

Improving Systemic Collateral Efficiency

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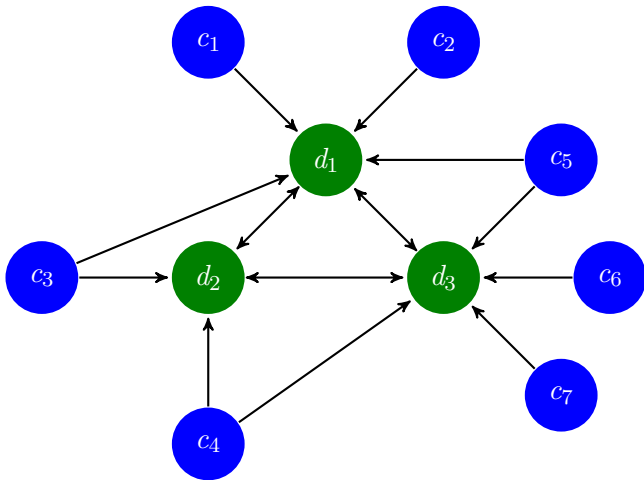
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Framing the Issue

- ▶ Collateralization lowers counterparty risk.
- ▶ Increasing collateral requirements has a shadow price, and also implies transfers from dealer shareholders to dealer creditors.
- ▶ Dodd-Frank Title VII and MiFID is part of a G20 mandate for central clearing and broader collateral requirements on non-cleared derivatives. New regulatory capital requirements push both ways.
- ▶ Dealers are charging ahead with major improvements in collateral efficiency, including trade compression and central clearing of derivatives, repos, and securities lending.

Table: Some of the funding value adjustments of major dealers (millions).
Source : Andersen, Duffie, and Song (2015).

	Amount	Date
J.P. Morgan Chase	\$1,500	Q4 2013
BAML	\$497	Q4 2014
Citi	\$474	Q3 2014
Morgan Stanley	\$468	Q4 2014
Credit Suisse	Fr279	Q4 2014
UBS	Fr267	Q3 2014
RBS	\$475	Q4 2012
Deutsche Bank	€366	Q4 2013
Barclays	£75	Q4 2012
Lloyds	€143	Q4 2012
Nomura	\$98	Q4 2013
Goldman Sachs	NA	Q4 2012



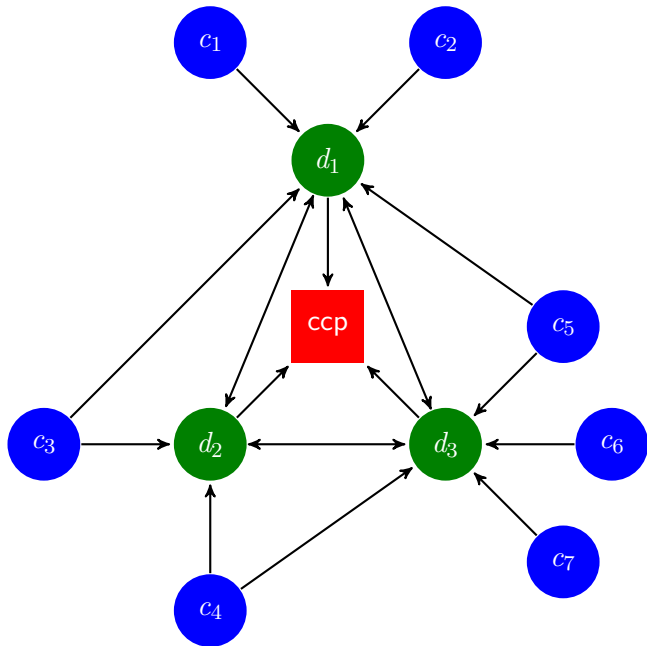


Chart 4: Gross Notional Outstanding Volume: Interest Rate Derivatives, US\$ trillions

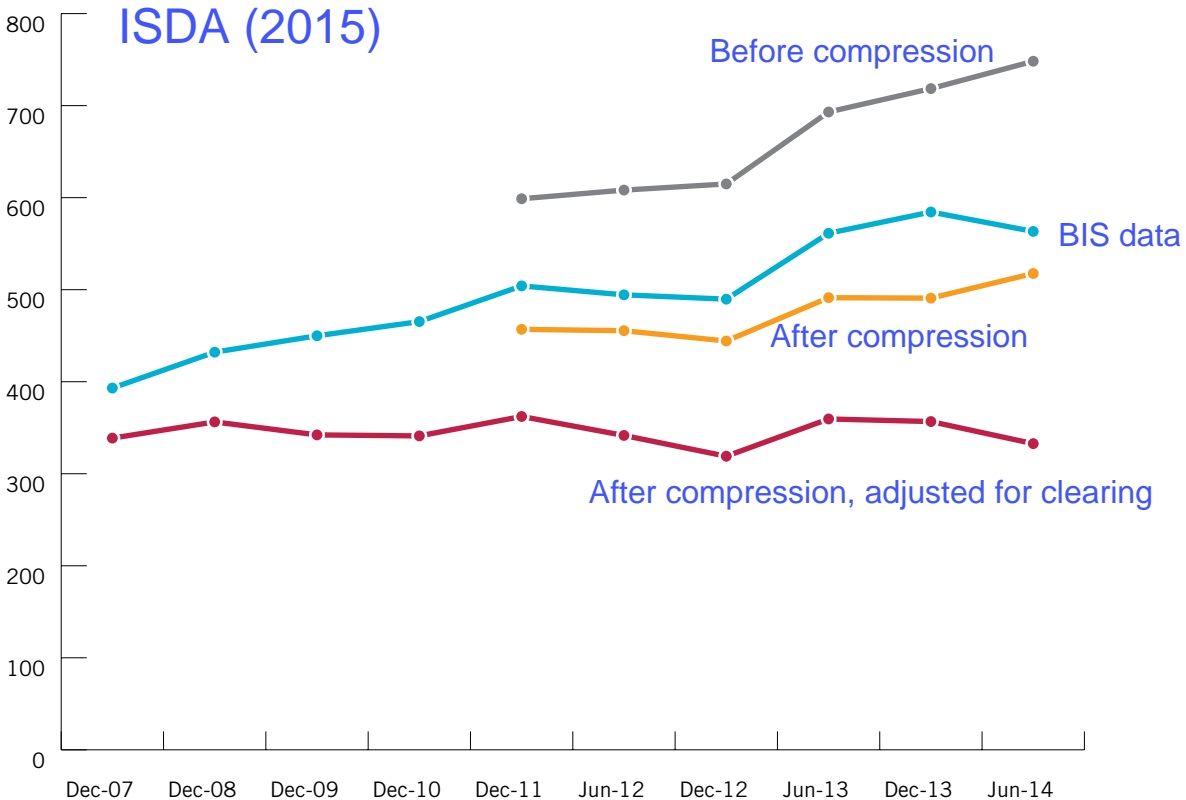
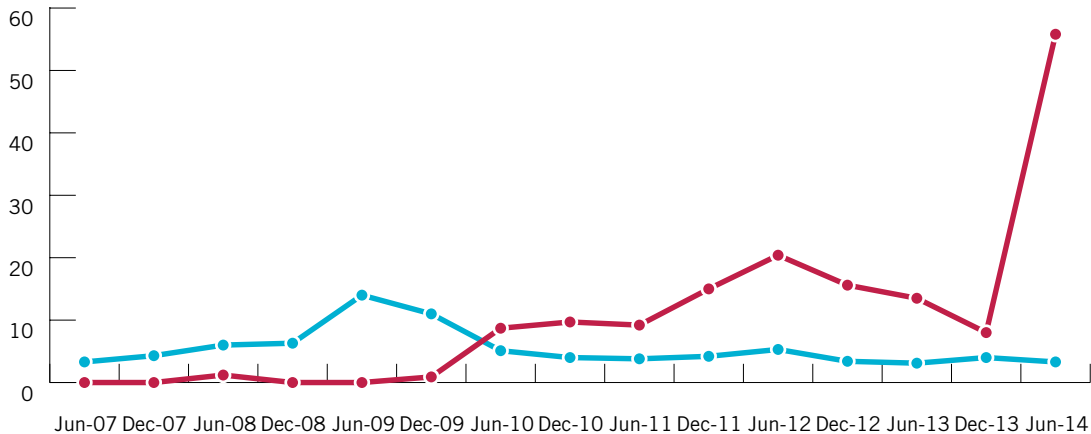


Chart 3: TriOptima triReduce Period Compressed Volume: CCP and Non-CCP Trends, US\$ trillions



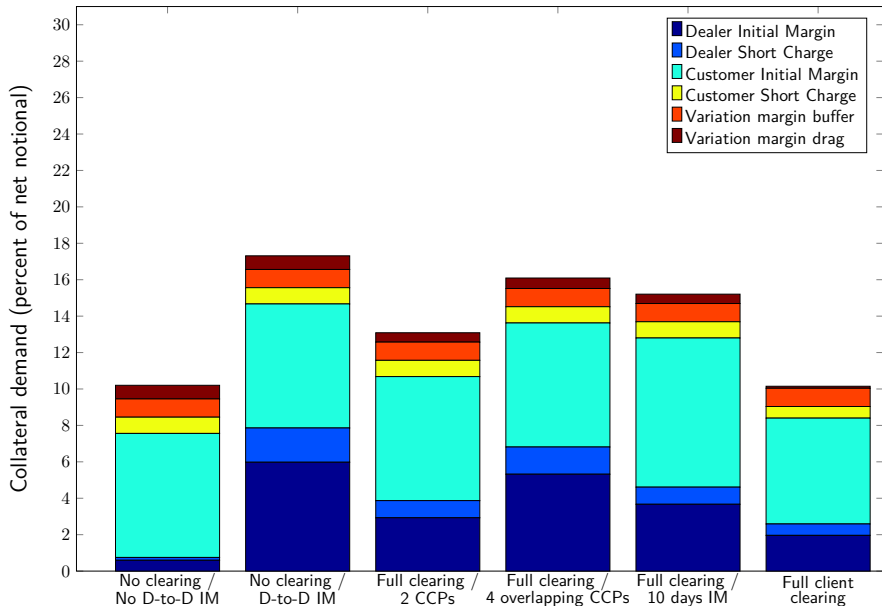
ISDA (2015)

Non-CCP



CCP





Source: Duffie, Scheicher, Vuillemeys (2015)

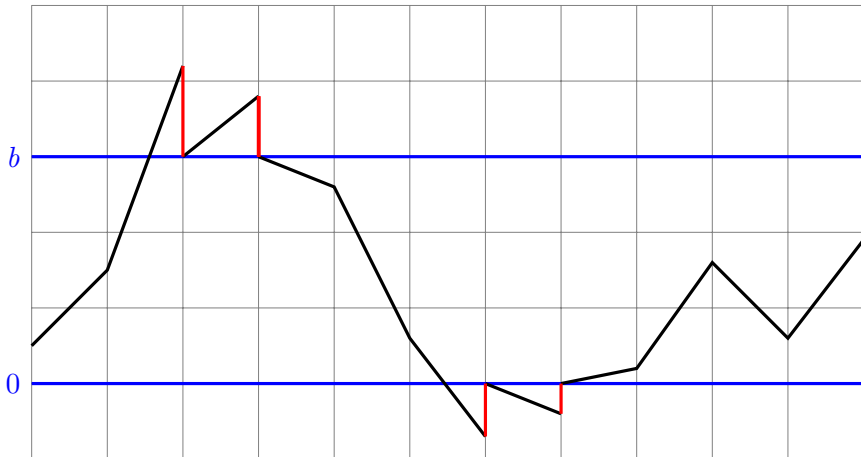
ISDA (2015)

Table 1: Gross Notional Outstanding Volume: Interest Rate Derivatives, US\$ trillions

	Dec-07	Dec-08	Dec-09	Dec-10	Dec-11	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14
(RGNO) BIS Reported Gross Notional Outstanding	393.1	432.1	449.9	465.3	504.1	494.4	489.7	561.3	584.4	563.3
(AFCT) Adjustment Factor for Cleared Transactions	54.4	75.8	107.7	124.2	141.9	152.8	170.7	201.8	227.7	230.6
LCH.Clearnet (single-counted) gross notional outstanding	54.4	75.8	107.7	124.2	141.9	152.8	170.7	195.5	213.0	206.8
CME gross notional outstanding	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.0	9.1	15.6
JSCC gross notional outstanding	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.3	5.6	8.2
(AGNO) Adjusted Gross Notional Outstanding	338.7	356.3	342.2	341.1	362.2	341.6	319.0	359.5	356.7	332.7
Pct (%) Cleared Gross Notional Outstanding	16.1%	21.3%	31.5%	36.4%	39.2%	44.7%	53.5%	56.1%	63.8%	69.3%

Appendix : Illustrating Collateral in Flight

Margin buffering



Velocity Drag and Precautionary Buffers

