The xVA Challenge: Counterparty Risk, Collateral, Funding, Capital, Initial Margin and Central Cleaning

Overview:
This course explains and describes the valuation adjustments in derivatives pricing in relation to counterparty risk, collateral, funding and capital. The ideas are built up sequentially and workshops are used to develop the key ideas including modelling, legal aspects, portfolio effects and the resulting calculation of CVA, DVA, FVA, ColVA, KVA and MVA.

Particular attention is paid to current market practice (analyzed by survey results), the impact of regulation (e.g. Basel III) and accounting standards (IFRS 13). Future changes such as mandatory clearing and bilateral marging requirements are also covered. Participants will be able to take away all worked examples and additional exercises and models implemented using Excel functions and macros.


Who should attend?
- Banks, end-users of derivatives, regulators and third parties
- Derivatives traders, structurers and salespeople
- Treasury departments
- Risk managers (market and credit)
- IT, product control, legal and operations
- Quantitative researchers
- Portfolio managers
- Operations / Collateral management

Prior Knowledge
- Numerate background (basic)
- Knowledge of OTC derivatives products
- Basic knowledge of Microsoft Excel

Date:
20 to 22 July 2016 (Wed to Fri)

Time:
9:00am to 5:00pm

Venue:
Cliftons Singapore,
The Finexis Building

Course fee:
CFA Singapore member: US$3,812.25 nett
Non-member: US$4,485.00 nett
20% off Group Discount available

Course fee includes:
Course materials, lunch & refreshments

Trainer:
Dr. Jon Gregory

Eligible for FTS:
Programme Code - P16011STTI

Eligible for SkillsFuture Credit

CE: 24 Hours | CPD: 24 hours
### Day One

**Credit exposure and CVA Background**
- Example
- Overview and history
- The impact of regulation and accounting
- The xVA concept
- Setups

**Regulation and accounting**
- IFRS 13
- Basel III
- Clearing mandate
- Bilateral margining rules

**Exposure and default probability**
- Credit exposure
- Simulating exposure
- Risk-neutral default probabilities
- Mapping methods

Example: IRS exposure simulation

**CVA and DVA**
- CVA formulas and example
- Incremental CVA
- Bilateral CVA
- Monetizing DVA and the link to funding

Workshop: CVA/DVA calculations

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### Day Two (cont’d)

**Regulatory capital and KVA**
- Counterparty risk capital requirements
- Review of methodologies
- Capital value adjustment (KVA)
- KVA examples

Example: EAD and KVA calculations

**Managing and optimizing xVA**
- xVA desks and managing xVA
- xVA calculation examples
- CVA hedging and capital relief
- Price optimization

Example: Complete xVA calculations

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### Day Two

**Funding, collateral and capital**

**Funding and FVA**
- FVA formulas and examples
- Defining funding costs
- FVA framework and link to CVA/DVA
- Arguments over FVA

Example: FVA calculation

**Collateral**
- Collateral mechanics
- OIS discounting
- CoIVA
- The impact of collateral on CVA and FVA

Workshop: Collateral simulation

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### Day Three

**Central counterparties and initial margin**

**Central counterparties**
- OTC clearing
- The topology of clearing
- Mechanics of OTC clearing
- Client clearing

**CCP risk management**
- Fire drills and auctions
- The loss waterfall
- Initial margin and default funds
- Other loss allocation methods

Example: Loss allocation

**Initial margin methods**
- Standardized portfolio analysis of risk (SPAN)
- Value-at-risk (VAR) and expected shortfall (ES)
- Calibration issues
- SIMM (standardized initial margin model)

Example: SIMM calculation

**Initial margin and MVA**
- Initial margin and segregation
- The impact of initial margin on CVA and KVA
- MVA
- The risks of increasing margin requirements

Example: MVA calculation
As a participant in the CFA Institute Approved-Provider Program, CFA Singapore has determined that this event qualifies for **24 credit hours**. If you are a CFA Institute member, CE credit for your attendance at this event will be automatically recorded in your CE diary.

**FTS – Eligible:**
This programme is approved for listing on the Financial Training Scheme (FTS) Programme Directory and is eligible for FTS claims subject to all eligibility criteria being met. Please note that in no way does this represent an endorsement of the quality of the training provider and programme. Participants are advised to assess the suitability of the programme and its relevance to participants’ business activities or job roles. The FTS is available to eligible entities, at a 50% funding level of programme fees subject to all eligibility criteria being met. FTS claims may only be made for programmes listed on the FTS Programme Directory with the specified validity period. Please refer to www.ibf.org.sg for more information.

Programme code: P160115TTI

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**Instructor’s Bio data**

**Dr Jon Gregory** is an independent expert specializing in counterparty risk and xVA related projects. He has worked on many aspects of credit risk in his career, being previously with Barclays Capital, BNP Paribas and Citigroup. He is also a senior advisor at Solum Financial Derivatives Advisory.

Jon is author of the books “The xVA Challenge: Counterparty Credit Risk, Funding, Collateral, and Capital” (now in its third edition) and “Central Counterparties: The Impact of Mandatory Clearing and Bilateral Margin Requirements on OTC Derivatives”, both published by Wiley Finance.

Jon holds a PhD from Cambridge University.
Registration Form

Advanced reservation is required due to limited capacity. For participation, please complete the fields below and fax or email back to CFA Singapore. Please indicate membership ID to enjoy members’ rate. (Course fee includes course materials, tea break and lunch during the workshop)

<table>
<thead>
<tr>
<th>Membership Type</th>
<th>Standard Fee per delegate</th>
<th>Group Discount</th>
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<tr>
<td>CFA Singapore</td>
<td>US$3,812.25 nett</td>
<td>20% off for 3 or more delegates</td>
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<tr>
<td>Non Member</td>
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Terms and Conditions:
- Registration will only be confirmed upon receipt of registration form and full payment.
- If any registered delegate is unable to attend the workshop, a replacement is welcome at no extra cost. No refund will be made.
- CFA Singapore reserves the right to cancel or postpone the workshop due to unforeseen circumstances and also the right to reject any registration.
- By signing and submitting this form, I / we consent to CFA Singapore collecting, using, disclosing and processing my / our personal data:
  1. for purposes related to the administration of the registration for the above workshop;
  2. to send me updates informing me / us of events and activities organized by CFA Singapore.

*I understand that my personal data will be used and retained in accordance with the CFA Singapore Personal Data Policy available at www.cfasingapore.org

I have read and accept the terms and conditions stated above.

Signature/ Date ___________________________ Company Stamp ___________________________