

A Hedgebook Audit eBook

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# CONFIDENCE AMIDST COMPLEXITY

A checklist for meeting year-end regulatory reporting requirements for financial instruments.



**Hedgebook Audit**

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# INTRODUCTION

## A YEAR-END FINANCIAL INSTRUMENT CHECK LIST

Financial year-end is an extremely busy time for companies, and their auditors, due to reporting requirements.

For many importers, exporters and borrowers interest rate swaps, FX forwards and options are common financial instruments used for hedging financial market risks. The valuation, or mark-to-market, of these derivatives need to be calculated and reported. For auditors, validating the client provided valuations is an important (and required) aspect of the audit process. There are credit and debit adjustments and hedge accounting considerations, too. Complex mathematical models and treasury expertise is required to check these valuations with confidence. Hedgebook makes the financial reporting of these instruments as easy and efficient as possible, saving time and adding confidence to the reporting process.

This eBook is a guide to the accounting standards that are relevant for the foreign exchange and interest rate financial instruments Hedgebook captures. There are five areas covered:

1. Fair value (IFRS 13, FRS 102)
2. CVA/DVA (IFRS 13)
3. Sensitivity analysis (IFRS 7)
4. Hedge effectiveness testing (IAS 39 / IFRS 9)
5. Current/non-current assets/liabilities (IFRS 7)



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## 1. Fair value (IFRS 13, FRS 102)

IFRS 13 states that valuations need to be an independent “exit price” for the transaction. In the UK, FRS 102 requires every organization with financial instruments to provide a valuation. It is hard to argue that a valuation from one of the counterparties to the transaction (i.e. the bank), constitutes an independent valuation, however, there are still many companies that rely on their bank or broker for this information. Long gone are the days when auditors will accept this approach as there is clearly a lack of independence of a counterparty provided valuation. Historically there have been few economic alternatives to bank or broker valuations; that is no longer a valid argument. Hedgebook provides independent valuations of foreign exchange, interest rate and commodity derivatives using its proprietary models. Auditors can access Hedgebook from anywhere to get a fast, accurate valuation.

## 2. CVA/DVA (IFRS 13)

In the post Global Financial Crisis environment, greater focus has been given to the impact of counterparty credit risk on financial instrument valuations. IFRS 13 has been effective since 1 January 2013 and requires the valuation of counterparty credit risk to be quantified and separated from the risk-free valuation of the financial instrument and reported within the financial statements. The objectives of IFRS 13 are to provide:

- greater clarity on the definition of fair value
- the framework for measuring fair value
- the disclosures required about fair value measurements.

Importantly, from a CVA/DVA perspective, IFRS 13 requires the fair value of a liability/asset to consider the effect of credit risk, including an entity’s own credit risk. The notion of counterparty credit risk is

defined by the risk that a party to a financial contract will fail to fulfil their side of the contractual agreement.

There are numerous methodologies when considering the calculation of CVA/DVA with the appropriate methodology determined by the size and sophistication of the entity's holding of derivatives. For most SMEs (Hedgebook's demographic) a less complex methodology to calculate CVA/DVA is sufficient as the hedge instruments will largely consist of vanilla products such as interest rate swaps and foreign exchange forwards/options which are less credit intensive than more complex products/structures. Hedgebook applies the Current Exposure Method to its CVA/DVA calculations.

Both Credit Value Adjustments (CVA) and Debit Value Adjustments (DVA) need to be calculated dependent on whether the financial instrument is an asset or a liability:

- CVA is the credit adjustment for a derivative that is "in-the-money" (an asset) and reflects the credit risk of the counterparty
- DVA is the credit adjustment for a derivative that is "out-of-the-money" (a liability) and reflects the own credit risk of the reporting entity.

When considering credit risk there are several factors that can influence the valuation including:

- time: the longer to the maturity date the greater the risk of default
- the instrument: a forward exchange contract or a vanilla interest rate swap will carry less credit risk than a cross currency swap due to the exchange of principal at maturity
- collateral: if collateral is posted over the life of a financial instrument then counterparty credit risk is reduced
- netting: if counterparty credit risk can be netted through a netting arrangement with the counterparty i.e. out-of-the money valuations are netted with in-the-money valuations, overall exposure is reduced.

Hedgebook uses the current exposure method which we feel is appropriate for vanilla instruments such as FX forwards, FX options and interest rate swaps for an entity using these instruments for hedging purposes, rather than trading.

Hedgebook's CVA/DVA module is broken into the following steps:

- Creating new credit curves (both for the counterparty to the transaction and the company's own credit).
- Managing previously created credit curves
- Assigning credit curves to instruments
- Running the CVA/DVA report

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### Creating credit curves

The user needs to include at least one data point for Hedgebook to create a credit curve. Hedgebook linearly interpolates/extrapolates as appropriate. The more data points that can be included the better and sources such as treasury advisors, banks, corporate bonds and bank funding costs are all useful sources for determining credit spreads. The user will need to add at least two curves – one to reflect the counterparty to the transaction and one to represent the company’s own credit standing. Hedgebook adds the credit curve to the risk-free curve so that future cashflows can be discounted to present value and compared against the risk-free valuation.

Once the credit curves have been added they are saved and can be amended/deleted as required.

The final step before running the report is applying the counterparty credit curves to individual deals as appropriate. Once the user is satisfied the deals have been correctly assigned with a credit curve, the CVA report can be run. The output of the report is split by instrument type and includes the risk-free valuation as well as the fair value and CVA/DVA amount.

## 3. Sensitivity analysis (IFRS 7)

As part of the notes to the accounts under IFRS 7 there is a requirement to include a sensitivity analysis for financial instruments. This is a “what if” scenario that requires the re-calculation of fair value if the underlying market data is shifted. Often a +/-10% movement in the spot rate is used for FX instruments and a +/-100bp parallel shift in the yield curve for interest rate instruments. There should be some sense check applied to the probability of the movement occurring when considering what is reported in the accounts notes.

The Hedgebook application allows a user to perform sensitivity analyses on foreign exchange and interest rate positions and in doing so helps achieve compliance with IFRS 7 as simply and efficiently as possible. The valuations can be included directly into the Notes to the Financial Statements.

### Interest Rate Swaps

The Hedgebook app produces the fair value of each financial instrument based on the prevailing zero curve and the fair values following pre-defined shifts in the yield curve.

The zero curve is flexed by a parallel shift of +/-25, +/-50, +/-100 and +/-200 basis points. The output of the report is the fair value of each transaction under the yield curves. The analysis provides information about the extent to which the entity is exposed to risk. The subsequent Hedgebook report can be printed, copied into a document or downloaded to excel for inclusion in the Notes to the Financial Statements.

### Foreign exchange

Hedgebook's sensitivity analysis for FX instruments follows a similar approach to interest rates. The FX curve (spot plus forwards) is flexed by a +/-1%, +/-5%, +/-10% and +/-20% to derive the hypothetical valuations. The subsequent Hedgebook report can be printed, copied into a document or downloaded to excel for inclusion in the Notes to the Financial Statements.

## 4. Hedge effectiveness testing (IAS 39 / IFRS 9)

Hedge accounting allows companies to reduce the impact of movements in the mark-to-market valuations on the Profit and Loss account. It can be a complex area, although in most cases doesn't need to be. Having access to software that values financial instruments helps with simplifying the process. For auditors, having access to financial instrument valuations means it doesn't need to be difficult to check the hedge effectiveness testing provided by the client.

FX options are an example of some of the complications with hedge accounting.

FX options make up an element of many companies FX risk management strategies. FX options lock in the certainty of worst case exchange rate outcomes while allowing participation in favourable rate movements. FX options are used to create a vast array of alternative hedging products such as collars, participating forwards, leveraged products. For example, a collar structure involves writing, or selling, an FX option at the same time as buying an FX option at different strike rates to reduce premium, often to zero.

After transacting the FX option, the challenge comes for those that are hedge accounting and the requirement to split the valuation of the FX option into time value and intrinsic value. Hedge accounting allows the

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intrinsic value of an FX option to be designated in a hedge relationship and can therefore remain on the balance sheet. The time value of the FX option is recognised through profit or loss.

The intrinsic value of an FX option is the difference between the prevailing market forward rate for the expiry of the FX option versus the strike price.

The time value of an FX option is the difference between the overall FX option valuation and the intrinsic value. Time value is a function of the time left to the expiry of the FX option. The longer the time to expiry, the higher the time value as there is a greater probability of the FX option being exercised. A purchased FX option begins life with positive time value that decays over time to zero. A sold FX option begins life with negative time value and tends to zero by expiry date.

When hedge accounting for FX options the splitting of intrinsic value (balance sheet) and time value (P&L) does not have to be a time-consuming exercise. At Hedgebook we like to make life easy so as part of the FX Options Held Report the valuations are automatically split by intrinsic value and time value.

## **5. Reporting current and non-current cashflows for interest rate swaps (IFRS 7)**

As part of disclosures around financial instruments, IFRS 7 requires interest rate swaps to be categorised into current or non-current assets or liabilities. Calculating the current/non-current split is not straightforward as interest rate swaps are broken down into reset periods (usually quarterly or monthly). Given the shape of the yield curve at the reporting date, an interest rate swap can have both positive and negative cashflows through its life.

Hedgebook calculates which of the cashflows through the life of the swap are an asset (receiving interest), which are a liability (paying interest) and whether the cashflow falls within one year of the Valuation Date or beyond one year. The cashflows related to the floating leg of the swap are implied by the prevailing yield curve. The Current/Non-Current Report aggregates the cashflows for all swaps within a portfolio.

## Summary

Many organisations try to complete the regulatory reporting of financial instruments using spreadsheets and bank valuations which is not only poor practice (valuations should be independent) but also error prone and time consuming. There are low cost systems available that can streamline, simplify and improve the ever-increasing burden of year-end reporting requirements for the reporting entity.

Auditors are required to independently verify the valuations of financial instruments provided by their clients. Having the technology to do this is crucial. Gone are the days when it was acceptable to rely on the clients' valuations without checking their validity. More and more, accounting watchdogs around the world are focusing on the rigour around this verification process. Technology now means that there are low cost solutions which are available to cover off this, often little understood aspect of the audit process.

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## ABOUT HEDGEBOOK

Hedgebook was formed in 2011 with a mission to provide a cost effective alternative to spreadsheets when managing treasury risk. Easy to use, intuitive and affordable is our ethos in an increasingly volatile financial world. Hedgebook has been developed by experienced treasury practitioners who understand the complexities of the financial markets but who can present it in an easily understood format.

### TRY HEDGEBOOK AUDIT

“Hedgebook Audit has been an excellent addition to our Audit Team’s toolset. It has helped us add further rigour to our processes and deliver peace of mind to our clients.”

**Mark Hucklesby**

Partner, Grant Thornton

Find out more about our Hedgebook Audit product, and [schedule a demo](#).



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