

Overcoming the global liquidity squeeze through innovative partnership models

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Current collateral and liquidity management landscape for Bank X

Global exposure management

Constantly growing number and size of globally spread exposures to be covered on a daily basis

Bank X

Exposures to be collateralised daily in line with individual collateral profiles

CCP and OTC Trade Repository Exposure

- Eurex Clearing Germany
- LCH UK
- Oslo Clearing Norway
- X-Clear (x-ccp) Switzerland
- EMCF (x-ccp) Netherlands
- EuroCCP (x-ccp) UK
- LCH (x-ccp) UK
- CETIP Brazil
- ASX Australia
- ICE Clear UK
- CME UK

Market Exposure

- CETIP Brazil
- ASX Australia
- Strate South Africa
- Iberclear Spain
- CDS Canada
- HKMA Hong Kong
- Clearstream Germany/Lux

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Central Bank Money Access

- Central Bank Germany
- Central Bank USA (FRBNY)
- Central Bank Norway
- Central Bank Luxembourg
- Central Bank France*
- Central Bank Italy*
- Central Bank Spain*
- Central Bank Netherlands*
- Central Bank Spain*
- Central Bank*

* "CCBM2" 2014

Current collateral and liquidity management landscape for Bank X



Global collateral fragmentation

Globally fragmented collateral sitting with infrastructure providers and agent banks / global custodians not accessible for a consolidated / pooled collateral allocation / optimisation process

Bank X

Fragmented collateral across industry layers and time-zones can only be allocated and optimised on a best effort basis

Current collateral and liquidity management landscape for Bank X



Opportunity costs

Global collateral fragmentation does not only lead to a sub-optimal collateral allocation process, it also incorporates substantial opportunity costs

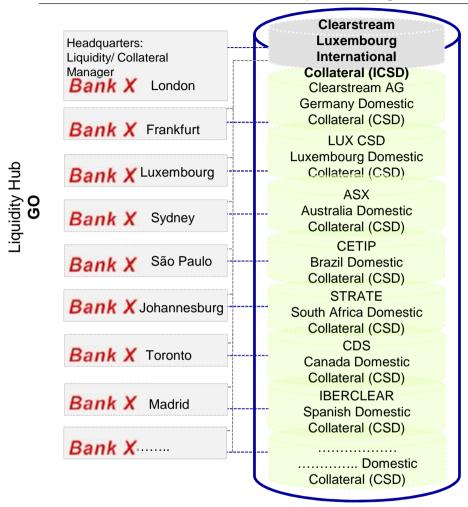
Bank X

Fragmented collateral across industry layers and time-zones can only be allocated and optimised on a best-effort basis Opportunity costs related to collateral fragmentation for the global banking industry EUR 4 bn p.a.*

Overcoming the global liquidity squeeze through innovative partnership models and pioneering IT technology . . .



New collateral and liquidity management landscape for **Bank** X



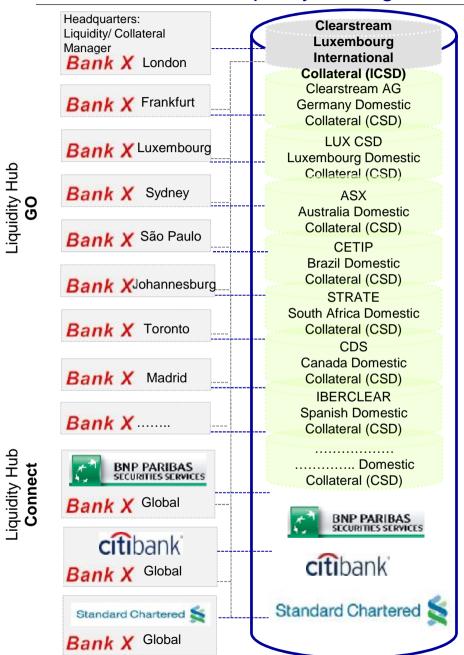
'As a potentially new "best practice" as defined by a CSD, Clearstream's Liquidity Hub GO presents a unique collateral management offering that some CSDs globally have been attracted to'

Liquidity Hub **GO** (Global Outsourcing)

Clearstream's strategic
partnerships with global
infrastructure providers
supporting the identification /
optimisation / allocation of
domestic / international collateral

- Wighter in the contract of the contract of
- ü 24 hour identification / optimisation / allocation / substitutions guaranteed
- ü Fast time-to-market / low cost / strong support from local regulators and CBs

New collateral and liquidity management landscape for **Bank** X

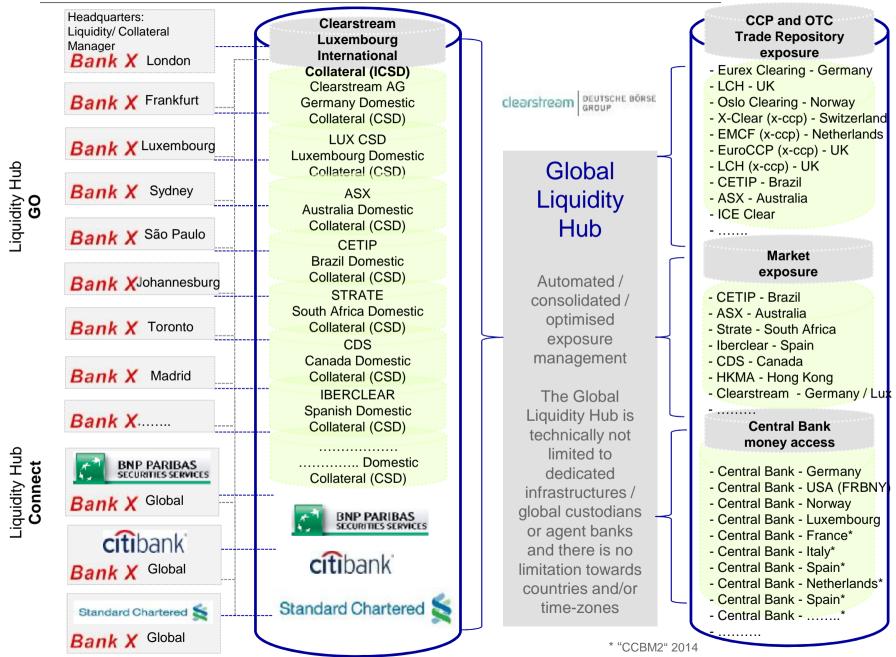


Liquidity Hub Connect

Clearstream's strategic
partnerships with agent banks
and global custodians supporting
the identification / optimisation /
allocation of collateral held with
agent banks and global
custodians

- Global custodian / agent bank can offer its customers sophisticated collateral management services (identification / optimisation / allocation / substitution) on a short time-to-market / low cost basis
- **ü** Collateral (custody) remains in the books of the global custodian / agent bank
- Bank X can steer / prioritise / optimise collateral allocation between global infrastructure providers and global custodians / agent banks

New collateral and liquidity management landscape for **Bank** X



... smart partnerships respecting each others interests and restrictions combined with pioneering IT technology will help to overcome the global liquidity squeeze



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