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# Credit Risk Accounting Under IFRS 13 CVA, DVA and FVA May 2013

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## Introduction

Determining and reporting the fair value of derivative instruments remains one of the most important issues that financial institutions are currently facing. This importance has been amplified in 2013, particularly with respect to the incorporation of counterparty risk, given the implementation of IFRS 13 (“**Fair Value Measurement**”). One of the key aspects of reporting under IFRS 13 is the Credit Value Adjustment (“**CVA**”) and Debt Value Adjustment (“**DVA**”) relating to the counterparty risk of Over-The-Counter (“**OTC**”) derivative contracts.

While evolving accounting standards have attempted to provide clarity with respect to fair value reporting requirements, these standards are still generally not sufficiently prescriptive to completely remove ambiguity and uncertainty. Financial institutions are thus typically interpreting the standards in terms of compliance with requirements, with reference to generally accepted current best market practice. CVA and DVA calculations are complex in nature and therefore their treatment under IFRS 13 will be anything but straightforward.

The guidance on the measurement of fair value accounting for financial instruments that was contained in IAS 39 (“*Financial Instruments: Recognition and Measurement*”) and FAS 157 (“*Financial Accounting Standard 157: Fair Value Measurement*”) was superseded by IFRS 13 for annual periods beginning on or after 1 January 2013. IFRS 13 provides a single framework for the guidance around fair value measurement for financial instruments. Certain references here are made to IAS39 and FAS 157 for comparison purposes.

## Concepts and IFRS Definitions

The key concepts and definitions around fair value accounting are as follows:

- IFRS 13 (paragraph 9): “The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date”, also referred to as an “exit price”
- IFRS 13 (paragraph 11): “When measuring fair value an entity shall take into account the characteristics of the asset or liability if market participants would take those characteristics into account ... at the measurement date. Such characteristics include ...
  - (a) the condition and location of the asset; and
  - (b) restrictions, if any, on the sale or use of the asset”
- IFRS 13 (paragraph 16): “Assumes that the transaction ... takes place either:
  - (a) in the principal market; or
  - (b) in the most advantageous market for the asset or liability”
- **Market participants**<sup>1</sup>: “Buyers and sellers in the principal (or most advantageous) market for the asset or liability that” are “independent”, “knowledgeable”, and are “not forced”
- **Principal market**<sup>1</sup>: “The market with the greatest volume and level of activity for the asset or liability”
- **Most advantageous market**<sup>1</sup>: “The market that maximises the amount that would be received to sell the asset or minimises the amount that would be paid to transfer the liability”

In relation to counterparty risk specifically, the following IFRS 13 aspects are important:

- CVA
  - IFRS 13 (paragraph 56): “The entity shall include the effect of the entity’s net exposure to the credit risk of that counterparty or the counterparty’s net exposure to the credit risk of the entity in the fair value measurement when market participants would take into account any existing arrangements that mitigate credit risk exposure in the event of default”
  - FAS 157: “A fair value measurement should include a risk premium reflecting the amount market participants would demand because of the risk (uncertainty) in the cashflows”

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<sup>1</sup> IFRS13 (appendix)

- DVA
  - IFRS 13 (paragraph 42): “The fair value of a liability reflects the effect of non-performance risk. Non-performance risk includes, but may not be limited to, an entity’s own credit risk”
  - FAS 157: “The reporting entity shall consider the effect of its credit risk (credit standing) on the fair value of the liability in all periods in which the liability is measured at fair value”

The above clearly seems to require both CVA and DVA adjustments to be made to the value of derivatives and that such adjustment should be reflected in the likely exit price. The concept of exit price in turn implies the use of market implied (risk-neutral) parameters. If such parameters cannot be easily obtained (for example, the credit spread of a counterparty), they must presumably be estimated via another reasonable method.

Another aspect that is unclear is the universe of OTC derivative transactions for which CVA and DVA must be accounted for. Collateralised transactions and those transactions with counterparties of very high credit quality are often ignored from a counterparty risk point of view due to the fact that the CVA and DVA, if quantified, would be small. It is important to emphasise that such transactions do not escape counterparty risk capital charges.

It is also relevant to note that the new regulations under Basel III do not allow the benefit arising from accounting IFRS DVA to be recognized in capital charges. Indeed, with respect to the cumulative gains and losses due to changes in own credit risk on fair valued financial liabilities, the Basel III document requires banks to “derecognise in the calculation of Common Equity Tier 1, all unrealised gains and losses that have resulted from changes in the fair value of liabilities that are due to changes in the bank’s own credit risk”<sup>2</sup>.

This results in an asymmetry versus accounting requirements, and a misalignment of accounting and regulatory standards, topics which Solum has previously discussed in [The Different Guises of CVA](#) (Solum Financial, December 2012). This can be a key source of reconciliation complexity (between front-office pricing, accounting and regulatory requirements) and lead to decision-making conflicts for financial institutions.

## Market Practice Trends

The trend in accounting for the credit risk in derivative transactions has moved from viewing CVA as an actuarial reserve against potential counterparty risk losses, to a market price reflecting the cost of hedging counterparty risk. This move in fair value accounting practice to viewing CVA in terms of an exit price using market implied parameters has generally been associated with the implementation of a DVA in financial statements, and front office pricing.

Changing market practice, from real world to market implied parameters, can best be reflected in the main components that are used to calculate a credit risk adjustment to a “risk-free” valuation:

- exposure (for example, the move from historical to market implied volatilities),
- probability of default (for example, the move from historical default probabilities to those implied by market credit spreads), and
- recovery (for example, move from historical to market implied recovery rates)

This clearly has had a marked effect on the volatility of Profit and Loss (“P&L”) as reported in a financial institution’s books and records due to the fact that market implied parameters, which are typically larger<sup>3</sup> than historical parameters (also referred to as real world parameters), exhibit by their nature much greater variation over time.

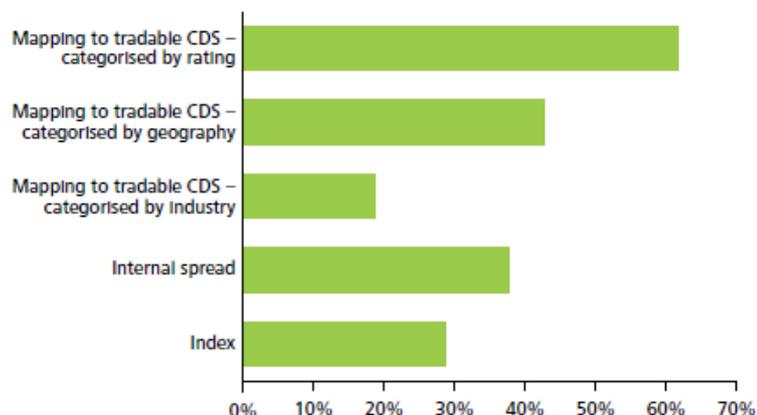
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<sup>2</sup> “Basel III: A global regulatory framework for more resilient banks and banking systems”, June 2011

<sup>3</sup> This is particularly true for market implied default probabilities which are often many multiples of real world default probabilities

The current market trend of moving to market implied default probabilities can be demonstrated by the following extract from the Deloitte/Solum CVA survey 2013 ([Deloitte / Solum Counterparty Risk and CVA Survey](#), February 2013):

Figure 23. Probability of default mapping for illiquid counterparties



*“In relation to counterparties whose CDS trade in the market, most of the banks surveyed imply default probability from the applicable observable CDS level. The use of historical default probabilities for illiquid names seems to be declining driven by future IFRS 13 accounting rules and Basel III capital requirements.” Deloitte/Solum CVA survey 2013*

The significant increases in CVA and CVA volatility by moving to market implied parameters has been somewhat offset by the requirement of DVA under IFRS 13. However, it should be noted that DVA is only relevant in a market implied environment when exit pricing and hedging concepts are applicable.

As mentioned above, many OTC derivative counterparties may be ignored when accounting for CVA and DVA, most obviously those for which a 2-way collateral agreement is in place. Whilst this is certainly true, there is a trend to expand the coverage to cover all counterparties, regardless of their credit quality and the underlying risk mitigants in place. It is clearly more appropriate to quantify a small CVA/DVA rather than implicitly assume it is zero.

### Adoption of the Market Implied Approach for Pricing Trades

Historically the larger international banks have been using a market implied approach for CVA (including using a market implied/historical blended approach to mapping credit spreads) and DVA for some time when pricing trades. Some of the larger European banks, and a large proportion of smaller regional banks, have continued to use historical parameters (and not to account for DVA). However, as mentioned above, many of these larger institutions are now moving towards using market implied parameters, together with accounting for DVA. This creates a dynamic in the market where smaller and regional banks are often perceived to be underpricing the counterparty risk in trades due to their use of historical parameters. Nevertheless, there is a gradual move to market implied pricing which is being driven by several aspects, including accounting standards. These are summarised below:

- IFRS 13 requirements to account for DVA, and the subsequent necessity to align CVA and DVA inputs;
- large US and Canadian banks having accounted for CVA and DVA under FAS 157 since Nov 2007 (and generally using market implied parameters to account for these);
- the desire to align accounting CVA/DVA and front office CVA/DVA (which can only be managed and hedged on a market implied basis) in order to prevent significant volatility between the economic view and the accounting view;
- the definition of the exit price concept under IFRS 13 which affects regional banks and other counterparties (for example, corporates) when facing international banks accounting for CVA and DVA under market implied parameters;

- the explicit requirement to use market implied default probabilities for capital calculations under Basel III; and
- explicit guidance from a number of local regulators aimed at harmonising CVA and DVA methodologies within their region of jurisdiction.

It should be mentioned that, whilst regulation seems to be very stringent over the use of market implied default probabilities, there seems to be considerably more flexibility over the quantification of exposure parameters (for example the use of market implied instead of historical volatilities).

### **Hurdles and Resistance to the Adoption of the Market Implied Approach under IFRS 13**

As mentioned above however, IFRS does not explicitly enforce the use of market implied parameters. Rather, it sets out the framework for fair value accounting using the exit price concept. Therefore, there remains some resistance to an immediate move among some of the banks which have so far continued to use historical parameters.

This resistance is driven by a variety of factors, amongst which are:

- the potential large increase in CVA by moving to market implied parameters;
- the potential increase in the volatility of CVA/DVA by moving to market implied parameters (and the associated decisions on hedging versus not hedging, passive versus active CVA desk, etc);
- low trade volumes and small CVA (both on an absolute and relative basis) meaning that counterparty risk is less of an issue for the institution in question;
- lack of clarity and harmonisation between international and local Generally Accepted Accounting Practice (“GAAP”);
- lack of alignment with regulatory requirements (for example, the exclusion of DVA under Basel III as mentioned above); and
- the complexity of obtaining appropriate and consistent market data for the relevant market implied parameters (for example, counterparty credit spreads for illiquid counterparties)

However, it seems inevitable that IFRS 13 accounting will eventually require market implied CVA and DVA to be reported. Many banks have already made the change away from historical calculations and it seems likely that the remainder will eventually be forced to follow suit. In the meantime, there will still be problems due to perceived aggressive pricing by less sophisticated banks that have not switched to a market implied approach.

As mentioned above, one of the hurdles to adopting market implied default probabilities is the fact that for the vast majority of counterparties there are no market observable credit spreads. Hence market implied default probabilities have to be estimated from other relevant sources. These estimated mapping processes are not straightforward in practice and need to be designed to achieve consistency and robustness for accounting and front office hedging purposes, whilst still complying with regulatory requirements.

### **Further Accounting Considerations**

The accounting framework for the fair value of a derivative is ever-changing and is, in general, increasing in complexity as more adjustments are made to the relevant risk-free value. Adjustments that are currently being made to the risk-free value by many banks (from a front office pricing perspective) include:

- Funding Valuation Adjustment (“FVA”), noting that many banks appear to view DVA as a funding benefit;
- adjustments for the optionality of posting different collateral under a Credit Support Annex (“CSA”);
- cross border and country-specific netting enforceability adjustments;
- IFRS vs. local GAAP accounting adjustments; and

- hurdle rates introduced into pricing to reflect the capital requirements under Basel II and Basel III (for default capital and CVA capital).

The question that remains is whether these adjustments to risk-free valuations represent a market practice prevalent enough that they could be considered as part of the exit price between market participants.

One of the more prevalent and topical adjustments is FVA. For uncollateralised positions, it is becoming increasingly common for financial institutions to introduce funding costs and benefits via an FVA adjustment in inception pricing of trades:

*“52% of participants charge for FVA at the trade level with most charging it to the relevant trading desks at inception. The remainder recover FVA on an accrual basis or not at all”.*  
Deloitte/Solum CVA survey 2013 (p. 38)

In general, however, there is then no subsequent valuation adjustment made to derivative positions for IFRS accounting purposes to reflect this inception pricing FVA. Given that IFRS refers to an exit price for the fair value of a derivative, and it is becoming common market practice to include FVA in inception charging, it could be argued that FVA should be included in the IFRS fair value of a derivative under the exit price concept.

## Conclusion

The introduction of IFRS 13 is fundamentally affecting the way in which banks (and other institutions accounting under IFRS) need to approach the inclusion of fair value adjustments into the risk-free value of a derivative. This will have a potentially significant effect on these institutions, and some of the following considerations will need to be taken into account when addressing the impact, in order to attempt to successfully manage this transition to generally accepted fair value accounting:

- this is a key strategic issue for banks: governance and control over the move to market implied parameters, and the inclusion of DVA, needs to be robust so as to adequately manage any expected (and unexpected) consequences;
- in addition, the effect of IFRS 13 goes far beyond CVA accounting. It will have a significant impact on:
  - front office business models;
  - data requirements (the increased requirement for market data (liquid and illiquid) for the underlying trades and for mapping the credit spreads of the counterparties, etc);
  - alignment of front office and accounting CVA, DVA, FVA, etc;
  - P&L volatility introduced by moving to market implied parameters and the management and necessary explanations thereof;
  - the decision of how to set up a CVA desk, and its detailed mandate (passive versus active CVA management, hedging, inception pricing, etc);
  - increased computational complexity and how existing and new systems will be further designed to deal with the increased requirements (for example, in-house development versus vendor systems)
  - collateral management; and
  - the decision over clearing of trades

Despite the somewhat divergent interpretation of the accounting rules across financial institutions, an observable trend has started to emerge towards a market consensus view of fair value accounting for derivative financial instruments. This consensus approach, which more heavily relies on market implied measures of risk than was previously the case, is certain to have a significant effect on the strategic business decisions that financial institutions will be required to make. The need for these institutions to prepare for, and to address, such changes is growing in importance, and is unlikely to abate in the foreseeable future.

## Contact us

### **Solum Financial**

12 Austin Friars  
City of London  
EC2N 2HE  
United Kingdom  
+44 207 786 9230  
[research@solum-financial.com](mailto:research@solum-financial.com)

*Solum Financial Limited is authorised  
and regulated by the Financial Services Authority*

### **Jon Gregory**

Partner  
[jon@solum-financial.com](mailto:jon@solum-financial.com)  
+44 207 786 9233

### **Rowan Alston**

Senior Consultant  
[rowan@solum-financial.com](mailto:rowan@solum-financial.com)  
+44 207 786 9238

### **Nicolas Gakwaya**

Senior Consultant  
[nicolas.gakwaya@solum-financial.com](mailto:nicolas.gakwaya@solum-financial.com)  
+44 207 786 9234

### **Thu-Uyen Nguyen**

Partner  
[tu@solum-financial.com](mailto:tu@solum-financial.com)  
+44 207 786 9231

### **Vincent Dahinden**

CEO  
[vincent@solum-financial.com](mailto:vincent@solum-financial.com)  
+44 207 786 9235

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