The Role of Credit in FX Markets
Trends & Solutions: Futurization, Clearing, Credit Proxies

Frankfurt, 6 September 2018
Evolving Market Structure in the FX Industry

Drivers of change: The FX industry is evolving driven by significant changes in credit, regulation, risk taking as well as ways of trading (OTC vs. listed FX) …

… leading to higher capital / credit costs, lower risk appetite, changing market structure (e.g. NBLPs) and new regulatory requirements
Credit Models in FX

Existing credit models are highly influenced by such drivers of change – affecting both the OTC as well as the listed / ETD world …

Credit models
- Prime Brokerage
- Bilateral Credit
- FX Clearing – ETD and OTC

Target clients
- Hedge Funds
- CTAs
- NBLPs
- Corporates
- Asset Managers
- Banks
- Asset Managers
- Hedge Funds
- Banks
- …
Credit Availability and Pricing

... post the SNB event and in light of the recent changes in the market, availability and pricing of credit (PB and else) has changed significantly

Prime-brokered turnover by instrument

<table>
<thead>
<tr>
<th>Instrument</th>
<th>2013</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD1,131 trn</td>
<td>68</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td>141</td>
<td>119</td>
</tr>
<tr>
<td></td>
<td>150</td>
<td>143</td>
</tr>
<tr>
<td></td>
<td>770</td>
<td>564</td>
</tr>
</tbody>
</table>

Capacity reduction: -22%

A number of effects at work ....

Credit capacity:

Credit costs:

Market participants:

Market liquidity:

Absorption capability:

Credit risk concentration:

Source: BIS
FX Credit Landscape – Outlook

While the trading layer is rather globalizing, credit is localizing … and ultimately stays with banks. Will this be the future model, too?

Future developments …

- **Concentration**
  - Driven by capital / regulatory requirements, diminishing revenues, return-on-equity targets and costs

- **Competing for Profitable Clients**
  - Tier 1 FXPBs to compete for highly profitable clients, while continuing to shed less profitable clients

- **Costs**
  - Driven by current and future regulatory developments

- **Revenues**
  - Revenues shrink due to non-banks entering the market as LPs and requirement to unbundle fees

... leading to

- Credit model changes
- Alternative business solutions required to ensure FX market access for all clients
- Making way for new technology and proliferation of prime-of-prime brokers
- Futurization and clearing of OTC FX transactions as seen as major innovation
# FX Clearing as a Way Forward in Credit

Although FX is currently exempt from clearing obligations, new capital and margin rules are changing economics of bilateral models.

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Impact on FX derivatives</th>
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</thead>
<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td><strong>EMIR/Dodd-Frank clearing obligation</strong></td>
<td>Obligation to clear standardised OTC derivatives</td>
</tr>
<tr>
<td></td>
<td>▪ Reporting of all derivatives to TRs</td>
</tr>
<tr>
<td></td>
<td>▪ Improved risk management</td>
</tr>
<tr>
<td></td>
<td>n/a (FX derivatives exempted from clearing obligation)</td>
</tr>
<tr>
<td><strong>EMIR/BCBS-IOSCO margin obligation</strong></td>
<td>Initial/variation margin requirements for non-centrally cleared OTC derivatives (included in EMIR in Europe)</td>
</tr>
<tr>
<td></td>
<td>▪ Margin calculation and segregation</td>
</tr>
<tr>
<td></td>
<td>▪ Subject to exposure thresholds</td>
</tr>
<tr>
<td></td>
<td>Initial Margin required for XCCY swaps (except ‘FX leg’) &amp; FX options</td>
</tr>
<tr>
<td></td>
<td>Exemptions from margin obligation</td>
</tr>
<tr>
<td></td>
<td>▪ Physically settled FX fwsds &amp; swaps</td>
</tr>
<tr>
<td></td>
<td>▪ FX leg of XCCY swaps</td>
</tr>
<tr>
<td><strong>Basel III (CRD IV / CRR I) capital requirements</strong></td>
<td>Improved coverage of counterparty credit risk</td>
</tr>
<tr>
<td></td>
<td>▪ Introduction of CVA for OTC transactions</td>
</tr>
<tr>
<td></td>
<td>▪ Refined treatment of CCP exposures</td>
</tr>
<tr>
<td></td>
<td>▪ Introduction of leverage ratio</td>
</tr>
<tr>
<td></td>
<td>Increased capital requirements for non-cleared/non-collateralised FX derivatives</td>
</tr>
<tr>
<td></td>
<td>Incentives for voluntary clearing</td>
</tr>
</tbody>
</table>

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Although FX is currently exempt from clearing obligations, new capital and margin rules are changing economics of bilateral models. The introduction of clearing for FX derivatives is expected to improve risk management, increase capital requirements for non-cleared/non-collateralised FX derivatives, and provide incentives for voluntary clearing. The adoption of regulations such as EMIR/Dodd-Frank and Basel III (CRD IV / CRR I) is driving changes in the FX market, prompting a shift towards centralised clearing as a way forward in managing credit risk.
FX Clearing to be Introduced at Eurex Clearing

Next to economic efficiencies, moving the bilateral market to a multilateral cleared solution increases safety

### Bilateral trading & clearing
1:1 relationship between market participants

### Bilateral trading & multilateral clearing
1:n relationship

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**Safety**
- Risk management structure & independent position valuation by neutral institution
- Superior client asset protection models
- Robust default management process
- Central bank access for investment and liquidity

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**Efficiency**
- Capital efficiency:
  - Single legal cross product netting set
  - Reduced balance sheet exposure
- Collateral efficiency:
  - Largest spectrum of available collateral
- Margin efficiency:
  - Eurex clearing Prisma allowing portfolio and x-margining with multilateral netting
FX Clearing – When Does it Make Sense?

Cost efficiency of the cleared model depends on key drivers such as collateral availability, netting efficiency and credit quality of counterparty.

<table>
<thead>
<tr>
<th>Key driver</th>
<th>High level impact</th>
<th>Strongest case for central clearing, in case of …</th>
</tr>
</thead>
</table>
| Availability of collateral / funding costs | ▪ Driving costs for posting initial margin (dependent on collateral availability)  
▪ Indirect impact on Leverage Ratio (additional balance sheet exposure) | … good collateral availability / low funding costs |
| CCP (multilateral) netting advantage | ▪ Multilateral netting reduces overall risk exposure, lowering initial margin and capital requirements | … high CCP netting advantage |
| Credit rating of counterparty/ risk weight | ▪ Driving risk weight, thus with direct impact on RWA and CVA  
▪ CCP always at 2% risk weight | … low credit quality/rating (i.e. high risk weight) of bilateral counterparty |

… hence, economics of clearing need to be analysed on a client by client basis
DBG has a Holistic Strategy to Deliver a Hybrid OTC and Exchange-Based FX Market Proposition serving Global Markets

Based on Regulation, Reputation and Solutions