



Towards a Transparency Standard

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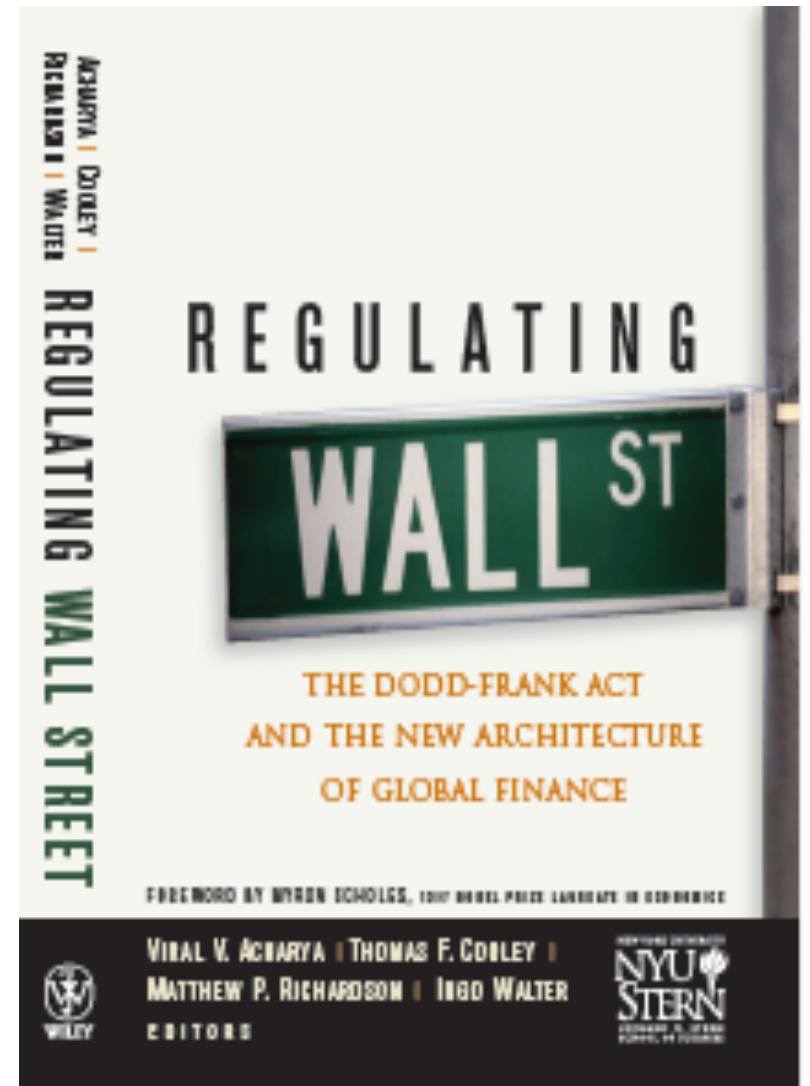
Presentation at NBER Systemic Risk Initiative
October 2010



Regulating Wall Street:

The Dodd-Frank Act and the New Architecture of Global Finance

October 2010



Outline of the talk

- Counterparty risk externality and ways to address it (focused on derivatives exposures)
- A Transparency Standard
- What do financial firms currently disclose?
- What will financial firms be asked to disclose (Dodd-Frank Act)
- Implications for the Office of Financial Research



Counterparty Risk Externalities

Counterparty risk externality (Acharya-Engle 2009, Acharya-Bisin 2010)

- A agrees to pay B; A turns around and sells to C also...
- Contract with C potentially dilutes contract with B
- A *counterparty risk externality* that A must internalize for there to be efficient levels of leverage and risk-taking
- Can B adequately reflect this risk in charging price or adopting risk controls against A?
- Depends upon whether B can observe what A does and write an *exclusive* contract depending on *what else* A does
- Examples:
 - Position limits
 - Margin requirements based on credit ratings

Ways to address counterparty risk externality

- Central clearing and margining
 - Enables central counterparty or trade guaranteeing body or exchange to observe end-of-day (even intra-day) positions
 - Position limits and margins are set accordingly
 - Works best if the same clearing entity clears most products
- Transparency
 - Many markets will remain OTC
 - Regulatory attempts to charge capital on simpler assets has failed terribly
 - Enable better pricing and managing of counterparty risk by markets

Why this issue is particularly important in context of derivatives?

- 10-Q's of banks reveal some information about derivative exposures (as we will see in detail later)
- In 3Q 2009
 - 5 largest US banks carrying \$500bln of un-collateralized payable exposure
 - Numbers similar for European banks
- What do these numbers mean?
 - Gross or Net?
 - What is the potential exposure: replacement cost assumption?
 - To correlated counterparties?



A Transparency Standard

All dealers and large swap participants should report on frequent basis...

- **Classification of OTC exposures** into
 - product types (such as single-name CDS, index CDS, interest rate swaps, currency swaps, commodities, equities, etc.),
 - by major currency categories,
 - maturity (buckets) of contracts,
 - type of counterparty (bank, broker-dealer, corporation, GSE, monoline, insurance firm, etc.), and
 - credit rating of counterparties.

All dealers and large swap participants should report on frequent basis...

- **Size of exposures** as
 - gross (maximum notional exposure),
 - in fair-value terms (to account for mark-to-market changes),
 - net (taking account of bilateral netting arrangements), and
 - **uncollateralized** net (recognizing collateral posted by counterparties)

All dealers and large swap participants should report on frequent basis...

- **Uncollateralized net exposures** should be stated also as “**potential exposures**” based on stress tests that take account of
 - several notches of ratings downgrade of counterparty and its ability to post additional collateral; and
 - counterparty default and replacement risk assuming severe market conditions such as replacement time of 2-4 weeks
 - Liquidity risk
 - Level 1 product today may be Level 3 in most stress scenarios

All dealers and large swap participants should report on frequent basis...

- **Margin call reports** listing additional collateral liabilities as
 - total additional liability in case the firm was to experience one, two or more (say, up to six) notch downgrades; and
 - largest such liabilities aggregated by different counterparties (say, five or ten largest)
- **Concentration reports** providing above information for the entity's largest counterparty exposures (say, the largest five or ten) that account for a substantial proportion of the total exposure, say 75%.



What Do Financial Firms Currently Disclose?

More than we see in Call Reports

But it is not well-standardized

It is NOT in Call Reports, Compustat, ...

Disclosure	GS	MS	BofA	Citi	JPM	AIG
Exposure - product type						
- maturity bucket						
- counterparty type						
- counterparty credit rating						
Value – Maximum loss						
– Uncollateralized net						
– Net of collateral						
– By Currency Categories						
Collateral posted						
Additional collateral to post						
– One notch downgrade						
- Two notch downgrade						
- Three notch downgrade						
- Multi-notch downgrade						
Concentrations						



Citigroup:

Credit derivatives positions by industry, product
and rating of underlying reference entity

The following tables summarize the key characteristics of the Company's credit derivative portfolio as protection seller (guarantor) as of September 30, 2009 and December 31, 2008:

<i>In millions of dollars as of September 30, 2009</i>	Maximum potential amount of future payments	Fair value payable⁽¹⁾	
By industry/counterparty			
Bank	\$ 860,437	\$ 46,071	— 60%
Broker-dealer	301,216	17,661	— 20%
Monoline	-	-	
Non-financial	2,127	96	
Insurance and other financial institutions	151,326	12,753	
Total by industry/counterparty	\$1,315,106	\$76,581	
By instrument:			
Credit default swaps and options	\$1,314,282	\$76,383	
Total return swaps	824	198	
Total by instrument	\$1,315,106	\$76,581	
By rating:			
Investment grade	\$ 759,845	23,362	— 30%
Non-investment grade	422,865	33,231	
Not rated	132,396	19,988	
Total by rating	\$1,315,106	\$76,581	

(1) In addition, fair value amounts receivable under credit derivatives sold were \$23,324 million.



JPMorgan:

Credit derivatives positions by maturity and credit rating of underlying entity

Protection sold – credit derivatives and credit-linked notes ratings/maturity profile^(a)

December 31, 2008 (in millions)	< 1 year	1-5 years	> 5 years	Total notional amount	Fair value ^(c)
Risk rating of reference entity					
Investment grade (AAA to BBB-) ^(b)	\$ (177,404)	\$ (1,767,004)	\$ (713,555)	\$ (2,657,963)	\$ (215,217)
Noninvestment grade (BB+ and below) ^(b)	(121,040)	(992,098)	(428,895)	(1,542,033)	(244,975)
Total	\$ (298,444)	\$ (2,759,102)	\$ (1,142,450)	\$ (4,199,996)	\$ (460,192)

45%

(a) The contractual maturity for single-name CDS contract generally ranges from three months to ten years and the contractual maturity for index CDS is generally five years. The contractual maturity for CLNs typically ranges from three to five years.

(b) Ratings scale is based upon the Firm's internal ratings, which generally correspond to ratings defined by S&P and Moody's.

(c) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements and cash collateral held by the Firm.



Goldman Sachs:

OTC derivatives counterparty exposure by maturity, credit rating of counterparty, netting of collateral, risk types and maturity buckets

OTC Derivative Credit Exposure
(in millions)

As of September 2009

Credit Rating Equivalent	0 - 12 Months	1 - 5 Years	5 - 10 Years	10 Years or Greater	Total	Netting ⁽²⁾	Exposure	Exposure Net of Collateral
AAA/Aaa	\$ 1,482	\$ 3,249	\$ 3,809	\$ 2,777	\$ 11,317	\$ (5,481)	\$ 5,836	\$ 5,349
AA/Aa2	6,647	12,741	7,695	9,332	36,415	(20,804)	15,611	11,815
A/A2	31,999	46,761	29,324	31,747	139,831	(111,238)	28,593	24,795
BBB/Baa2	4,825	7,780	5,609	8,190	26,404	(12,069)	14,335	8,041
BB/Ba2 or lower	3,049	13,931	2,903	1,483	21,366	(5,357)	16,009	9,472
Unrated	666	1,570	387	148	2,771	(224)	2,547	1,845
Total	<u>\$48,668 ⁽¹⁾</u>	<u>\$96,032</u>	<u>\$49,727</u>	<u>\$53,677</u>	<u>\$238,104</u>	<u>\$(155,173)</u>	<u>\$ 82,931</u>	<u>\$61,317</u>

← 40%



JPMorgan:

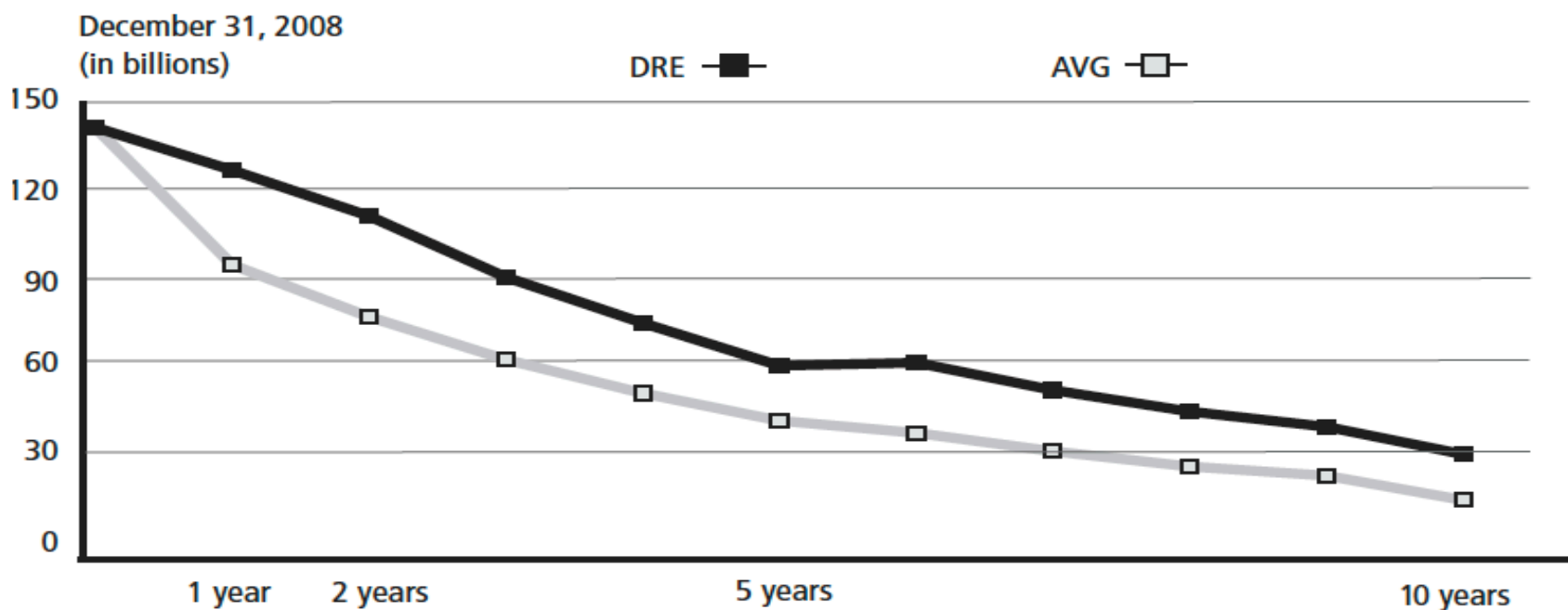
Similar information...

Much better counterparty credit risk

Ratings profile of derivative receivables MTM

Rating equivalent December 31, (in millions, except ratios)	2008		2007	
	Exposure net of all collateral	% of exposure net of all collateral	Exposure net of all collateral	% of exposure net of all collateral
AAA/Aaa to AA-/Aa3	\$ 68,708	48%	\$ 38,314	57%
A+/A1 to A-/A3	24,748	17	9,855	15
BBB+/Baa1 to BBB-/Baa3	15,747	11	9,335	14
BB+/Ba1 to B-/B3	28,186	20	9,451	14
CCC+/Caa1 and below	5,421	4	357	—
Total	\$ 142,810	100%	\$ 67,312	100%

Exposure profile of derivatives measures





**Concentration Reports?
NOT YET PROVIDED...**



Margin Call Report:

Contrasting scenarios (and risks) of
JPMorgan and Goldman Sachs;

Was AIG's collateral need unexpected?

How much cash did they have relative to margin risk?

Collateral

Credit-Risk-Related Contingent Features in Derivatives

	JP Morgan	AA to BBB: 6 notch	AA to AA-: 1 notch	Goldman Sachs	
	<u>Collateral Posted (\$bn)</u>	<u>Additional Collateral in Case of downgrade</u>		<u>One Notch Downgrade, in \$mm</u>	<u>2 Notch</u>
2006-Q4	26.6				
2007- Q1	27.0	2.6	0.1	607.0	
2007- Q2	28.3	2.9	0.2	598.0	
2007- Q3	32.8	3.2	0.3	752.0	NA
2007- Q4	33.5	2.5	0.2	595.0	
2008- Q1	48.5	3.4	0.3	957.0	
2008- Q2	58.2	3.5	0.6	785.0	
2008- Q3	60.1	4.3	0.9	669.0	
2008- Q4	99.1	6.4	2.2	897.0	2140.0
2009- Q1	82.3	4.9	1.4	941.0	2140.0
2009- Q2	67.7	4.0	1.2	763.0	1930.0
2009- Q3	66.0	4.4	1.5	685.0	1700.0
2009- Q4					

AIG's collateral risk disclosure over time

	2007-1	2007-2	2007-3	2007-4
Marginal Call Reports				
Additional Collateral for One-notch Downgrade Rating ⁽⁴⁾	\$902	\$847	\$830	\$1,390
Additional Collateral for Two-notch Downgrade Rating				
Additional Collateral for Three-notch Downgrade Rating				
Additional Collateral for Multi-notch Downgrade Rating				
	2008-1	2008-2	2008-3	Actual
Marginal Call Reports				
Additional Collateral for One-notch Downgrade Rating ⁽⁴⁾	\$1,800	\$1,200	\$1,800	
Additional Collateral for Two-notch Downgrade Rating			\$9,800	Moody's/Fit
Additional Collateral for Three-notch Downgrade Rating			\$20,000	S&P
Additional Collateral for Multi-notch Downgrade Rating			\$32,000	Market risk

AIG's collateral risk as of 6 Aug '08 10Q

Credit ratings are important to AIG's business, results of operations and liquidity.

Downgrades in AIG's credit ratings could increase AIG's borrowing costs and could adversely affect its competitive position and liquidity. With respect to AIG's liquidity, it is estimated that, as of the close of business on April 30, 2008, based on AIGFP's outstanding municipal guaranteed investment agreements (GIAs) and financial derivative transactions at that date, a downgrade of AIG's longer-term senior debt ratings to 'Aa3' by Moody's Investors Service (Moody's) or 'AA-' by Standard & Poor's, a division of the McGraw-Hill Companies (S&P) would permit counterparties to call for approximately \$1.8 billion of collateral, while a downgrade to 'A1' by Moody's or A+ by S&P would permit counterparties to call for approximately \$9.8 billion of additional collateral. Further downgrades could result in requirements for substantial additional collateral, which could have a material adverse effect on how AIGFP manages its liquidity. The actual amount of collateral that AIGFP would be required to post to counterparties in the event of such downgrades depends on market conditions, the fair value of outstanding affected transactions and other factors prevailing at the time of the downgrade. Additional obligations to post collateral would increase the demands on AIGFP's liquidity.

Cash holdings relative to margin call risk

- Goldman Sachs (4Q 2008):
Two-notch downgrade = \$2bln+
Cash = \$100bln+ (as of 3Q 2008, “Total Global Core Excess”)
Margin-risk coverage ratio = 50
- JPMorgan Chase (4Q 2008):
One-notch downgrade = \$2bln; Six-notch = \$6bln
Cash = \$26bln (as of 3Q 2008)
Margin-risk coverage ratio = 4+
- A.I.G. (Q3 2008):
Two-notch downgrade = \$9.8bln; Three-notch = \$20bln (est), \$32bln (realized)
Cash = \$2.5bln in March 2008
(\$18.6bln post-intervention Sep 08, due to \$61bln Fed borrowings)
Margin-risk coverage ratio < 1 for two-notch downgrade



Market Risk Report

Some reporting but inadequate and un-standardized

Example I: Goldman Sachs

- Trading risks:

VARs market-by-market + Diversification effect

Range of VARs

Distribution of days with varying buckets of trading revenues

- Non-trading risks:

10% sensitivities to underlying asset value + No diversification

Example II: Citigroup

- Interest rate risk: US, Mexican, Euro, Japanese, GBP

Instantaneous 100 bps and gradual (25bps per quarter)

Increase and decrease

Combinations of overnight and 10-year rate (gradual) on net interest revenue

- Other risks:

VARs market-by-market + Diversification effect

Range of VARs



What Will Financial Firms Be Asked to Disclose?

“Wall Street Transparency and Accountability” part of the Dodd-Frank Act of 2010

- All existing derivative positions (both cleared and un-cleared “swaps”) to be reported to a swap data repository within 180 days of its enactment
- All new positions – cleared or un-cleared – to be reported starting 90 days after the enactment (or an alternative legislated period)
- The repository will be tasked with providing data to the regulatory agencies – including foreign and international agencies, if applicable – to minimize systemic risk
- The repository will be tasked with publishing aggregate market information (trading and clearing in major swap categories, participants and developments in new products) to public twice a year
- The Act requires *real-time public reporting*, meaning “to report data relating to a swap transaction, including price and volume, as soon as technologically practicable after the time at which the transaction has been executed.”
- Such public reporting will, however, not include counterparty or customer information, and will also have a delay exemption for “block trades” (to be defined by rule-makers for particular markets and contracts) taking account of the impact of disclosure of such trades on liquidity.

What the Act DOES NOT require?

- No mention of reporting of collateral information on trades
- Clearinghouses will clearly determine collateral requirements themselves; what about trades that remain OTC or un-cleared?
- Legislating counterparty risk transparency for regulators is good
- But should be extended in some form to markets, e.g., with a lag
- Complex positions likely to remain OTC
- Prices of new trades often not sufficient to mark old positions
- Need *potential exposure* and *collateral risk*, not just MTM values
- Risk management variables won't be collected by depository



Implications for the Office of Financial Research (OFR)

TRANSPARENCY STANDARD FOR SIFI's

Identifying and regulating systemic risk

- Systemic Risk Oversight “Council” to deem institutions as systemically important financial institutions (SIFI's) and regulate them
- Office of Financial Research (OFR) to collect, analyze and disseminate relevant information for anticipating future crises
- SIFI's are generating a host of valuable information – some internal and some reported publicly – on risk management
- Risk management part of public reports are
 - NOT STANDARDIZED, ADEQUATE and ANALYZED
- Council and OFR with prudential regulators, academics and accounting boards to come up with a machine-readable
TRANSPARENCY STANDARD FOR SIFI's

Sources [10Q/K's (for 1Q 2009)]

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JPM:

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