

This figure applies the methodology like shown in "Fair Value DCF".

IFRS related requirements are linked to the following headlines:

Fair value measurement became an important topic during the global financial crisis in 2008. Some people argued that fair value could lead to a deterioration in banks' financial reports. On the other hand, as it is the purpose of IFRS, fair value enables investors to have a clearer picture of an entity's financial situation.

Therefore fair value principles are at the core of IFRS:

- Numerous types of financial instruments are to be measured at fair value.
- The fair values of all financial instruments have to be shown in reporting/notes.

The key challenges in practice include

- Development of the necessary IT infrastructure across all classes of instruments.
- Mark-to-model valuation of classical illiquid instruments (e.g. retail loans).

The solution computes fair value for all financial instruments and presents the figures either directly in the financial statements or in the notes (e.g. for loans).

Financial accounting requires certain granular measures as each valuation component shows up on separate accounts. The sum of all posted valuation components for one single deal build the measure called for by IFRS. Hence, the valuation is fully compliant with the requirements in IFRS.

All financial instruments are initially measured at fair value plus or minus transaction costs, in the case of a financial asset or financial liability not at fair value through profit or loss. IFRS 9 requires that all financial assets are subsequently measured at amortised cost, FVOCI or FVPL based on the business model for managing financial assets and their contractual cash flow characteristics (SPPI-Test).

For the measurement of fair value in view of IFRS, the following general determination hierarchy originating from IAS 39 48A states:

"The best evidence of fair value is quoted prices in an active market. If the market for a financial instrument is not active, an entity establishes fair value by using a valuation technique. The objective of using a valuation technique is to establish what the transaction price would have been on the measurement date in an arm's length exchange motivated by normal business considerations. Valuation techniques include using recent arm's length market transactions between knowledgeable, willing parties, if available, reference to the current fair value of another instrument that is substantially the same, discounted cash flow analysis and option pricing models. If there is a valuation technique commonly used by market participants to price the instrument and that technique has been demonstrated to provide reliable estimates of prices obtained in actual market transactions, the entity uses that technique. The chosen valuation technique makes maximum use of market inputs and relies as little as possible on entity-specific inputs. It incorporates all factors that market participants would consider in setting a price and is consistent with accepted economic methodologies for pricing financial instruments."

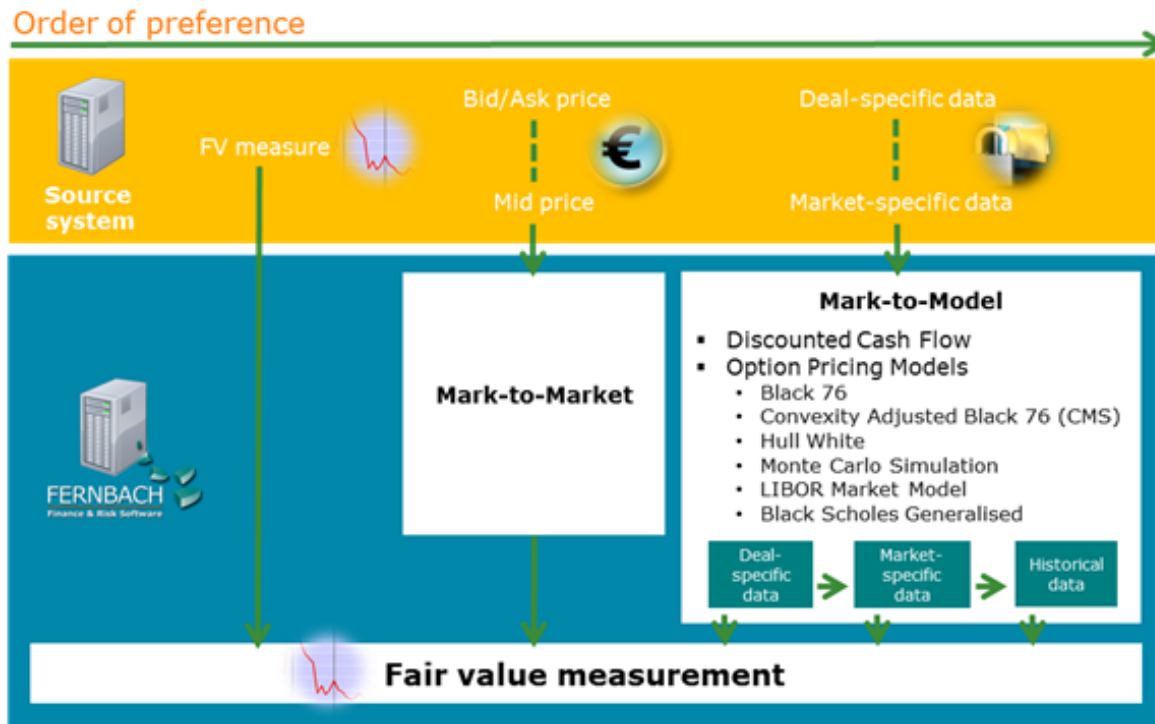
Fair Value is calculated taking into account the latest market movements and credit-worthiness.

Based on the idea that only changes in fair value from the secured risk in a hedging relationship have to be compared between hedging instruments and hedged items, both the concepts of [Fair Value DCF](#) and [Fair Value DCF with constant credit spread](#) are considered in the solution.

In order to be compliant with IFRS and take into consideration the IT circumstances of a bank, the solution uses the following ranking for fair value:

1. Use of **fair value measures that already exist** in external systems, provided these figures are IFRS-compliant.
2. **Mark-to-market approach:** Use of market prices as an input for the determination of fair value.
3. **Mark-to-model approach:** If both points 1 and 2 are not available, the solution uses inputs from the market in the form of parameters.

Using this hierarchy, it is ensured that a valuation result is only calculated once and then used for all analysis systems according to the principle of "single calculation".



1. External fair value measurement:

If fair value measures have already been calculated outside the solution, these figures could be delivered to the solution as an input, provided these figures are IFRS-compliant. Alternatively, it is possible to manually capture the valuation results for a financial instrument in web-based dialogues. In order to fulfil requirements for accounting and reporting purposes, the solution expects external systems to deliver fair value ratios at a certain level. For example, the solution expects the decomposition of fair value changes in view of changes in market rates, changes in credit spread, amortisation and accrued interest-related parts. In addition, if a bank designates a hedge relationship between deals, the solution would expect ratios such as Hedge EIR to be delivered in order to improve the quality of effectiveness testing. Please note that for the delivery of external fair value measures, the solution will not calculate these fair value figures again.

If no external FV measure is provided, the solution will calculate fair value figures either through a mark-to-market or a mark-to-model approach.

2. Mark-to-market approach:

Within the mark-to-market approach, the solution uses quoted prices in an active market as a first priority. The solution expects that the bid price will be delivered for assets held or liabilities to be issued and that the asking price (sometimes referred to as "current offer price") will be delivered for an asset to be acquired or liabilities held. If no current market price is available, an entity can deliver a historical price to the solution, provided no significant changes in economic circumstances have occurred. The historical price should be adjusted in case conditions have changed. The solution has experiences in connecting to different market information providers and in using appropriate market prices for fair valuing.

3. Mark-to-model approach:

If there is no active market or if markets have become inactive, the market price can not be considered as the fair value. In this case, an entity can measure fair value by using a valuation technique. A valuation technique would be expected to arrive at a realistic estimate of fair value if

- it reasonably reflects how the market could be expected to price the instrument and
- the input to the valuation technique reasonably represents market expectations and measures of risk-return factors inherent in the financial instrument.

The solution provides advanced mark-to-model valuation techniques, including but not limited to

- discounted cash flow method,
- option pricing formulas and
- Monte Carlo simulation.

These models are commonly used by market participants to price the related financial instruments. For all these models, the solution makes maximum use of market inputs and relies less on entity-specific inputs.