Pros and Cons of Collateralisation for Corporate Treasurers

Jon Gregory

11th Annual Fleming Collateral Management Forum
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Bank point of view
Credit risk reduction and capital
CVA, FVA and KVA example

Corporate point of view
More competitive pricing and access to long-dated derivatives
Liquidity and operational aspects
Central clearing

Q&A
The Birth of xVA

- Derivatives pricing was previously seen as pricing cashflows
- Now it is seen as being also related to
  - Credit risk
  - Funding
  - Collateral
  - Capital
  - Initial margin
- These aspects are not mutually exclusive and often require portfolio level calculations
  - The has led to the birth of the “xVA desk” or “central resource desk”
  - This desk typically deals with most of the complexity in derivatives pricing
- Directionality is a big problem

How much is this plain vanilla derivative in the window?
The Standard in OTC Derivatives

- At the same time, standard derivatives valuation is becoming driven by close to perfect collateral exchange which is the norm in the interbank or centrally cleared market:
  - Zero threshold
  - Daily calls
  - Mainly cash collateral
  - Initial margin

- For some banks, it is not the question of receiving collateral but also:
  - Is it cash collateral
  - Can it be treated as settlement?
Costs Are Still Increasing

• Arguably, xVA related costs still need to rise due to:

• Herd mentality
  – Banks may remain competitive against peers, even if they believe they are ‘underpricing’

• Implementation of regulatory mandates
  – Leverage ratio, NSFR, SA-CCR, FRTB

• Growing representation of xVA on the balance sheet
  – For example CVA and FVA accounting practices since 2012

• KVA becoming less ‘soft’

Traders shocked by $712m CVA loss at StanChart

Source: Solum Financial
The xVA Hierarchy

Capital
- Leverage Ratio
- CVA Capital Charge
- CCR Capital Charge
- Market risk

Initial margin
- Clearing mandate
- Bilateral margin rules

Collateral
- Floors
- Cheapest to deliver

Funding
- NSFR / LCR
- Cross currency basis
- LIBOR-OIS basis
- Treasury funding

Credit
- IFRS 13 Accounting
- Credit line utilisation
- Credit provisioning

Profit to generate return on capital
- KVA

Real costs?
- MVA
- CoIVA
- FVA
- CVA / DVA

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Bank Point of View – Uncollateralised Derivatives

- **Credit**
  - CVA has a balance sheet impact (even when collateralised)
  - CVA volatility is partially unhedgeable (e.g. no CDS on most corporate credits)
  - DVA benefit is not monetisable

- **Collateral**
  - Cash or securities makes a difference
  - Benefit of receiving collateral hard to monetise

- **Funding**
  - Funding costs are material and also have a balance sheet impact (for most banks)
  - Banks will pay funding benefits
  - FVA volatility is also difficult to manage
  - NSFR costs may be considered / LCR cost for any contingent ratings triggers

- **Capital**
  - Significant cost, Pruval, Leverage ratio costs may be considered
  - CVA capital is relevant for most banks (even given the corporate exemption in Europe)
  - CVA and FVA hedges can be capital consuming
## Bank Point of View – The Benefit of Collateralisation

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<thead>
<tr>
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<th>Uncollateralised</th>
<th>Collateralised</th>
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<tbody>
<tr>
<td>Credit (CVA)</td>
<td>CVA</td>
<td>CVA reduction</td>
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<td>DVA</td>
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<td>Funding (FVA)</td>
<td>FCA</td>
<td>FCA reduction</td>
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<td>FBA</td>
<td>FBA reduction</td>
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<td>NSFR</td>
<td>Improved NSFR ratio (cash collateral)</td>
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<td>Capital (KVA)</td>
<td>CCR</td>
<td>Improved Return on Equity</td>
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<td>CVA</td>
<td>Improved leverage ratio (cash collateral)</td>
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<td>Leverage ratio</td>
<td>Improved leverage ratio (cash collateral)</td>
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Bank Point of View – The Benefit of Collateralisation

Note: FVA and ColVA can be benefits
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Q&A
The Problem with Directional Derivatives Portfolios

- **ITM**
  - Credit Risk
  - Close-out considerations
  - Limited opportunity to restructure
  - Better pricing

- **OTM**
  - Limits breaches, difficult to trade
  - Worse pricing
  - More opportunity to restructure

A turning tide for two-way CSAs?
Restructuring xVA?

- From a Corporate’s perspective, collateralisation would tend to ‘internalize’ many of the costs of trading OTC derivatives

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<td>Funding and Liquidity</td>
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<td>FVA</td>
<td>Unsecured funding cost + liquidity buffer</td>
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<td>Capital</td>
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<td>KVA</td>
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Corporate Point of View – The Cost of Collateralisation

Valuation Impact

Limited to loss of net DVA

Liquidity Impact

- Corporate assets are generally non-financial and illiquid
- Requirement for large cash balance (cost of carry expensive) and/or use of committed bank facilities and/or CP market

Valuation Impact

CVA

DVA

One-way collateralised

Two-way collateralised

Pricing Example (10-year IRS): Bank’s Point of View

CVA

Two-way collateralised

One-way collateralised

Corporate Point of View – The Cost of Collateralisation

DVA

Cash outflow

0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Time (years)

Valuation Impact

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Move to Collateralisation – Pros and Cons

• Pros
  – Better pricing with limited xVA costs
  – Closer alignment with price and valuation
  – Credit risk mitigation
  – Better close-out process

• Cons
  – In general, no regulatory requirements (for example non-financial counterparties will only be subject to clearing obligations / bilateral margining if their derivatives notional exceeds a threshold)
  – Liquidity costs
  – Collateral disputes - don’t want to just accept the banks valuation
  – Resource and systems heavy
  – Hedge accounting
  – Potential impact for other creditors (e.g. covenants) and impact on own credit rating
Alternatives

• Managing position on a portfolio basis
  – Maximum number of counterparties
  – Understand banks credit limits
  – Don’t always trade at the ‘best price’
  – Offsetting transactions where possible

• Credit auctions for costly derivatives

• Break clauses
  – Only mandatory breaks may be considered beneficial by banks
  – Accounting?
  – Cost of replacement

• Reset features
  – Weaker form of collateralisation
  – Can be at the transaction level for very heavy xVA trades
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