Advice on how to account for derivatives

Contents

1 The Afi methodology

Recognition and measurement of derivative instruments arranged for hedging purposes. Regulatory framework and implications

Applicable regulatory framework

- **Prevailing:**
  - IAS 39: "Financial Instruments: Recognition and Measurement"
  - IFRS 13: "Fair value measurement"
- **In process of implementation:**
  - IFRS 9 "Financial Instruments". IFRS 9 will replace IAS 39. It is scheduled for mandatory application for annual periods beginning on or after January 2018
  - Significant changes in how hedges are tested for effectiveness
  - Significant changes in treatment of derivatives in the context of debt restructuring

Implications for reporters

- **Measuring derivative instruments:**
  - It is mandatory to measure derivative instruments arranged to hedge financial risks at fair value
- **Valuation adjustments for own credit risk:**
  - It is mandatory to consider own credit risk and that of any non-financial counterparties when determining a derivative instrument's fair value
- **Testing for effectiveness:**
  - This test enables financial reporters to determine whether a derivative arranged is an effective or ineffective hedge which in turn determines under which headings fair value changes must be recognised

Work performed by Afi

1. Fair value of derivative financial instruments

Under IAS 39 (until definitive implementation of IFRS 9) & IFRS 13

2. Testing derivatives for effectiveness

Under IAS 39 (until definitive implementation of IFRS 9)

Measuring derivative instruments for accounting purposes

The derivative instrument valuation process

- The upload into the AfiVal database of the intrinsic characteristics of the universe of derivatives as well as information on the reporting entity, each derivative's counterparty and the netting set.
- The generation of scenarios for the underlying market variables for the universe of derivatives in each netting set using Monte Carlo methodology calibrated for market data and using historical correlations.
- Estimation of credit spreads and loss given default (LGD) for the counterparty banks and for the reporting company (implicit in market data or in-house estimates in the event there is no liquid market for the instruments for the purpose of calculating these values implicitly).
- The generation of times to default for the reporting company and counterparty for each of the scenarios defined in the Monte Carlo modelling process for the key market variables.
- The aggregation of the results and the calculation of risk-free valuations and value at risk to obtain the amount of credit valuation adjustments for each netting set and, lastly, the allocation of this aggregate amount to each individual derivative.

Measuring derivative instruments for accounting purposes

Introduction of valuation adjustments for credit risk

- Derivative instruments must be valued at fair value (IAS 39), factoring in own and counterparty credit risk (IFRS 13).
- In the case of a derivative instrument which may imply future cash inflows or outflows (e.g. swaps and forwards), the incorporation of a simple credit spread for the counterparty into the rate used to discount the future cash inflows or an own credit spread to discount cash outflows is not correct.
- Counterparty credit risk is only relevant when the net amount of future cash outflows and inflows is positive for the reporting entity, while own credit risk is only of relevance when the net amount of cash outflows and inflows yields a negative fair value (for the reporting entity).
- Nor is it correct to use these spreads as a function of the estimated net amount of future cash flows.
- Simulation techniques are required to factor in the impact of both classes of credit risk.
- In the case of derivatives with a master agreement that contemplates position netting, the above calculation has to be performed in an integrated manner for all the derivatives included in a given netting set.
- Positions are measured jointly at fair value by netting set using the generally accepted methodologies for the various classes of instrument, calculating the adjustment for counterparty credit risk (credit valuation adjustment, or CVA) along with the adjustment for own risk (debit valuation adjustment, or DVA).

Methodology for testing for effectiveness

General approach

- Testing for hedge effectiveness uses the approaches generally accepted by the auditors, methods which, moreover, simplify the accounting treatment and minimise test non-performance, at all times framed by reporter requirements under IAS 39 and assessed on both a retrospective and prospective basis.
- The incoming IFRS 9 “Financial Instruments”, which will take full effect from January 2018, envisages giving greater weight to qualitative factors when testing for effectiveness, albeit continuing to prescribe the performance of quantitative testing to ascertain hedge effectiveness

The dollar-offset method

- This method consists of comparing the change in the fair value of the hedging instrument with the change in the fair value of the hedged item's cash flows. If the resulting correlation ranges between 80% and 125%, the hedge is deemed highly effective.
- Depending on the company's risk management policy, this ratio can be built on a cumulative basis or from one period to the next.

Methodology for testing for effectiveness

The hypothetical derivative approach

- The hypothetical derivative approach is described as 'method B' in paragraph F5.5. of the IAS 39 Implementation Guidance.
- The hedged risk is modelled as a derivative instrument constructed on the assumption that its characteristics are a perfect match for those of the hedged item.
- The change in the fair value of the hypothetical derivative should be equal to the change in the present value of the expected future cash flows of the hedged item from the inception of the hedge referred to in paragraph 96 of IAS 39.

Prospective testing

- Prospective tests take the form of sensitivity analysis in which quoted market interest rates inferred from the forward rate curves (implicit rates) are used to simulate parallel movements in the market curve, both upwards and downwards.
- The hedged item and hedging instrument are then reassessed and the dollar-offset ratio between both variations is recalculated to test for continued effectiveness under the new scenario.

Results

- Measurement of the ineffectiveness of a hedge is based on the comparison of the changes in the fair value of the derivative actually arranged as hedge and the changes in the fair value of the hypothetical derivative.
- If the actual results of a hedging relationship fall outside of the 80%-125% window, the hedge is considered ineffective and the proposal will accordingly be to recognise any fair value adjustments against profit and loss for as long as it remains outstanding.
- In addition, hedge ineffectiveness within the 80%-125% window must be also recognised by the company, in accordance with prevailing accounting standards, in profit and loss.

Key incoming changes under IFRS 9

Performance of effectiveness tests

- The new regulations do not contemplate any changes in the classes of hedges permitted.
- However, the incoming IFRS 9 envisages giving greater weight to qualitative factors when testing for effectiveness, albeit continuing to prescribe the performance of quantitative testing to ascertain hedge effectiveness

Debt restructuring processes

- At present, IAS 39 prescribes controversial treatment of the amounts recognised in equity in connection with hedging instruments which have been cancelled as a result of debt restructuring processes.
- Specifically, IAS 39 stipulates that the amounts deferred in equity should be gradually recycled to profit and loss as the underlying debt affects the company's profit or loss.
- This treatment, which is mandatory under IAS 39, can distort the fair view of the company since although the derivative instrument which gave rise to the valuation adjustments recognised in equity has been derecognised, it continues to be reflected in the reporter's financial statements going forward.
- IFRS 9 corrects this approach by allowing immediate recognition in profit or loss or the amounts deferred in equity at the time the derivatives are settled. Note that these impacts could potentially alter the company's ability to pay dividends in the year in which this reclassification takes place.

2 Scope of advisory service and deliverables

Main work performed by Afi

1. Measuring the reporting entity's derivatives portfolio factoring in credit risk adjustments (for both initial recognition and subsequent measurement purposes)
2. Assistance negotiating the terms under which derivative instruments are arranged
3. Performance of effectiveness tests, hedge accounting support and assistance with formal hedge documentation
4. Help preparing the information needed for the annual financial statements including assistance drafting the derivative-related disclosure sections and the performance of sensitivity analysis by stressing the risk being hedged
5. Dealings with auditors: Afi experts on hand to explain the methodologies used and the results obtained and to resolve any issues which may arise in the course of audit work.

Measuring derivatives

Valuing the derivative portfolio

- **The valuation exercise is undertaken with the frequency requested by the company**
- **The valuation reports include the following points:**
  - The calculation methodology, inputs used and the credit valuation adjustment results for the derivative portfolio
  - Valuation of the instruments without including credit risk adjustments
  - The credit risk calculations for each instrument
  - A summary in a user-friendly Excel format so that the company can readily use the results
- Readiness on the part of Afi to **substantiate and defend the valuations before the auditor**

Effectiveness testing

Effectiveness tests: formal documentation

- **The effectiveness tests performed by Afi materialise in individual hedge files which contain the following:**
  1. Risk management objective and strategy for undertaking the hedge
  2. The specific financial instruments allocated to the hedging relationship
  3. The positions hedged
  4. The hedging relationship timeframe
  5. Hedge effectiveness testing frequency
  6. The method used to test the hedge for effectiveness, the amount effectively hedged and, by extension, the percentage used to calculate hedge ineffectiveness
  7. The most updated prospective and retroactive hedge tests

- **Afi also drafts the disclosure notes accompanying the reporting party's annual financial statements in respect of hedge accounting:**
  - Methodology applied
  - Derivative instrument sensitivity analysis

3 Contact details

Afi partners in charge of this project

Pablo Mañueco. Afi partner. Corporate Finance
pmanueco@afi.es
91 520 0102

Pablo Guijarro. Afi partner. Corporate Finance
pguijarro@afi.es
91 520 0102

Afi