Credit Derivatives Markets: Policy Issues

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International Association of Financial Engineers

Goldman Sachs Event, April 28, 2009

Drawing from research with Haoxiang Zhu and assistance from Zhipeng Zhang

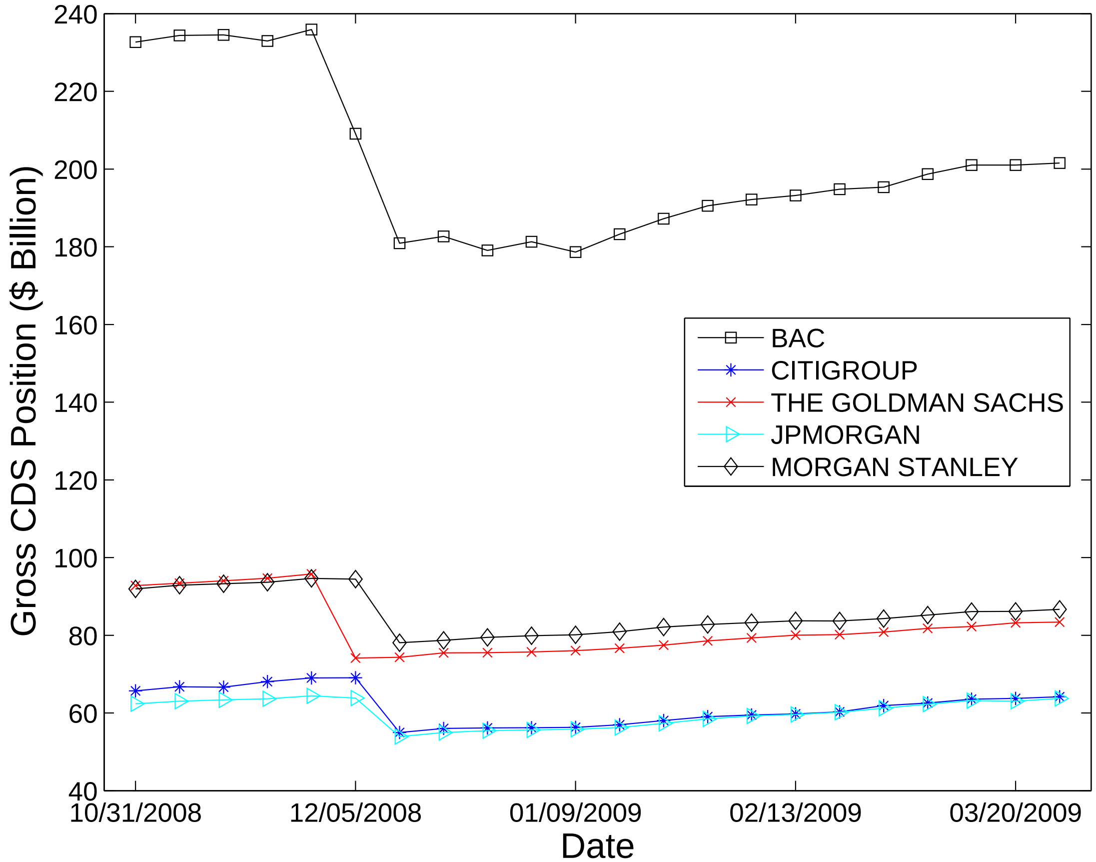


Figure 1: Gross amount of notional positions in credit default swaps recorded in the DerivServ Trade Information Warehouse, for protection against the defaults of several major U.S. dealers. Source: DTCC.

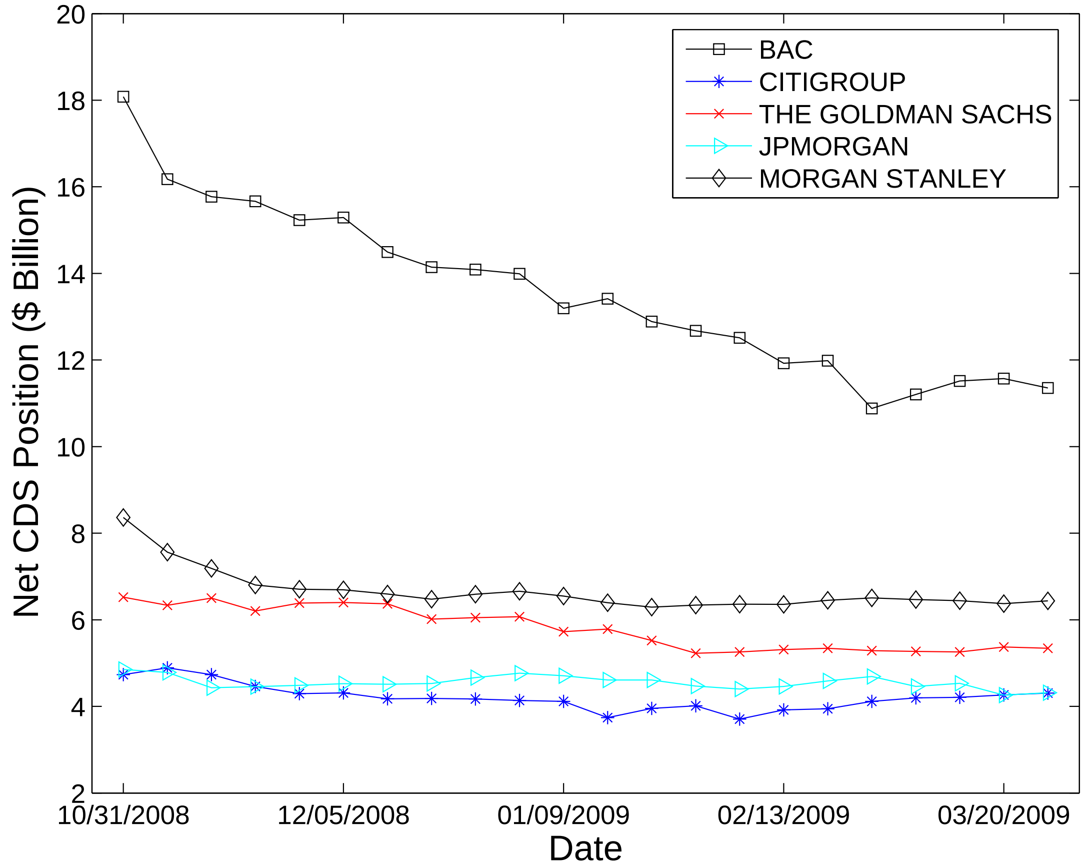


Figure 2: Net amount of notional positions in credit default swaps recorded in the DerivServ Trade Information Warehouse, for protection against the defaults of several major U.S. dealers. Source: DTCC.

Some Policy Issues Facing CDS Markets

1. How do we use central clearing counterparties effectively?
2. How do we guide the migration of some credit derivatives trading onto exchanges?
3. What is the potential for improving market transparency?
4. To what extent should credit derivatives be regulated as insurance contracts?

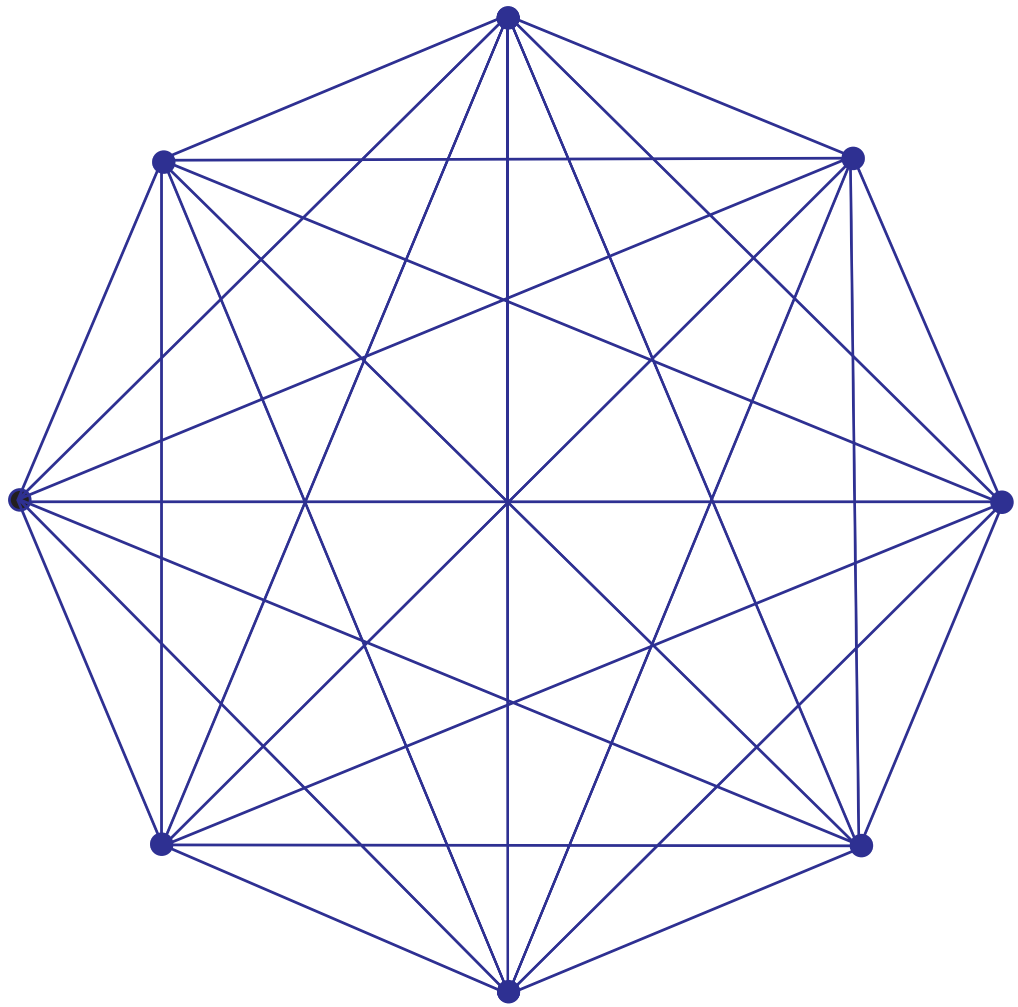


Figure 1: An over-the-counter market.

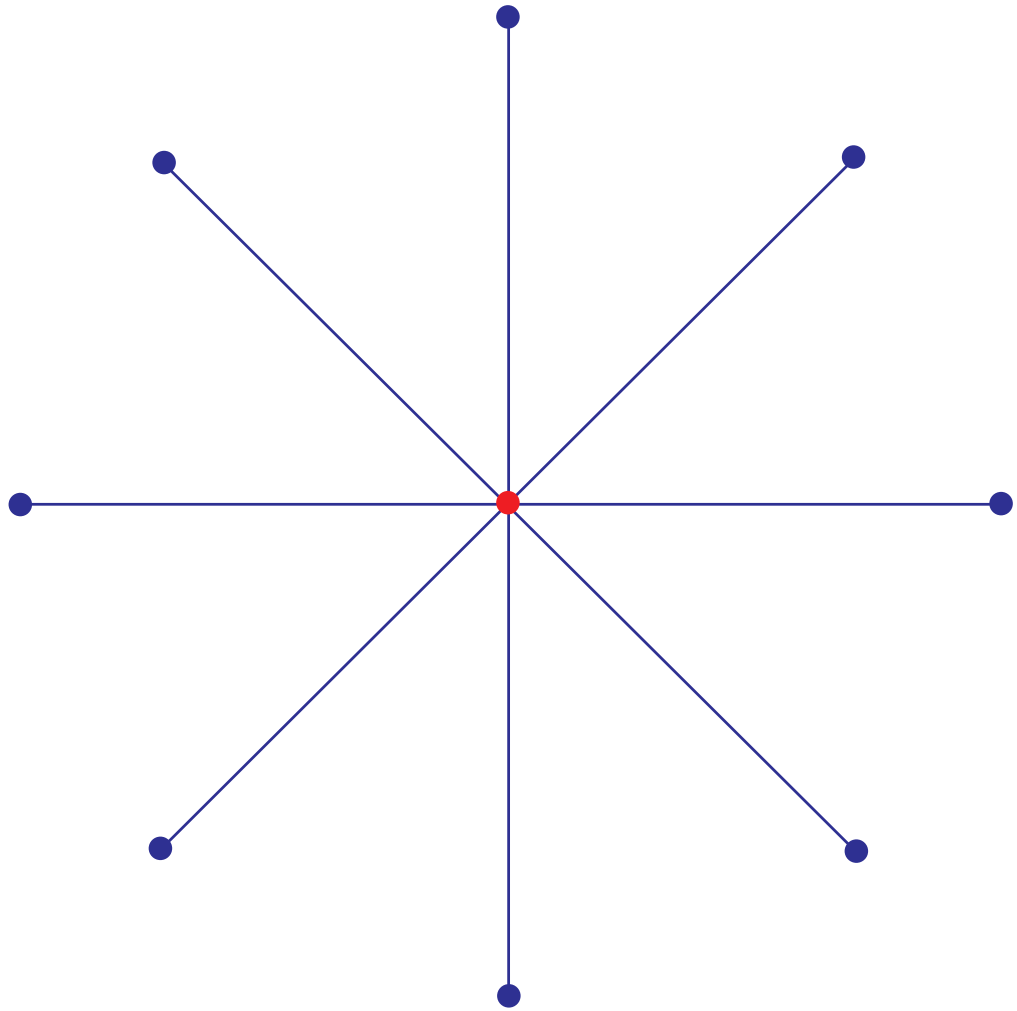


Figure 2: An exchange market.

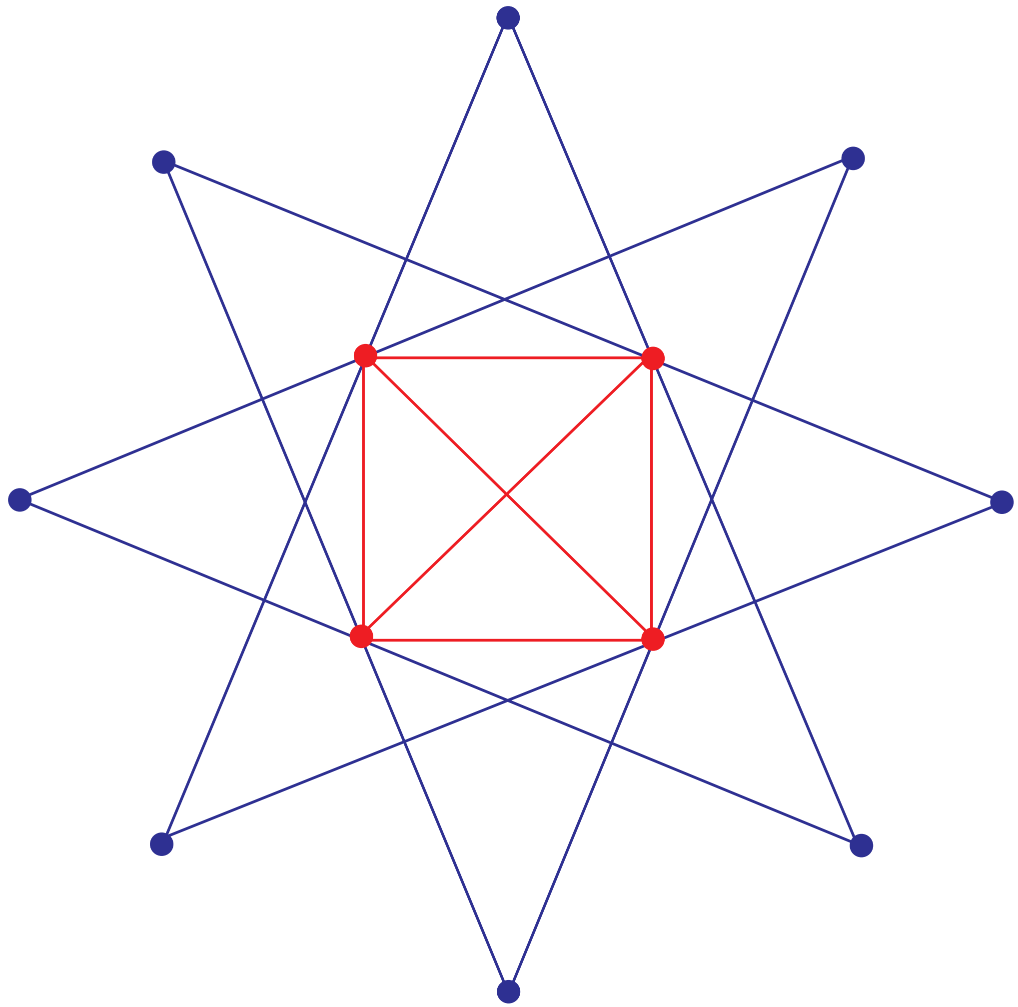
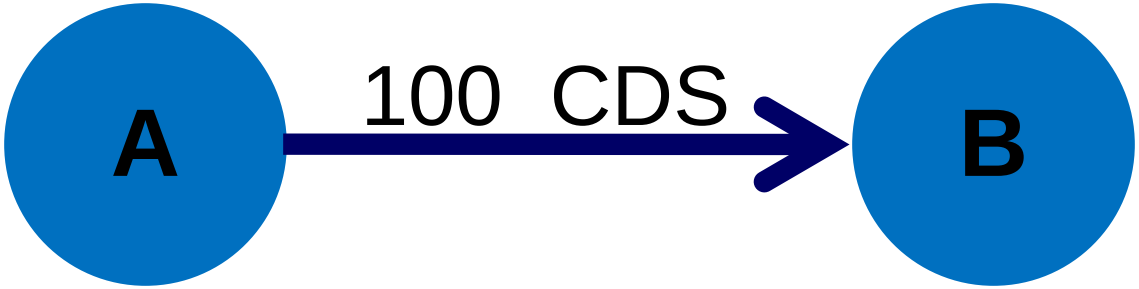
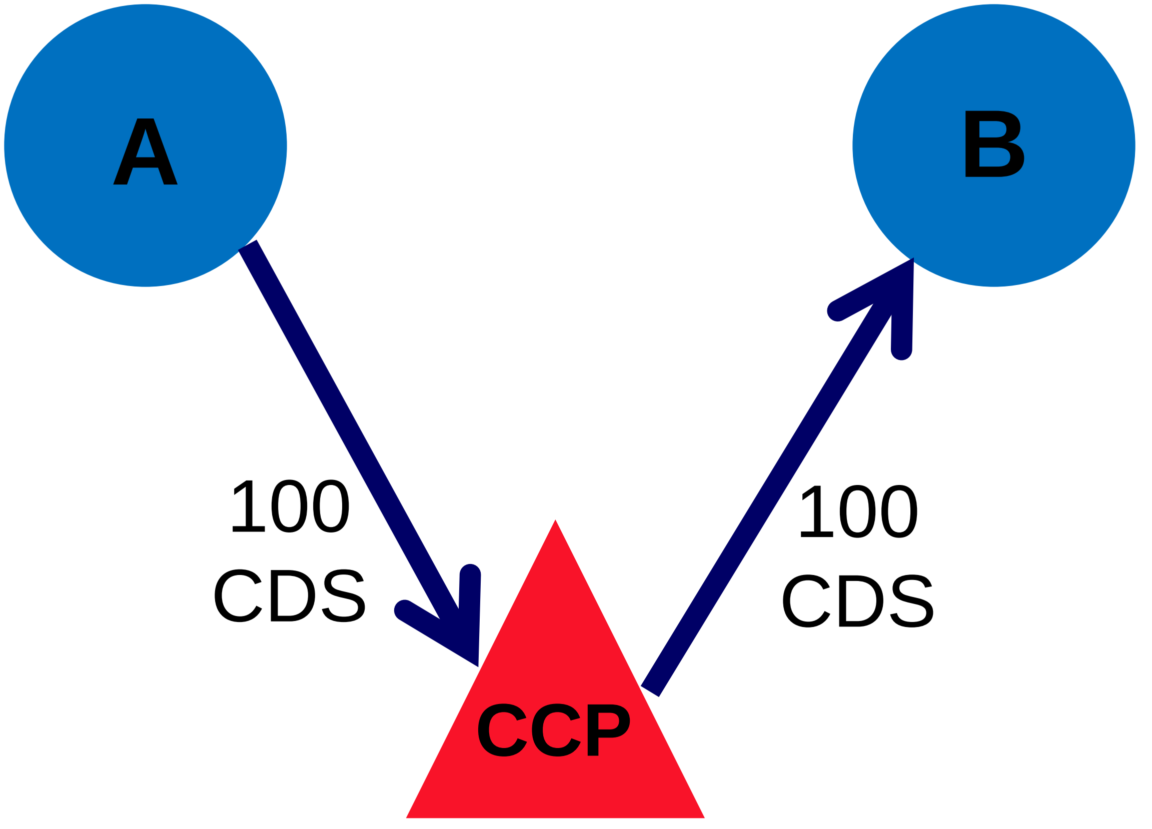
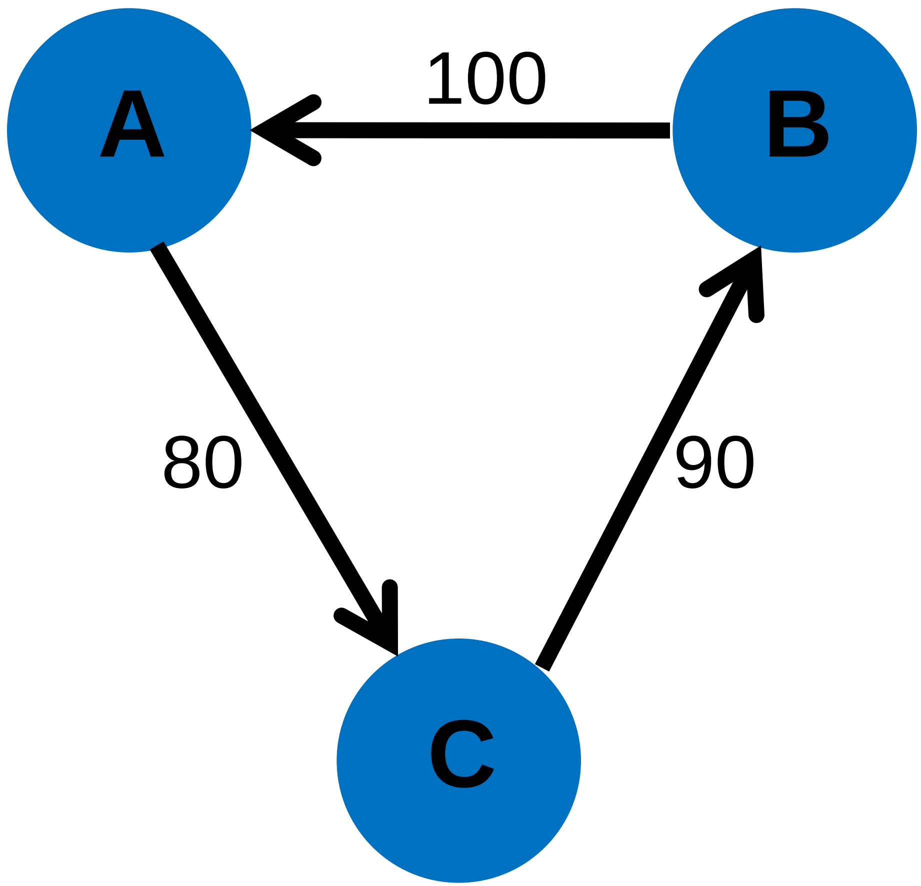
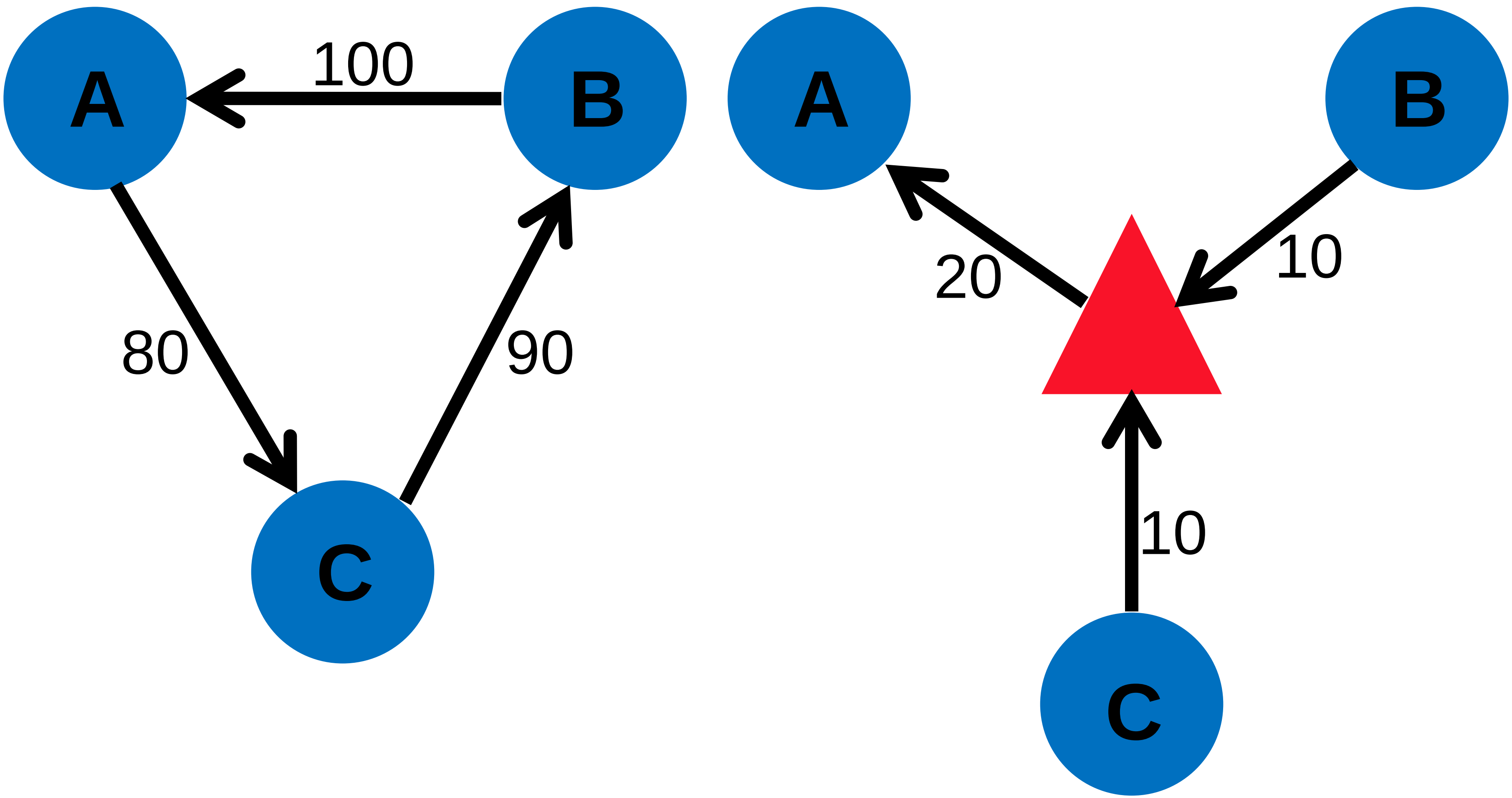


Figure 3: A dealer market.


A
100 CDS
B

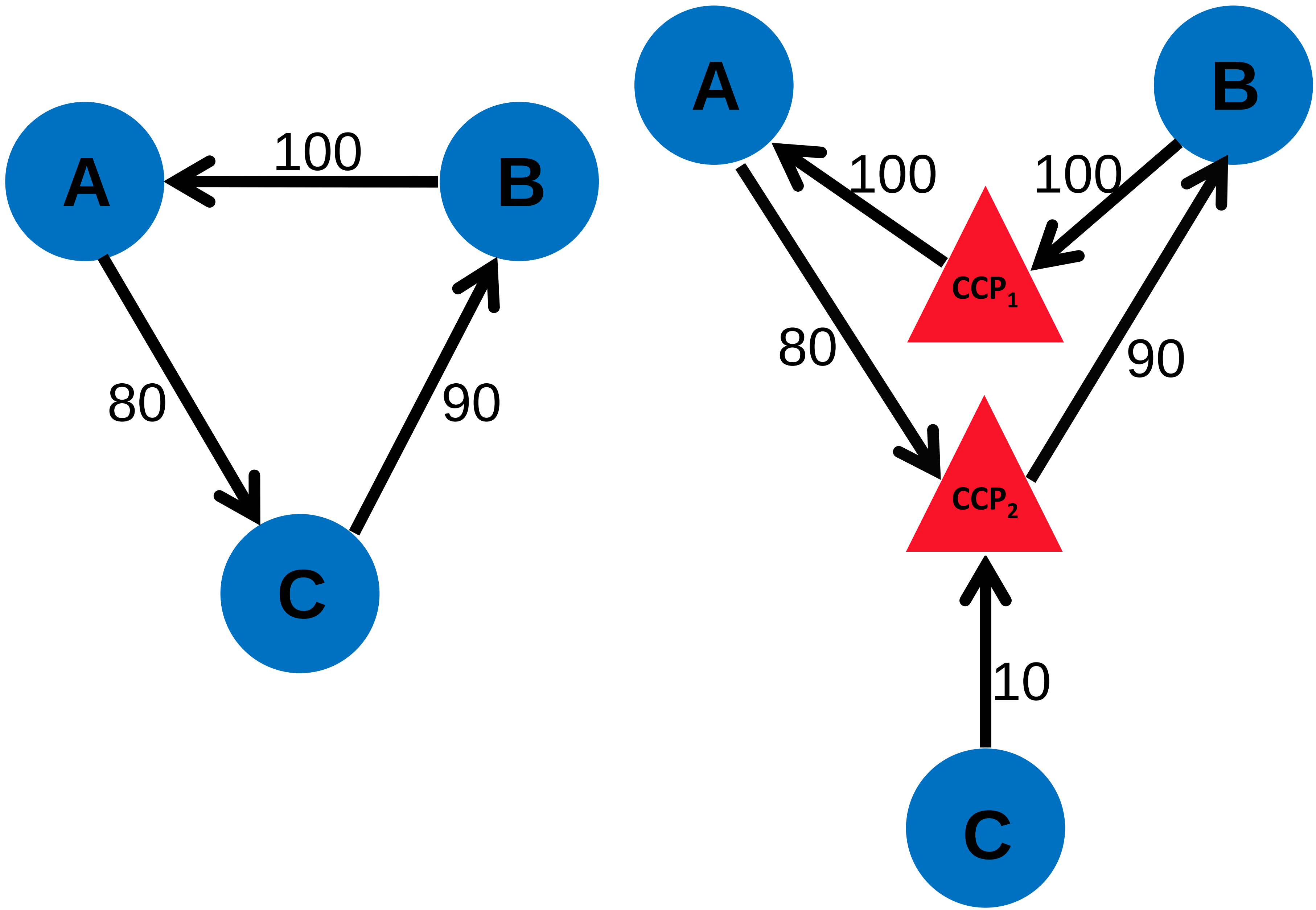

A
B
100
CDS
100
CDS
CCP

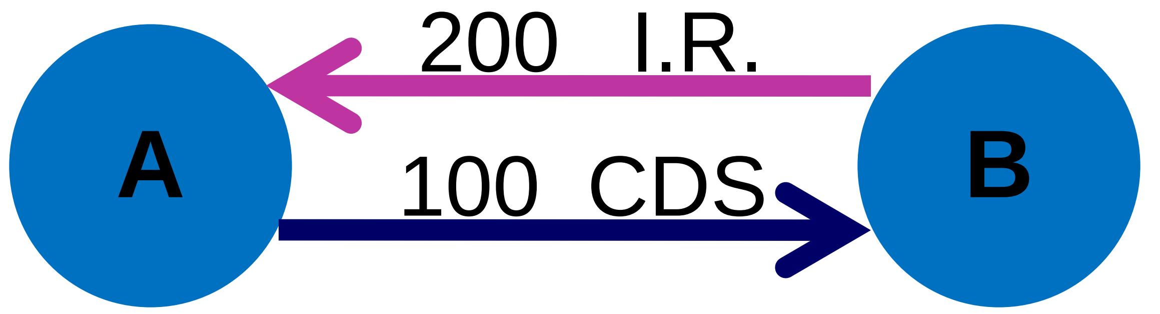

A
B
C
100
80
90


A
B
C
100
80
90
A
B
C
20
10
10

CDS-Dedicated CCP Proposals

- U.S. CCPs:
  - ICE.
  - CME.
- European CCPs:
  - NYSE-Liffe-LCH.Clearnet.
  - Eurex.
  - ICE Trust Europe.
  - LCH.Clearnet SA (a French subsidiary of LCH, dedicated to Eurozone CDS clearing).
  - CME Group (London-based clearing of European CDS).


A
B
C
100
80
90
A
B
C
100
100
80
90
10
CCP_1
CCP_2


200 I.R.
A
B
100 CDS

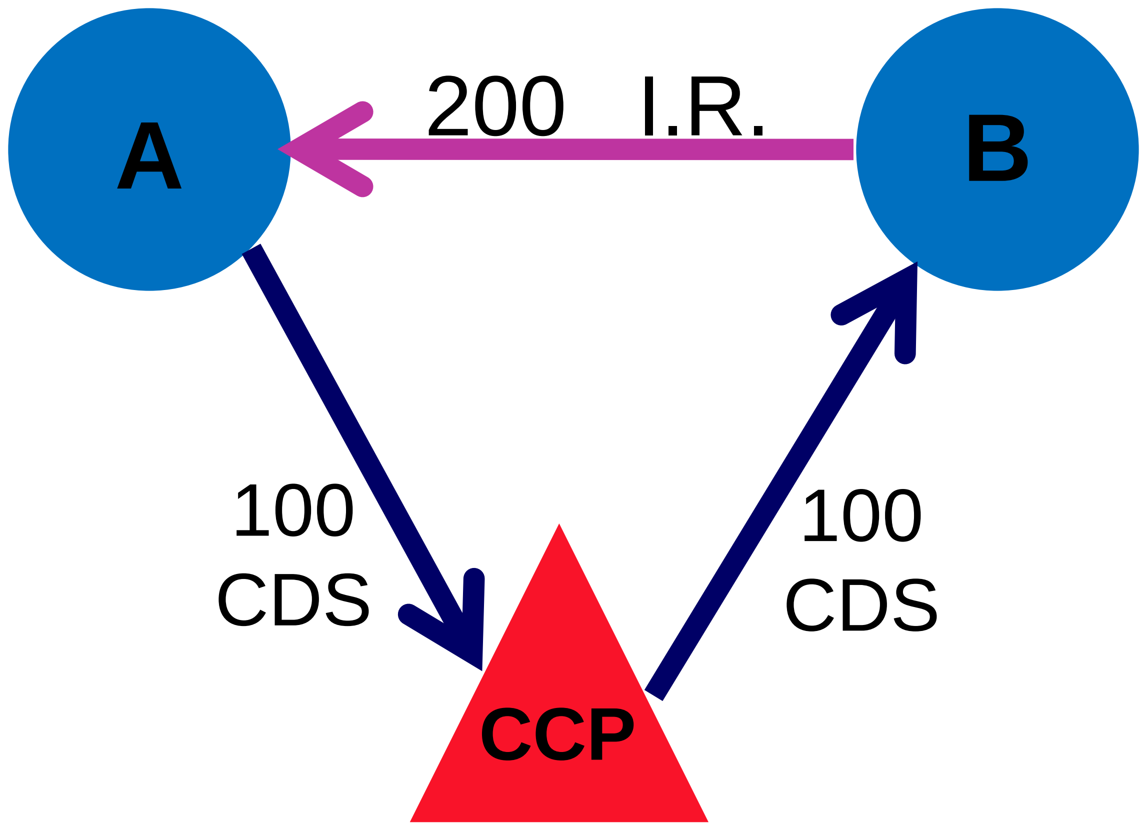

A
200 I.R.
B
100
CDS
100
CDS
CCP

Table 1: Gross exposures of dealers in OTC derivatives markets as of June 2008. Source: BIS.

Asset class	Exposure ($ billions)
CDS	3,172
Commodity	2,209
Equity Linked	1,146
Interest Rate	9,263
Foreign Exchange	2,262
Unallocated	2,301
Total	20,353
Total after netting	3,859

FEBRUARY 26, 2009

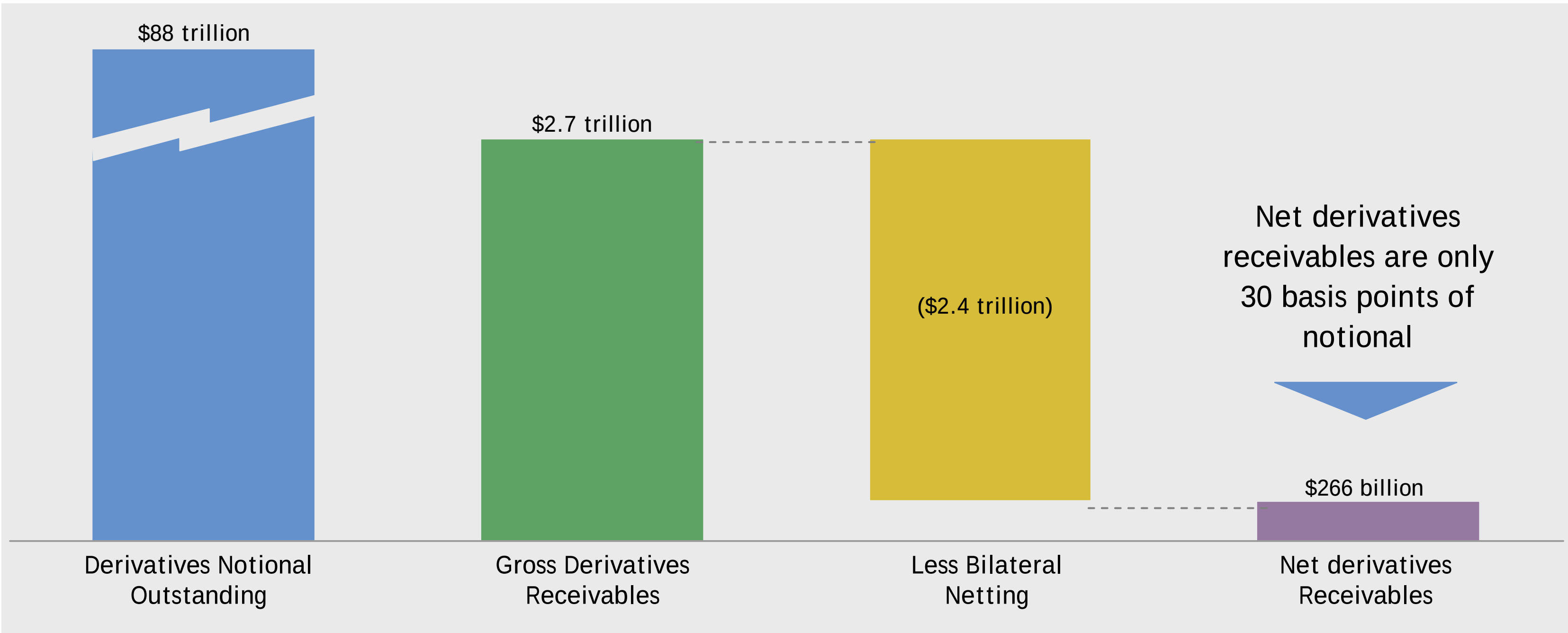
DERIVATIVES

Bill Winters, Investment Bank Co-Chief Executive Officer

JPMorgan Chase & Co.

Notional outstanding measures gives a misleading picture of counterparty exposure

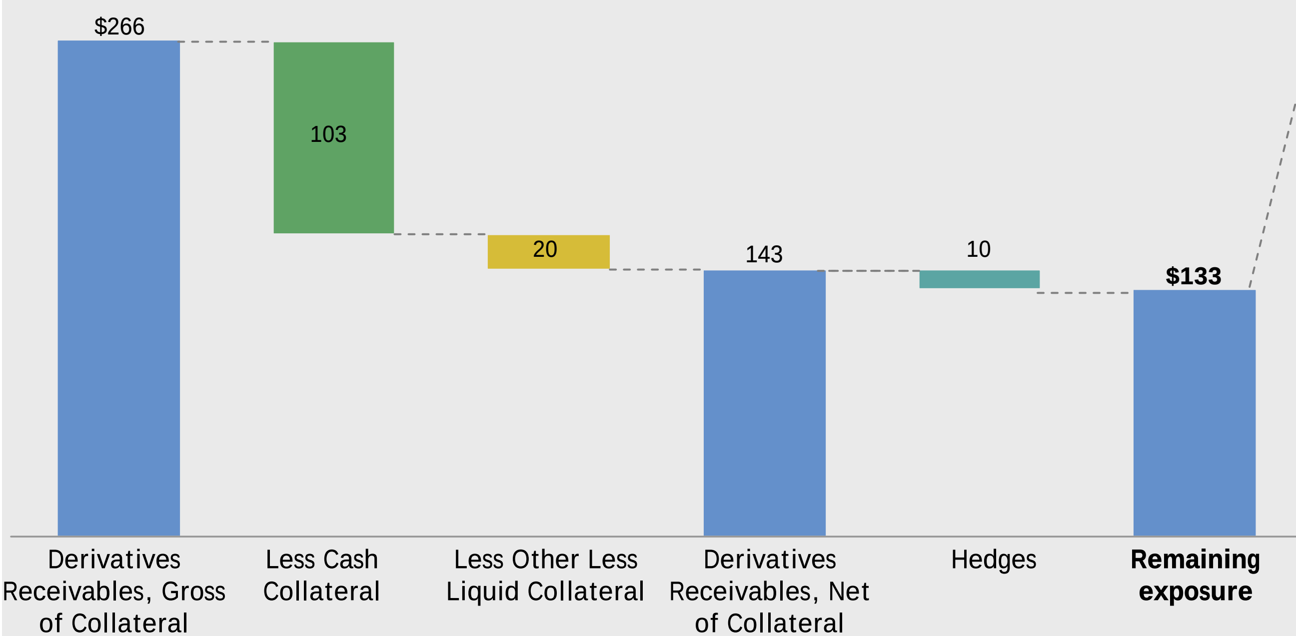
JPM Gross Derivative **Counterparty** Exposure in 4Q08



- Gross receivables measures current value of all transactions before taking account of netting
- JPM can net its derivatives payables and receivables with a given counterparty, reducing the assets on its balance sheet and its counterparty credit exposure. We only assume netting works where we are highly confident based on law and precedent

Through effective use of collateral, JPM reduces its counterparty exposure by almost half

JPM Net Derivative Counterparty Exposure in 4Q08 ($ in billions)



Risk Group	Percent	
Other high quality[1]	29%	
AAA	14%	
AA	20%	85%
A	13%	
BBB	9%	
BB	8%	
B	4%	
CCC	0%	
CC	2%	15%
C	1%	
D	0%	
Total	100%	

- 85%+ of counterparties (including most financial institutions) are required to post collateral daily, reducing JPM's credit risk, even in times of market volatility. We remain exposed to "gap risk" (i.e. sudden change in market value without ability to re-hedge) which we monitor and limit
- Governments, Supranationals and some corporations are not typically collateralized

[1] Other high quality includes low risk counterparties, including senior or preferred positions in special purpose entities

Proposition: For a market with N symmetric dealers, the introduction of a central clearing counterparty (CCP) for a particular class of derivatives leads to a reduction in average expected dealer counterparty exposure (before collateral) if and only if

$$R > \frac{2\sqrt{N-1}}{N-2}, \qquad (2)$$

where R is the ratio of the pre-CCP expected dealer-to-dealer exposures of the class in question to the expected dealer-to-dealer bilaterally netted exposure of all other classes combined.

Proposition: Whenever introducing a unique CCP for all dealers strictly improves efficiency, it is always more efficient to have one CPP than to have separate CCPs for different groups of dealers.