

OTC Derivatives Trade Repository Data: Opportunities and Challenges

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The 2008 financial crisis revealed frailty in the OTC derivatives market

Large concentrations of bilateral counterparty exposures

Inconsistent risk management

Lack of transparency

Adverse feedback loops (e.g., margin spirals)

2009 G-20 commitments

All standardized OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate

All standardized OTC derivatives contracts should be cleared through central counterparties

OTC derivative contracts should be reported to trade repositories

Non-centrally cleared contracts should be subject to higher capital requirements

- In 2010, the G-20 also committed to impose minimum margin requirements for non-cleared contracts

Goals of the G-20 derivatives market reforms

The G-20 asked the Financial Stability Board (FSB) and its members to assess implementation and whether it is sufficient to

- improve transparency in the derivatives markets
- mitigate systemic risk, and
- protect against market abuse

In 2010, the FSB enumerated the benefits of swaps data reporting

By providing information to authorities, market participants and the public, trade repositories will be a vital source of increased transparency in the market, and support authorities in carrying out their responsibilities, including

- (i) assessing systemic risk and financial stability;
- (ii) conducting market surveillance and enforcement;
- (iii) supervising market participants; and
- (iv) conducting resolution activities.

Implementation of trade reporting requirements are well advanced

The US Dodd-Frank Act requires that swaps transactions be reported to swap data repositories (SDRs) regulated by the Commodities Futures Trading Commission or the Securities Exchange Commission

- Reporting requirements for CFTC-regulated swaps were phased on over 2013
- SEC has proposed rules for reporting of securities-based swaps

Trade reporting mandated under the European Markets Infrastructure Regulation (EMIR) began in February 2014

Trade Reporting Requirements in FSB Member Jurisdictions

As at end-October 2014

Asset class	Jurisdictions																		
	AR	AU	BR	CA	CN	EU	HK	IN	ID	JP	KR	MX	RU	SA	SG	ZA	CH	TR	US
CO		■	■	■		■					■	■					■		■
CR		■	■	■	■	■		■		■	■				■		■		■
EQ		■	■	■	■	■				■	■	■					■		■
FX		■	■	■	■	■	■	■	■	■	■	■	■	■			■	■	■
IR		■	■	■	■	■	■	■	■	■	■	■		■	■		■		■

■ Requirements in effect for all sub-products ■ Requirements in effect for some sub-products

CO = commodity, CR = credit, EQ = equity, FX = foreign exchange, IR = interest rate

Source: FSB OTC Derivatives Working Group, November 2014

Trade reporting infrastructure is available in most jurisdictions

In the US, DTCC, CME, ICE and DSDR operate registered swap data repositories

Trade repositories may apply to operate in multiple jurisdictions

As of November 2014, 22 legal entities were registered to operate a trade repositories in one or more jurisdiction

Availability of Trade Repositories by Asset Class in FSB Member Jurisdictions

TRs authorised or pending authorisation as at end-October 2014

Asset class	Jurisdictions																		
	AR	AU	BR	CA	CN ¹	EU	HK	IN	ID ²	JP	KR	MX	RU	SA	SG	ZA	CH ³	TR	US
CO		1	2	3		6					2	1	2		1				4
CR		1	2	3		6		1		1	2		2		1				4
EQ		1	2	2		6	1			1	2	1	2		1				3
FX		1	2	2		5	1	1		1	2	1	2	1	1				3
IR		1	2	2		6	1	1		1	3	1	2	1	1				3

X indicates the number of TRs collecting transaction reports in given asset class that are authorised or pending authorisation (or have a temporary exemption from authorisation requirements) in given jurisdiction.

¹ In China, transactions in credit, FX and interest rate derivatives are required to be reported to the China Foreign Exchange Trade System (CFETS) ² In Indonesia, transactions in FX and interest rate derivatives must be reported to Bank Indonesia. ³ Under the partial reporting requirements in effect in Switzerland, transactions – including OTC – are reported to an exchange rather than to a TR. TRs will be introduced with the new regulation.

Source: FSB member jurisdictions.

Source: FSB OTC Derivatives Working Group, November 2014

DTCC Trade Information Warehouse

Central repository for substantially all CDS transactions

Unit of observation is individual transaction event

- New trades
- Post-trade events such as novations, terminations, etc.

Data fields cover economic terms of each transaction including

- Record date, notional amount, reference entity, buyer and seller, tenure, pricing terms

DTCC publishes aggregate data and reports disaggregate data to relevant authorities

- Fed has access to transactions in which a bank we regulate is a counterparty or in which the bank is named as a reference entity

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Monitoring bilateral risk exposures

CDS positions entail significant market risk

- Changes in spreads of individual reference entities or sectors
- Changes in the term-structure of credit risk
- Changes in market implied default correlations

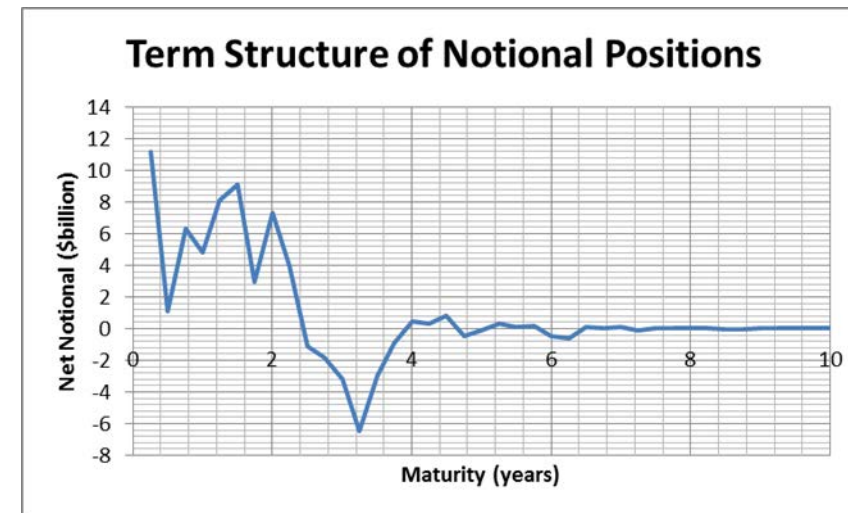
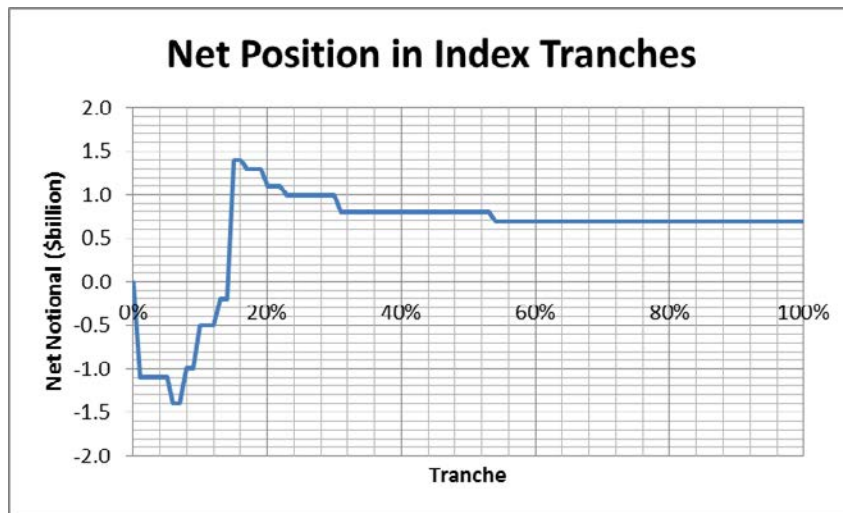
Engaging in CDS transactions exposes market participants to counterparty credit risk

- Both buyers and sellers may bear current exposure if positions are not covered by variation margin
- Sellers bear significant potential future exposure which cannot be fully covered by initial margin

Exposure to market risk factors

Aggregate net notional positions of individual institutions indicate exposures to market risk factors

- sector, region, maturity, index tranche

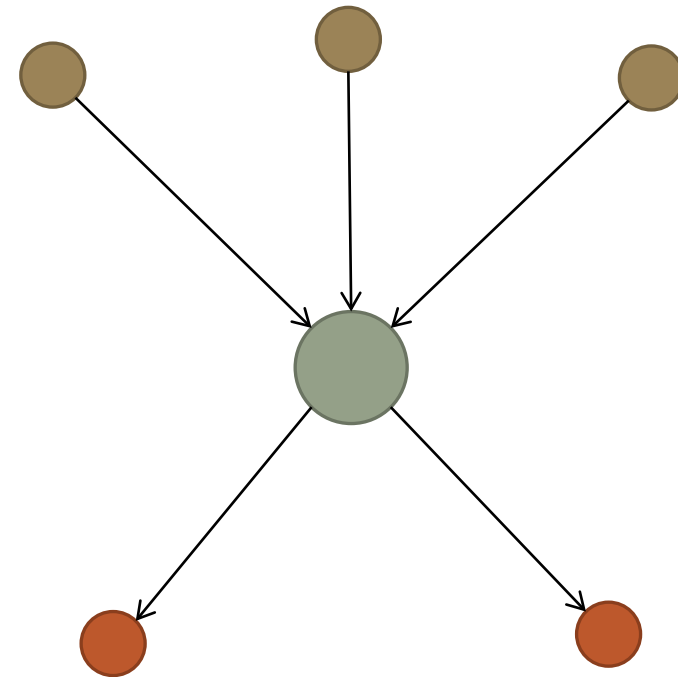


Counterparty risk exposures

Ability to monitor counterparty risk exposure is limited by lack of data on

- Netting arrangements
- Portfolio valuations
- Posted collateral

Notional positions provide an upper bound on the potential future exposure of a transaction



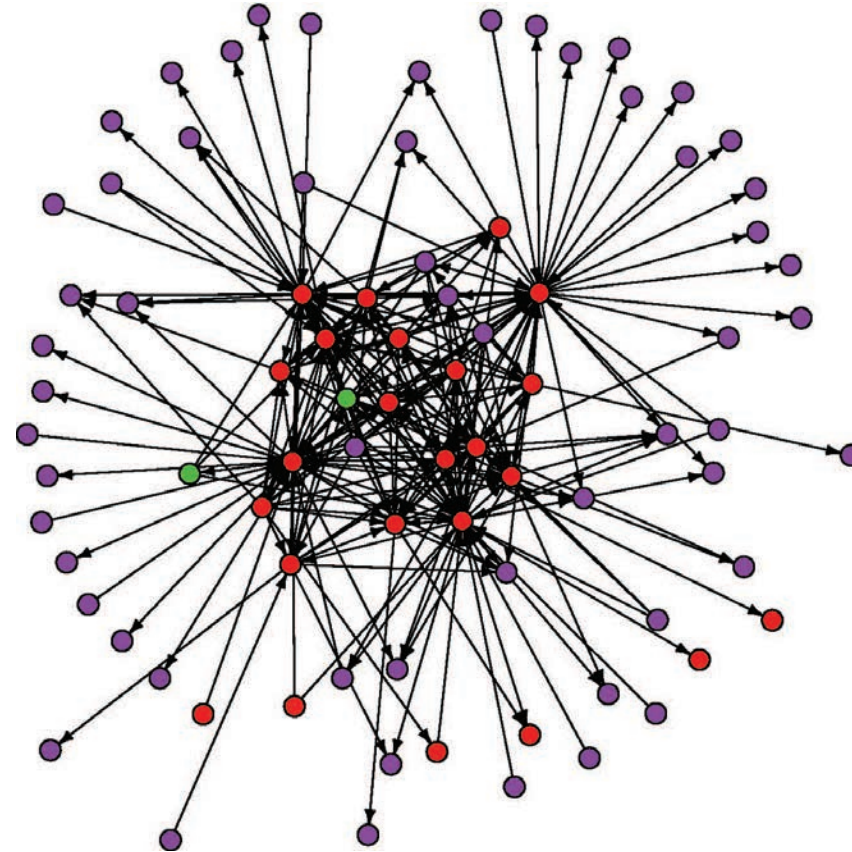
Evaluating the CDS network

Network analysis can help...

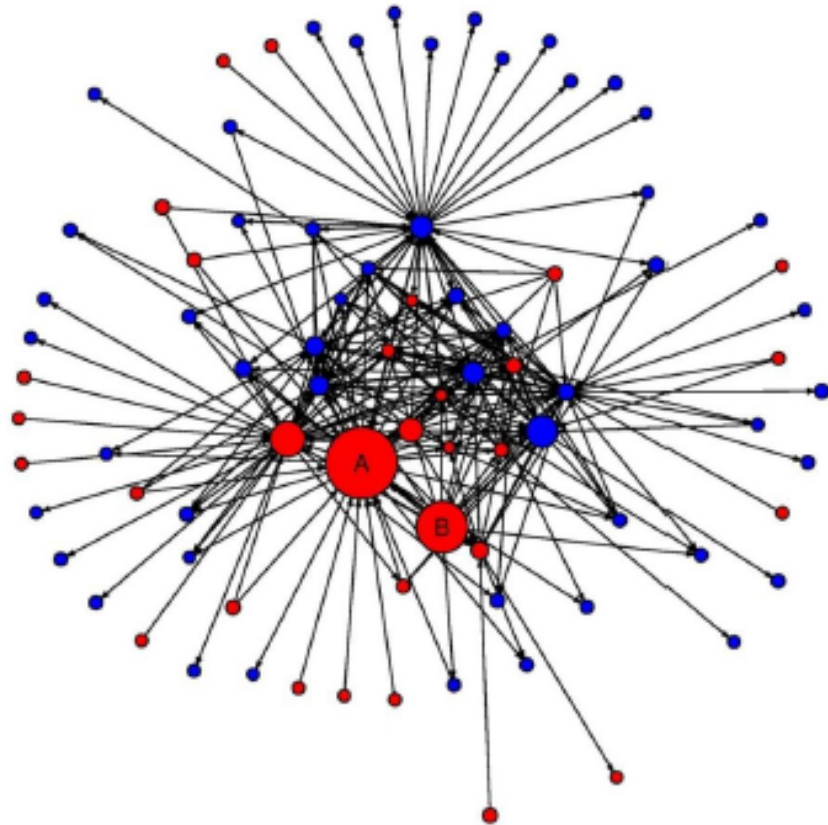
- Characterize patterns of interconnectedness
- Identify firms crucial to risk transfer
- Assess the robustness of the network to the failure of key nodes

Network characteristics

- **Centralization** – is the network dominated by significant buyers or sellers?
- **Clustering** – to what extent are market transactions intermediated by 3rd parties?
- **Connectedness** – would other firms remain connected if a key firm were removed?



Evaluating the CDS network



Red circles are net sellers

Blue circles are net buyers

Circle area indicates size of net exposure

Arrows point from sellers to buyers

Source: Janet Yellen, "Interconnectedness and Systemic Risk. Lessons from the Financial Crisis and Policy Implications," remarks before the AEA/AFA, January 2013. Derived from DTCC data.

Analysis supports the Federal Reserve's supervisory and financial stability functions

Monthly reports on the CDS positions of large, systemically important institutions

Quarterly reports on the largest market positions by any market participants and concentrations in trading activity

Quarterly reports on net and gross positions by financial sector (bank, asset managers, insurance, etc.)

Regulating a global market requires access to global data

Derivatives are a global business

- Largest market participants have subsidiaries in many jurisdictions
- Trades frequently involve counterparties in different jurisdictions

For systemic risk monitoring and other functions, it is important that relevant authorities be able to obtain a holistic view of global derivatives markets.

Ideally, TR data should span jurisdictions

Authorities with financial stability mandates may need access to data outside their jurisdictions

Legal barriers pose significant challenges to TR data reporting and access

Legal barriers such as bank secrecy laws and privacy laws impose restrictions on what data can be reported into foreign trade repositories

Important jurisdiction restrict how TR data can be shared among authorities

- Dodd-Frank Section 728 requires that an authority who is not the primary regulator of s swaps data repository provide an indemnity against any possible legal damages from data disclosure before accessing SDR data
- EMIR requires that a number of steps including the conclusion of an “international agreement” before data can be shared

Technical barriers impede data aggregation across trade repositories

Widespread adoption of Legal Entity Identifiers (LEIs) will improve our ability to link trades with counterparties and CDS reference entities

There is a need for greater standardization across trade repositories

- Common data field definitions
- Unique transaction identifiers to prevent double-counting of transaction data reported into multiple TRs
- Unique product identifiers to facilitate aggregation of transaction data to product-level positions

The FSB and international standards-setting bodies are working to address challenges

In August 2013 the CPMI and IOSCO issued a report detailing the types of TR data authorities require in order to meet their legal mandates

In September 2014 the Financial Stability Board published a feasibility study on aggregation of trade repository data.

- Found that a physically or logically centralized aggregation mechanism was preferable to system in which individual authorities collect and aggregate information
- However, significant legal and barriers need to be overcome before such a mechanism can be established

The CPMI and IOSCO are currently working to develop standards for

- TR data field harmonization
- Unique transaction identifiers
- Unique product identifiers

The FSB is undertaking a peer review of OTC derivatives trade reporting practices in member jurisdictions

Conclusions

Trade repository data provide a rich source of highly granular information on OTC derivatives markets

TR data analysis supports the Federal Reserve's prudential supervision and financial stability missions

Legal and technical barriers to TR data aggregation and access prevent authorities with financial stability mandates from obtaining a holistic view of global derivatives markets

Addressing these challenges requires coordination and cooperation among TR regulators, international standards-setting bodies, and authorities who make use of TR data