Fear of the Future: Dodd-Frank & Reform of OTC Commodity Derivatives Markets

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Outline

- How Did We Get Here?
  - Oil markets didn't cause the Financial Crisis & the Great Recession.
- Are We Losing a Good Thing?
  - OTC trades with no margin down!
- Do the New Regulations Spell Disaster Ahead?
  - A look at other reforms: TRACE & corporate bond trading

How Did We Get Here?

Commodity Markets & the Financial Crisis of 2007-2009

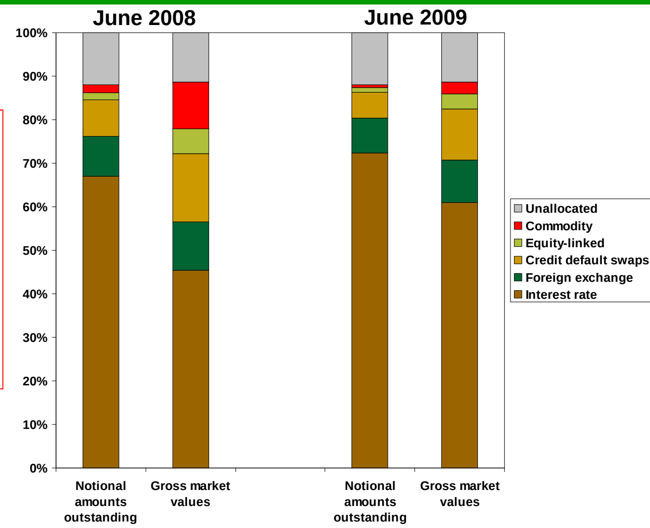
- It was a financial crisis, with its origin in the banking system.
  - Collapse of an asset bubble in the housing market.
  - A run on dealer banks.
- Commodity trading was not central to it.
- Don't go messing up parts of the financial system that aren't broken. Fix the one's that are broken. That's not us.

Commodity Derivatives are a Small Subset of the Larger OTC Derivatives Market

These figures reflect the global OTC derivatives market.

In mid-2008, commodity contracts were 2% of the notional amounts outstanding and 11% of the gross market values.

In mid-2009, these figures were 1% and 3%, respectively.



Source: BIS Table 19, Amounts outstanding of over-the-counter (OTC) derivatives, June 2008 and 2009.

Problems in the OTC Commodity Market

However, …

- The financial crisis exposed problems with a lack of transparency and prudent regulation that shed new light on *old* problems in commodity trading.
- Energy commodities generally had special loopholes that were already the subject of controversy and efforts at reform, so that the reform debate engendered by the larger financial crisis merely subsumed a pre-existing discussion.
- Coincidence or not, the sudden spike in commodity prices exploded in the middle of the larger financial crisis. There is no escaping being part of the larger reform process.

Are We Losing a Good Thing?

End-users in the debate over proposed financial reform

- End-users came out forcefully in the debate over financial reform, almost universally opposing mandatory clearing

    For example,

    - 3M
    - Cargill
    - Delta & ATA
    - John Deere
    - NSGA, AGA
    - APPA, EEI
    - US Chamber of Commerce, Business Roundtable, etc.

    and a similar reaction in Europe, culminating in

    - European Association of Corporate Treasurers

- The big banks had no better friend, ready to get out front and defend the bankers' interests like it was their own.

Clearing Requirement & Margins

The End-User Argument:

- In the past, OTC swaps were often offered without margin requirements.
- Clearing requires posting margin.
- The posting of margin is costly, draining corporate liquidity, increasing financing costs, making hedging costly.

This argument, in part, won the day, and there is now an exemption written into the new Dodd-Frank law,

  - But now, the terrain of battle shifts…writing a law is one thing, writing all the regulations that give the law content is another…
  - The Dodd-Frank hedge exemption regulations need to be written broadly to minimize the damage to the companies trying to hedge.

Typical End-User Illustration

- Under the current system, OTC without clearing…
  - Power supplier is extended an unsecured line of credit of about $20 million.
  - Hedge requires a $25 million line to secure this transaction. Therefore the power supplier needs to post $5 million up front.
  - Power supplier also trades natural gas. Natural gas positions are worth $7.5 million. These are an offset to the $25 million in security required. Net requirement is $17.5 million, which is below the $20 million unsecured line of credit.
- As in all of the end-user examples, the fates conspire to eliminate the need for any margining of an OTC swap without clearing.
- The incremental cost of a clearing requirement always equals
  - (i) the margin, under a system with clearing,

  minus
  - (ii) zero, the cost under the current system.

Estimating the Aggregate Cost: NGSA $900 billion, now $600+ billion

Initial Margin:

- Total notional OTC derivatives outstanding, year end '09: $615 trillion.
- of which 30% are US: $184 trillion.
- of which 0.5% are commodities: $922 billion.
- Apply a 15% margin: $138 billion.

Variation Margin:

- Total gross credit exposure on OTC derivatives outstanding year end '09: $3.520 trillion.
- of which 30% are US: $1.056 trillion.
- of which, 50% are collateralized: $528 billion uncollateralized credit exposures.

Total new margin required = $138 + $528 = $666 billion.

Compare to $0 cost for unmargined OTC swaps.

Net increase in margin is $666 billion

Source: NGSA calculation back-up provided by NGSA. Total notional OTC derivatives outstanding and gross credit exposure are BIS data. The % calculated for commodities is also BIS data, and exclude gold. Other assumptions are by NGSA.

Quibbles with the details of the calculation

- Initial margin.
  - Uses the gross notional amounts.
  - Margins would typically, if not always, be required on net counterparty exposures. Counterparty netting significantly reduces the total amount: down to 15%.
  - Clearing further reduces gross exposures by canceling offsetting positions held by one end-user with different counterparties.
    - Illustrated in the CDS market with Fed's efforts at portfolio compression since January 2008.
- Variation margin.
  - Same comments about offsetting exposures.
  - Comparing apples to oranges. These are accrued assets and liabilities. Like comparing futures and forwards.
- One calculation focuses on only commodities, the other doesn't. The inconsistency reflects the flaws in the underlying logic.

Asset class	Exposure ($ billions)
Credit default swap	2,987
Interest Rate	15,478
Equity Linked	879
Foreign Exchange	2,470
Commodity	689
Unallocated	2,868
Total	25,372
Total after netting	3,744

Source: BIS, data for June 2009. Taken from Duffie (2010a).

"Since January 2008, nearly $50 trillion in notional CDS positions have been eliminated from the market through portfolio compression, reducing the total notional amount of outstanding CDS positions from a peak of over $60 trillion to a current level of about $26 trillion, after allowing for additional trading in the interim."

Source: Duffie (2010b).

Estimating the Aggregate Cost: Business Roundtable $5-6 billion cut in capex

- $1,104 billion in gross notional at large companies
  - survey results extrapolated
- 3% margin translates to $33.1 billion cash call
- Cash constraints force a decline in capex
  - every 1 percentage point decline in the operating cash flow to net capital ratio causes a 0.06 percentage point decline in capex
  - $5-6 billion
- PR says this is an annual cut, but in fact it is just a one-time cut.

There is no such thing as a free lunch

- When banks offer you a swap without margins, it isn't for free.
  - The bank is knowingly extending you credit.
  - It goes through all the steps of a credit check to get approval.
  - The bank is implicitly financing your margin… and charging you a fee.
  - They won't get approval to do the deal unless the terms of the trade cover the credit risk.

Can you get margin financing in a Dodd-Frank world?

- In the brave new world of Dodd Frank you will need to find a way to finance that margin.
- The very same friendly banker can do the very same credit extension.
- Except that it must be wrapped as a different looking package.
  - In the old world it appeared as a marginless swap. The credit was implicit.
  - In the new world, the margin must be explicitly booked. The credit now must be explicit.
  - But it's the same credit and the same banker.
- Nothing is lost due to the requirement that margins be explicit.

Total margins are an important question.

- The real question is what will be the total amount of margins required under the new system.
- Clearing *may* reduce the total amount of margins.
  - Clearing often results in many positions being removed from the system.
  - Success depends upon how clearing functions.
  - Too many clearinghouses can undermine the value of required clearing.
- The task is to get the *system* right.

Disaster Ahead?
Lessons from TRACE

3 Key Elements in Reforming OTC Derivative Markets

- 1. ALL trade in derivatives is regulated. No exceptions.
- 2. Increased transparency.
  - Mandatory reporting of all transactions,
    - regardless of whether it is standardized or not, traded on an exchange or cleared.
  - Post-trade publication of trade data for most transactions, incl. bilateral deals.
  - Pre-trade publication of bids & offers through increased use of exchanges.
- 3. Increased use of clearing.

What is the value of transparency & clearing in the OTC derivatives market?

- Transparency can potentially make the market more efficient to the benefit of end-users. But transparency has its costs, too. The choice involves a global weighing of the costs and benefits of shifting from one market structure to another.
- There are a variety of potential benefits to clearing. Some of these can be captured by the dealers and one might expect trade to gravitate to a “cleared” market. But not always.
  - Trade can get “trapped” in a non-cleared market.
  - Dealers may have an incentive to keep the market uncleared.
- Social benefit of systemic risk reduction from clearing is not something that is entirely captured by the parties choosing a “cleared” market.

Historical Analogy: Reform of Corporate Bond Trading

- U.S. corporate bonds are a large market:
  - $5.37 trillion outstanding in 2006 out of a total bond market of $27 trillion, including municipals, Treasuries, mortgage-related, Agency, money market and asset-backed.
  - $470 billion in new issues in 2006.
  - $4.6 trillion in new issues between 1997-2006, versus $1.5 trillion in equity.
- But it has traditionally been very opaque, unlike stocks or Treasuries.
  - Issuances by a single company differ by seniority and other features, so are not fungible with each other.
  - Buyers (insurance co’s, pension funds) often hold to maturity, so there is little turnover.
  - Corps=20% of outstanding bonds but only 2.5-3% of trading activity.
  - Main market is through dealers with little in the way of public price quotations and price reporting. Exchange listings are few, and transactions are few and for very small sizes. Main source is a database of the National Association of Insurance Commissioners.
  - In 2002, round-trip trading cost = 0.25%.

TRACE System

- TRACE – Transaction Reporting and Compliance Engine
  - SEC rule approved January 31, 2001. System introduced July 2002.
  - Bond dealers required to report all trades in publicy issued corporate bonds to the National Association of Security Dealers, which makes the transaction data public. Data is available through the Financial Industry Regulatory Authority website or 3rd party vendors.
  - Phase-in:
    - ✓ 2002: trades in investment grade bonds with issuance size of $1 billion + 50 non-investment grade bonds. Time delay of 75 minutes.
    - ✓ 2003: 120 selected BBB-rated bonds + higher rated bonds with issuance size over $100 million. Time delay of 45 minutes.
    - ✓ 2005: all except newly issued and lightly traded. Time delay of 15 minutes.
    - ✓ 2006: all.

Results of Imposing the TRACE System

- Report here taken from summary in Bessembinder & Maxwell, Journal of Economic Perspectives, Spring 2008.
- Round-trip costs cut by one-half.
  - Costs dropped as well on non-reported bonds during the phase-in.
  - Concentration ratio of trades reduced.
  - Dispersion of transacted prices reduced.
  - Large reductions in employment and revenue of bond-trading departments: $1 billion/year
- Market organization changed.
  - Dealers reduced inventory and often operate instead as brokers. Transparency of transactions exposes dealers who accumulate an inventory.
  - Transactions are more difficult to execute; require time.
  - But total transactions have risen modestly.
  - Dealers cut down on internal research.

Conclusions

- The system for trading OTC commodity derivatives long needed reform.
- Reform can be to the advantage of end-users, but only if done right.
- End-users have been opposing reforms.
  - Their focus has been on the micro issues at the expense of the macro picture.
  - They have wrongly focused on an illusory benefit of the present system.
  - They fear the future. They cling to the past.
- Getting reform right requires collaboration by all parties.
- Get on board. Embrace the Future.

The End