account all relevant market data. An insurer applies the following principles when valuing its mortgage loans.

### **Valuation methods**

- 1. Regardless of the valuation method used, the insurer at least takes account of the following risk characteristics:**
  - a. type of mortgage (interest only mortgage, endowment mortgage or bank endowment mortgage, repayment mortgage);
  - b. remaining period until interest reset date;
  - c. credit quality (whether or not there is a National Mortgage Guarantee (NHG) and the loan-to-value ratio);
  - d. product-specific embedded options (e.g. capped rate in the case of variable interest);
  - e. prepayment/portability option.
- 2. The insurer determines the cash flows and a discount rate for each mortgage loan (or at least for each homogeneous valuation group) separately.** The valuation of aggregated cash flows using an average discount rate may differ from the sum of valuations based on homogeneous valuation groups with their own specific discount rates. Only if the discount rate is based on an arm's length transaction between independent parties in normal circumstances in respect of a portfolio having comparable characteristics (type, remaining period until interest rate reset, credit quality, product-specific embedded options and prepayment/portability option) it can be used for the discounting of the cash flows of the insurer's own portfolio of mortgage loans (or the comparable part of it). The insurer values non-performing loans separately.
- 3. The insurer ensures that the valuation of a separate mortgage loan is independent of the size of its loan portfolio.**

### **Cash flows**

- 4. The insurer uses a valuation method that ensures consistency between cash flows and discount rates.** If, for example, prepayments and/or expected credit losses are factored into the cash flows, these components are not taken into account in the discount curve (however, the risk premiums of prepayment and the credit loss do still belong in the discount rate, unless these risk premiums have been factored into the cash flows as well).
- 5. The insurer assumes that the mortgage loan will be fully repaid on the interest reset date.**

### **Discount rate**

- 6. Wherever possible, the insurer bases the discount rate on as much market data as possible.** If there is an active secondary market on which typical mortgage loans (or loan portfolios) are frequently traded, the insurer will use the transaction prices on this market in determining the discount rate. If no such market for Dutch mortgage loans exists, the insurer will make maximum use of other relevant observable market data (observable inputs). These market data are, for example, available in the prices of RMBS transactions, mortgage rates for consumers and the valuation and costs at which exposure to mortgage loans can be obtained through an investment fund.

7. **In determining the discount rate, the insurer uses expert judgement if and only if market data on a particular aspect are not available.** Examples of expert judgements are the downward effect on prices of cross-selling possibilities and/or the upward effect of the quotation/pipeline risk on the discount rate in the case of consumer mortgage rates. These aspects no longer apply when the mortgage loan is on the insurer's balance sheet. Insurers provide an explanation if the valuation differs from the observable market data.
8. **An insurer does not use its own undertaking specific data unless these data have a bearing on the price which a market participant is prepared to pay for the insurer's mortgage loans.** In making the valuation, the insurer does not take into account in any event its own financing costs, capital costs and/or mortgage interest rates. It does, however, take into account the risk characteristics of its own mortgage loan portfolio.
9. **The insurer calibrates the outcome of a model for the discount rate to relevant market data (and changes in that data).** If the discount rate is split into different components, the insurer guarantees that the sum of the components will be equal to the total discount rate.
10. **If an insurer deducts part of the profit margin from the discount rate it shows by means of transactions that market participants do indeed leave this part of the profit margin to the seller.**

#### **Market data to be taken into account**

11. **The insurer takes into account relevant consumer rates if there is no active secondary market for comparable mortgage loans or loan portfolios.** In such a situation the insurer puts itself in the place of a market participant acting in its own financial interests. In determining how much it is prepared to pay for the insurer's mortgage loans such a market participant will consider alternatives in order to achieve the same or comparable exposure to mortgage loans. One of the alternatives is to sell new comparable mortgage loans itself at the consumer rates applying at that time. If consumer mortgage rates, after correction for distribution costs and cross-selling possibilities, are more attractive than the discount rate at which the mortgage loans can be acquired from the insurer, the market participant will decide to issue mortgage loans itself. As no transaction would be concluded in such a case between the insurer and the market participant at the insurer's discount rate, this rate would not produce the correct market value as this would not be a price at which the insurer could actually sell the mortgage loans.
12. **The insurer assesses to what extent consumer mortgage rates are representative of its own mortgage loans.** Differences in risk characteristics may possibly imply a difference in price between new mortgage loans and the insurer's mortgage loans. The insurer takes into account in any event the following aspects when assessing to what extent consumer mortgage rates are representative of its own mortgage rates.
  - a. *Type of mortgage:* Rates in the consumer market for repayment mortgages are not necessarily representative of insurers' interest-only and endowment mortgages. The insurer examines how such a difference influences the valuation of its mortgage loans.
  - b. *Period until interest rate reset*
  - c. *Credit quality:* The insurer examines how differences in the current and projected development of the credit quality (e.g. loan-to-value) influence the value of its mortgage loans.

- d. *Mortgage loan conditions:* If mortgage loans that have rates among the best in the consumer market impose conditions disadvantageous to the mortgagor (e.g. no portability option when the mortgagor moves), the insurer assesses whether these rates are representative of its own mortgage loans (unless its own loans also do not have a portability option).
- e. *Moneyiness of prepayment/portability option:* If the insurer has mortgage loans with a different coupon from the current mortgage interest rates, this implies that the prepayment option has a different moneyiness; the current rates are indicative of the price at which the prepayment option is at the money, while the prepayment option of the insurer's mortgage loan is either in the money or out of the money. The insurer examines how the differences in moneyiness between its own mortgage loans and the newly issued mortgage loans play a role in the valuation of its own mortgage loans.
- f. *Commercial mark-ups and/or mark-downs* This concerns, among other things, the mark-up on the consumer market rates for mortgage quotation risk, i.e. the risk that the interest rate may rise between the quotation date and completion date, the mark-down for discounts on account of cross-selling possibilities when a new mortgage loan is taken out, and the mark-up for the distribution costs (marketing, intermediary etc.) in so far as these costs are not covered by the advice or handling charges which the consumer pays upon completion. The insurer corrects the discount rate to allow for the fact that these aspects no longer play a role once the mortgage loan has been completed and is included on the insurer's balance sheet. The insurer takes into account that mortgage interest rates in the consumer market are quoted rates and not actual transaction prices. If few or any mortgage loans are taken out at the best rates, the insurer decides whether these quotes are representative of its own mortgage loans. The insurer checks that there are no signs that a specific rate cannot be used as representative market data because there is little if any volume of transactions.

**13. The insurer takes into account information from new RMBSs in so far as they are sufficiently representative of its mortgage loan portfolio.**

**14. The insurer weighs the following aspects when using information from RMBSs and determining their relevance:**

- a. Standard RMBSs often have an effective maturity of five years; by contrast, the insurer has mortgage loans for the full maturity on its balance sheet.
- b. Moreover, often only senior tranches that have less credit risk are issued in the case of RMBSs, whereas the insurer runs the full credit risk on the mortgage loans.
- c. RMBSs involve a written option entitling the issuing party to waive repurchase, but an insurer's mortgage loan portfolio does not have this option.
- d. RMBS structures incorporate a complex swap to convert fixed cash flows into variable cash flows; an insurer's mortgage loan portfolio does not include such a swap. The value of this swap is not necessarily zero.

- e. The mortgage loans in the RMBS are not necessarily representative of the insurer's mortgage loans. If the risk characteristics of the mortgage loans in the RMBS differ from those of the insurer's mortgage loans, the transaction price of the RMBS is less representative of the value of the insurer's mortgage loans.

**15. The insurer compares the value of the mortgage loan portfolio with representative (RMBS) transactions.** In doing so, the insurer notes the remaining differences between the valuation of its own portfolio and the relevant transaction and underpins the impact of the differences by providing as much market information as possible. The insurer takes into account that the longer ago the transactions took place the less relevance they have for the present valuation.

**16. In applying spreads on the basis of RMBS transactions, the insurer takes account of the fact that such spreads do not contain administrative costs.** This is because these administrative costs are deducted before the spreads are paid to the holders of the RMBS notes.