Are CCP the solution to risk management of OTC derivatives

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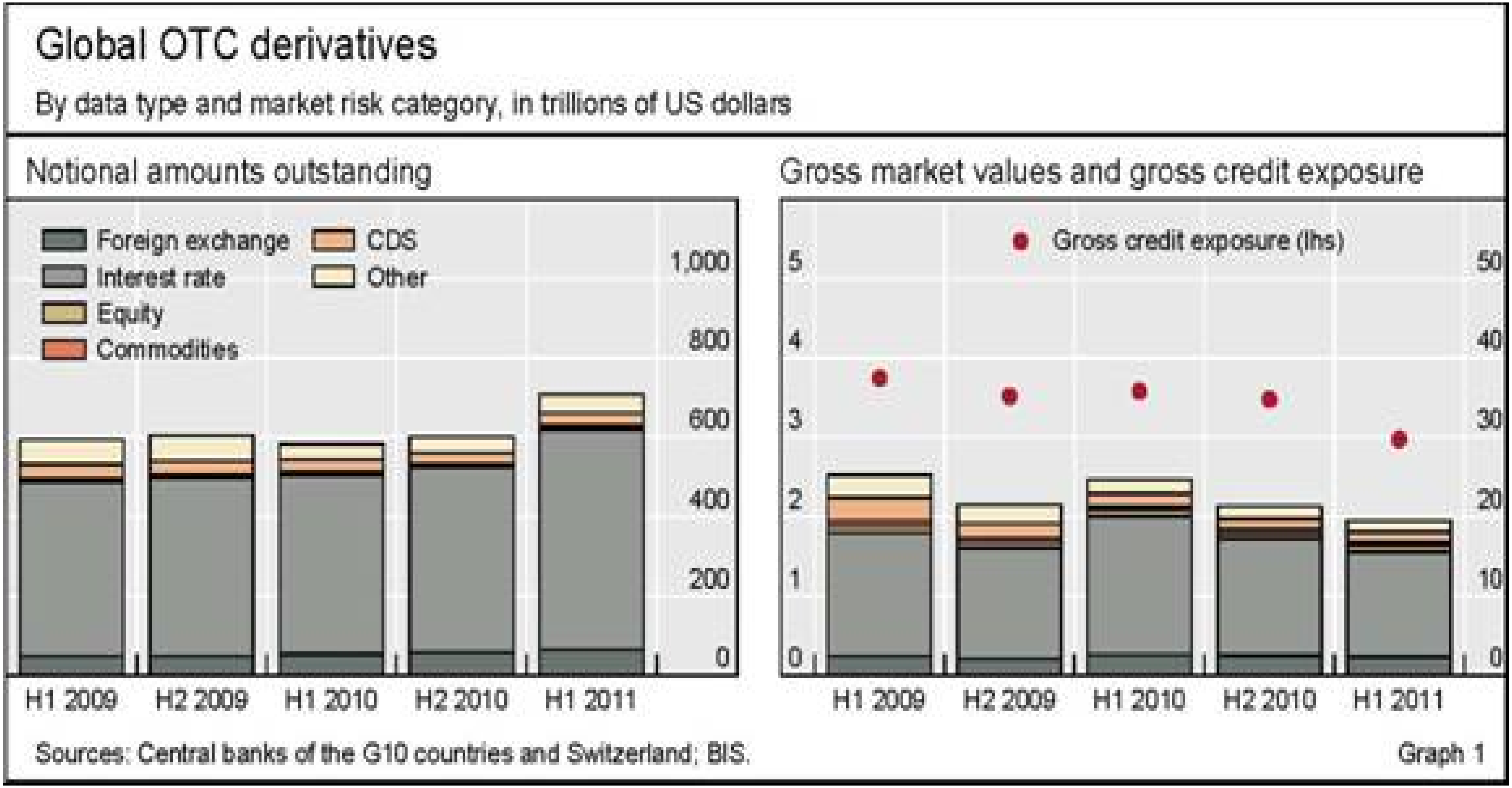
OTC Market Overview



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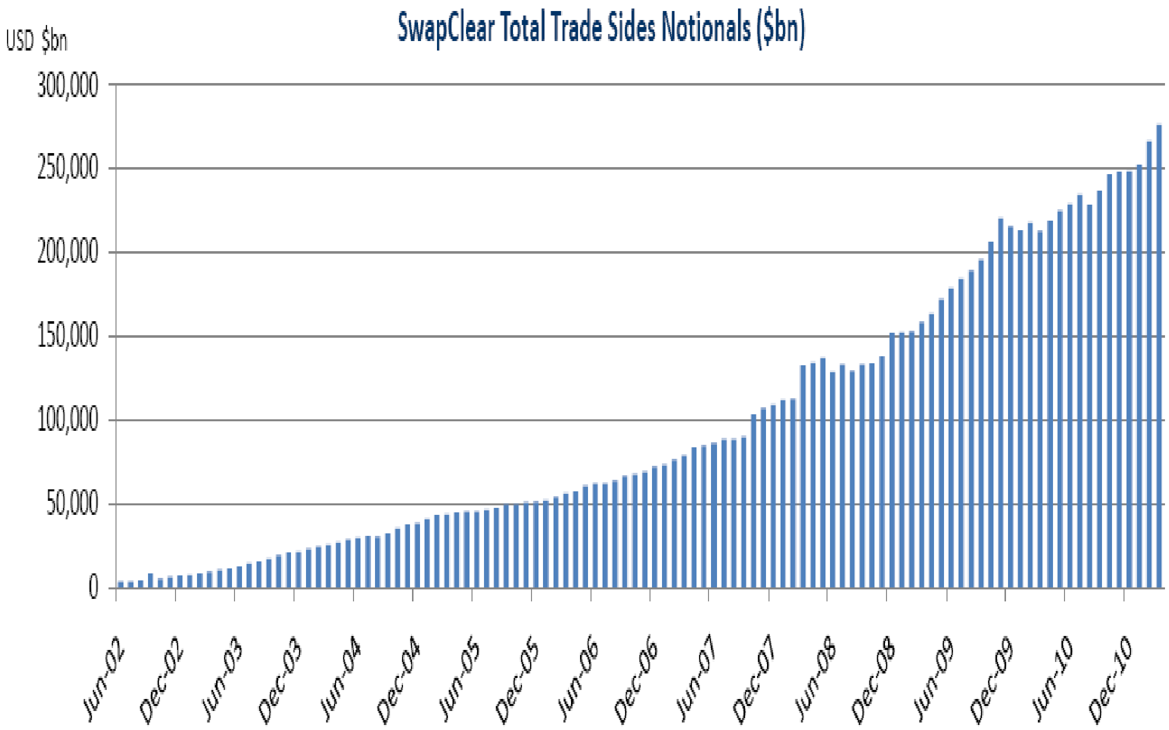
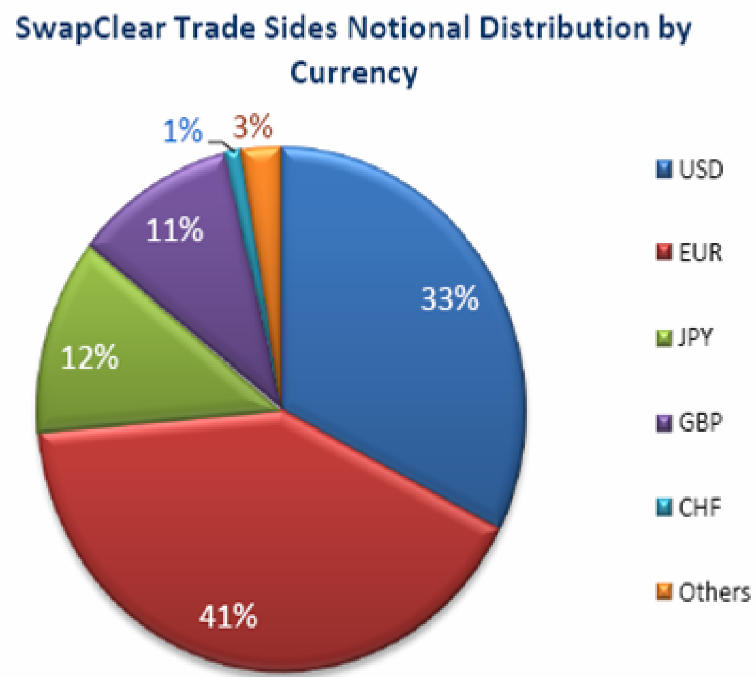
CCP Market Overview





Counterparty credit risk in OTC markets

- In a bilateral world each counterparty is at risk and must manage their default risk

- This exposure (replacement risk) needs to be measured and managed

- Most banks have implemented sophisticated risk systems using Monte Carlo simulation approach in order to model this exposure through time and evaluate what would be the worst-case loss scenario

- Risk department uses these risk measures to set tolerance level and maximum allowed risk exposure by counterparty

- Legally most bilateral transactions are executed through an ISDA contract which defines rules and processes for exposure calculation and default handling

Mitigating counterparty credit risk in a bilateral world

- **Bi-lateral Netting**
  - Gives both parties the right to offset positive and negative values of all OTC contracts.
  - This dramatically reduces our bilateral net exposure
- **Collateral**
  - Adding a credit support annex to an ISDA contract allows for exchange of collateral
  - Exposure is margined daily based on a threshold that is agreed between the parties
  - Recent market trend that we have observed is to bring this threshold to $0 between large financial institution (one main reason behind this is that credit value adjustment charges now incorporate credit risk into the valuation of each transaction)
- **Close-out**
  - Gives us the right to terminate contract with a defaulting counterparty immediately
- **Mutual Put / Break clause**
  - This is a trigger that allows for termination on a pre determined date.
  - Some contract may also contain termination clause below a certain rating or recouponning clause
- **Hedging:**
  - Single name can be hedge using CDS, but this will also create a new counterparty risk

Central clearing counterparties origin?

- With the recent credit crisis and the failure of some very large financial institutions, existing risk models for pricing derivatives had to be revisited

- Current models lack transparency thus creating liquidity constraints within the financial markets

- Mispricing of exotic derivatives in conjunction with the lack of proper collateral assessment

- CCP has thus emerged out of this crisis as the potential solution to all our problems

- Is CCP the sole solution to all our problems?

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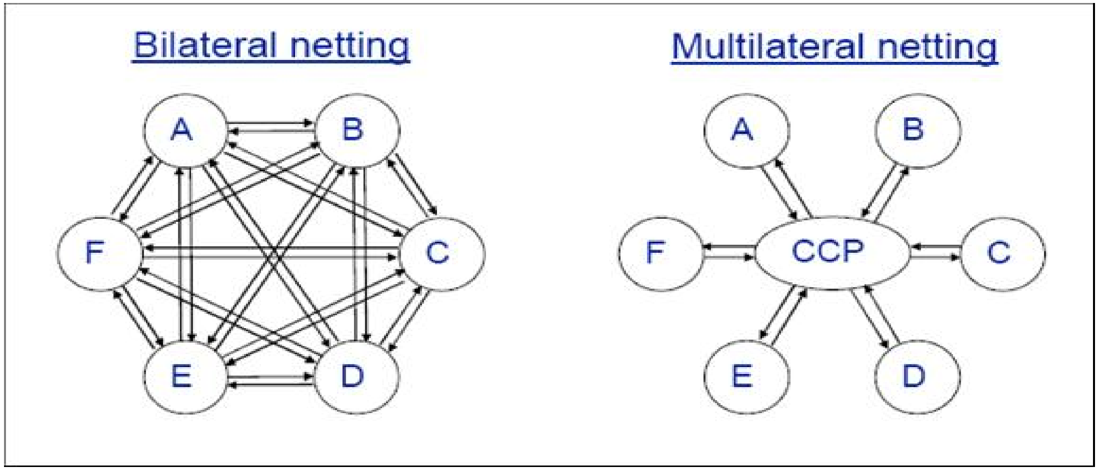
Advantages of central clearing

•**Multilateral netting**



•Contracts traded with different counterparties but cleared through a CCP can be netted
• This particularity has the potential to reduce overall exposure
• Countreparty risk is now with the CCP, eliminates bilateral counterparty risk

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Advantages of central clearing counterparty

- **Robust waterfall and mutualization of risk among participants**
  - CCP's waterfall mechanism if manage properly should protect non-defaulting members from other members' defaulting
  - When a member defaults, the CCP will liquidate the position, if a loss occur then the defaulting member 's initial margin, variation margin and default fund contribution will be used before non- defaulting member have to take a hit
  - In such extreme scenarios the loss will be shared among surviving members thus reducing the impact on surviving members

- **Transparency**
  - The CCP is the sole calculation agent
  - The same pricing model is used for all members cleared through the CCP

- **Capital reduction**
  - With Basle III a charge of 2% is expected to be required for transactions cleared through a CCP

- **Legal, Operational and Risk management standardization**
  - Centralization of rules, operations and risk management
  - CCP provides centralize settlement service, daily margining (in certain case, margin calls will be up to 6 times a day), netting and risk management function

Disadvantages of central clearing counterparty

- **Limited product coverage**
  - Due to the amount of standardisation required only the plain vanilla structure will be cleared at first
  - In the recent crisis, counterparty defaults were not caused by the vanilla contracts but the more exotic structure

- **Will multilateral netting really reduce bank exposure**
  - It is not obvious that overall exposures will be reduced
  - Since only a limited number of trade types can be cleared risk with some counterparties might increase
  - As more products are cleared this will be resolved by itself

- **Competition and CCP**
  - Having one or few large CCPs maximizes netting but also impose upward pressure on margin requirements
  - Having more CCPs will maintain competitive pressure on margins but reduce netting
  - Will increase competition increase risk into the CCP model ?

- **Risk Management**
  - All the risk analyses is transferred to the CCP, will this weaken the market discipline of each participant
  - Lower rated counterparties will be trading on the same platform has better rated firm with the same condition
  - Currently in the bilateral world cost of credit is integrated into our PnL (CVA adjustments)

- **What will happen if CCP fails**
  - This could be even more catastrophic than what we went through in the last few years

Are CCP's a good thing or bad thing

- The overall purpose of creating CCP makes a whole lot of sense

•Complex OTC Derivative though are different games. Products are highly customized , standardization will be a challenge

• CCP will compete among each other. By shifting the risk management function over to CCP is not a guaranteed safeguard against future potential crisis.

• CCP will face pressure on maintaining adequate margin vs new CCP that will see the day. This will obviously challenge the risk management standard and controls

• Current CCPs are not AAA rated, so risk remains (operational , legal ,...), it is only transferred.

• Banks have invested a lot in counterparty credit risk over the last decade and have sophisticated systems to evaluate that risk; CCP are still at its early stage, a transition period will be required

• Legislation will have to adapt as well, cross border netting across CCP is only one item that will be required in order to mitigate the overall risk

Conclusion

- CCP are there to stay so we might as well get ready and get familiar with their risk structure

- Does this mean that we no longer have to follow our counterparty risk. Not at all, risk will remain as only very few products will be cleared at first

- A strong implication of CCP is that the remaining bilateral world will change. As we have seen in recent years, integration of CVA charges in the trading book was a first step, latest development in the CSA to an SCSA agreements with $0 threshold and standardization of collateral are other good steps in reducing bilateral CCR.

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