Lecture No. 1

Credit, Credit Derivatives, and Credit Default Swaps

Dr. Sergio Cao

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Credit, Credit Derivatives, and Credit Default Swaps

by

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Falling Giant: A Case Study Of AIG

What was once the unthinkable occurred on September 16, 2008. On that date, the federal government gave the AIG a bailout of $85 billion. In exchange, the U.S. government received nearly 80% of the firm's equity. For decades, AIG was the world's biggest insurer; but in September, the company would have gone under if it were not for government assistance.

Read more: [http://www.investopedia.com/articles/economics/09/american-investment-group-aig-bailout.asp#ixzz1vhMMVOiw](http://www.investopedia.com/articles/economics/09/american-investment-group-aig-bailout.asp#ixzz1vhMMVOiw)
Greek Default

• On March 9, 2012, The ISDA EMEA Determination Committee resolved that a Restructuring Credit Event has occurred after Greece pulled off a massive restructuring of debt where a vast majority of private sector lenders agreed to swap $77 billion in Greek debt for new bonds worth as much as 75 percent less.

• The DC also announced an auction with respect to the settlement of standard CDS for which Greece is the reference entity.
J.P. Morgan’s $2 Billion Blunder

*Bank Admits Losses on Massive Trading Bet Gone Wrong; Dimon’s Mea Culpa*

The bank, betting on a continued economic recovery with a complex web of trades tied to the values of corporate bonds, was hit hard when prices moved against it starting last month, causing losses in many of its derivatives positions. The losses occurred while J.P. Morgan tried to scale back that trade.

WSJ Online
Credit Derivatives

• Allow the transfer of credit risk, from the holder of the debt instrument to another party without necessarily transferring, or selling, the debt instrument itself.

• Allow credit risk to be stripped from loans and bonds and placed in a different market.
CREDIT DEFAULT SWAPS

• Consider Company A that extends a debt to Company C that issues a bond for the debt.

• Company A then buys protection from Company B such that when Company C defaults on the bond, Company A has the right to sell the bond to Company B.

• In return, Company A pays premium to Company B.
CREDIT DEFAULT SWAP

A

B

Bond (reference asset)

C

Periodic payments (in return for right to sell reference bond in case of default)
CDS, Example

Figure 1 Credit default swap.

1. Default protection buyer
2. 90 basis points per year
3. Payment if default by reference entity
4. Default protection seller
U.S. STATE 5-YEAR CDS PRICES

http://workforall.net/CDS-Credit-default-Swaps.html
CREDIT DEFAULT SWAPS AND BOND YIELDS

• The n-year CDS spread should be approximately equal to the excess of the par yield on an n-year corporate bond over the par yield on an n-year risk-free bond.

• CDS spreads can be used to imply the risk-free rates used by market participants.
CDS market and a company’s credit risk

• The spread for a CDS on a reference company actually reflects only the default risk associated with the company, unlike bond pricing which may be affected by factors like coupons, tenor, debt covenants, and so on.

• Studies show that the credit default swap market for corporates is often more liquid than the market for the corporate bonds.
CDS market leads the bond market for corporates

• In the study by Coudert and Gex, they compared CDS spreads with spreads on a generic 5-year bond.

• Their results show that the CDS market has a lead over the bond market for corporates.

• The same conclusion holds for sovereigns, although not for low-yield reference sovereigns
GENERAL ELECTRIC CAPITAL CORPORATION

http://www.bloomberg.com/quote/CGECC1U5:IND
REPUBLIC OF VENEZUELA

http://www.bloomberg.com/quote/CVENZ1U5:IND
JP MORGAN CHASE & CO.

Index Chart for CJPM1U5

http://www.bloomberg.com/quote/CJPM1U5:IND
Does a CDS completely eliminate credit risk?

• The answer is NO.

• While the CDS protection buyer decreases exposure to credit risk of the reference entity, it is exposed to the credit risk of the protection seller, or what is called counterparty credit risk.

• The European Central Bank released a study on CDS and counterparty credit risk in 2009
Other Credit Derivatives

• Total Return Swap
• Collateralized Debt Obligations
• CDS variants
  – iTraxx Europe
  – CDX.NA.IG
  – CDX.NA.HY
  – CDX.EM
Total Return Swap (TRS)

• A total return swap (TRS) is an agreement where one party agrees to make a series of payments linked to a reference asset (e.g. a bond), and another party makes a series of payments tied to a reference rate, usually LIBOR plus a spread.

• The TRS is an agreement therefore to exchange returns on a reference asset and a reference rate.
TRS, Example

Figure 2  Total return swap.

- Total return payer
- Total return on bond
- LIBOR + 25 basis points
- Total return receiver
Collateralized Debt Obligations (CDO)

• Collateralized mortgage obligations (CMOs) brought mortgage backed securities (MBS) to general investors by repackaging their cash flows into tranches with different characteristics.

• This repackaging mechanism can be applied to create collateralized debt obligations (CDOs), which are securities backed by a pool of debt.
Example: CDO, SPV

**Figure 3** Collateralized Debt Obligation Structure
CDS Indices

• CDX.NA.IG
• iTraxx Europe
• Portfolios updated on March 20 and September 20 each year
• Companies that are no longer investment grade are dropped from the portfolios, and new investment grade companies are added
• (Hull, Sec. 23.3)
CDS Indices

• Suppose that the 5-year CDX.NA.IG index is quoted by a market maker as a bid 65 bps, offer 66 bps. (Index Spread)

• Roughly speaking, this means that a trader can buy CDS protection on all 125 companies in the index for 66 bps per company.
CDS Indices

• Suppose a trader wants $800,000 of protection on each company.

• The total cost is

\[ 0.0066 \times $800,000 \times 125 = $660,000 \text{ p.a.} \]

• The trader can similarly sell $800,000 of protection on each of the 125 companies for a total of $650,000 p.a.
CDS Indices

• When a company defaults, the protection buyer receives the usual CDS payoff
• and the annual payment is reduced by $660,000/125 = $5,280
A Guide to Credit Index Trading

• Credit Index Trading is similar to bond trading in that the coupon and maturity are fixed before the roll.

• For credit indices, payments from Buyer to Seller are made as quarterly payments (“Fixed Coupons”)

• Fixed Coupon is determined for each index before the roll and remains the same until maturity.
A Guide to Credit Index Trading

• Upfront payments are made at initiation between the Buyer and Seller, and close of the trade to reflect the change in spreads.
• The price ("Index Price") is par minus the present value of the spread differences.
• Market participants use calculation tools provided by external vendors to calculate Index Price
A Guide to Credit Index Trading

• Over the period of the contract in which Protection Buyer A buys the protection from Protection Seller B, there are three kinds of cash flows
  – Upfront payment
  – Coupon payments
  – Settlement payment
WHAT TRIGGERS PAYMENT IN A CDS?

• A credit event is a discrete state; either it occurs or not.
• There should be no ambiguity as to when a credit event has occurred. Otherwise, there is legal risk involved.
• For CDS, the occurrence of a credit event is decided by a Determination Committee (DC) of the ISDA.
Case of Argentina

• In November of 2001, Argentina announced a restructuring of its local debt that was less favorable to holders of credit.

• Holders of sovereign CDS with Argentina as reference entity argued that this was a “credit event” and therefore called on the swap sellers for payments.

• The swap sellers, on the other hand, did not agree that the restructuring constituted default.
When Offsetting pairs of CDS do not offset

• Bear Stearns loaned $10 million to a development in the Philippines which was backed by a Philippines government agency (GSIS).
• Bear Stearns bought protection, call it CDS1, from AON for $425,000.
• AON was then short exposure to the GSIS, and so then bought protection (call it CDS2) from Societe Generale for $328,000.
Who “invented” credit default swaps?

- One of the first CDS was when J.P. Morgan bought protection from the European Bank for Reconstruction and Development for its exposure to Exxon.
- J. P. Morgan built up a "swaps" desk in the mid 1990's.
- The market doubled in size every year after that and covered all grades of corporate and emerging market debt.
How big is the CDS market?

• The results of the ISDA 2010 mid-year market survey show that the notional amount outstanding of credit default swaps (CDS) was $26.3 trillion at mid-year 2010, a decrease of 13.7 percent from $30.4 trillion at year-end 2009.
How big is the CDS market?

• CDS notional outstanding for the past twelve months was down 15.9 percent from $38.6 trillion at mid-year 2009.

• Credit default swaps are 5.6 percent of the total of all derivatives reported to the ISDA Market Survey.
How big is the CDS market?

• Data from the Depository Trust & Clearing Corporation (DTCC) that keeps a record of outstanding CDS involving major dealers as counterparties show that the size of the CDS market was $29 trillion by mid 2009.
How big is the CDS market?

• Data from the Bank for International Settlements (BIS) show that the total notional amount of CDS was $6 trillion in 2004, $28 trillion in 2006, $57 trillion in 2008.

• In 2009, total notional amount was $32 trillion and $28 trillion by end of 2011.
Sovereign CDS

• Results of the 2002 Credit Derivatives Report of the British Bankers Association show the growth and development of the CDS market since they were introduced in late 1990s.

• The market grew from $40 billion outstanding notional value in 1996 to $1.2 trillion at the end of 2001, and expected to reach $4.8 trillion by the end of 2004.

Sovereign credit default swaps by Frank Packer & Chamaree Suthiphongchai, BIS Quarterly Review, December 2003
Sovereign CDS

• The same report indicates that single name CDS accounted for 45% of the overall credit derivatives market.

• Sovereign CDSs, i.e., CDS where the reference entity is a bond issued by a sovereign, are considered the most liquid credit derivative instruments in emerging markets.
### Table 1 - Number of quotes by type of CDS

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<thead>
<tr>
<th>Type</th>
<th>1997</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003(^1)</th>
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<td>Corporate</td>
<td>196</td>
<td>1,892</td>
<td>11,726</td>
<td>22,538</td>
<td>55,679</td>
<td>102,039</td>
<td>88,817</td>
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<td>Bank</td>
<td>394</td>
<td>2,715</td>
<td>8,021</td>
<td>6,854</td>
<td>16,844</td>
<td>25,490</td>
<td>8,615</td>
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<tr>
<td>Sovereign</td>
<td>771</td>
<td>2,283</td>
<td>8,169</td>
<td>8,133</td>
<td>11,535</td>
<td>10,124</td>
<td>7,844</td>
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<tr>
<td>Total</td>
<td>1,361</td>
<td>6,890</td>
<td>27,916</td>
<td>37,525</td>
<td>84,058</td>
<td>137,653</td>
<td>105,276</td>
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<tr>
<th>% change of number of quotes and trades from the previous year</th>
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<td>Corporate</td>
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<td>Bank</td>
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<tr>
<td>Sovereign</td>
</tr>
<tr>
<td>Total</td>
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\(^1\)First half; change over first half of 2002.

Source: CreditTrade
Table 2 - Quotes on sovereign CDSs

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<th>Percentage</th>
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<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>Total</th>
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<td>628</td>
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<td>717</td>
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<td>China</td>
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<td>256</td>
<td>85</td>
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<td>Argentina</td>
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<td>1,318</td>
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<td>Thailand</td>
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<td>562</td>
<td>121</td>
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<td>3.2</td>
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<td>Russia</td>
<td>16</td>
<td>395</td>
<td>365</td>
<td>377</td>
<td>1,153</td>
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<td>3.1</td>
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<td>Other Countries</td>
<td>1,310</td>
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<td>2,417</td>
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<td>All emerging markets</td>
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<tr>
<td>Total</td>
<td>8,133</td>
<td>11,535</td>
<td>10,124</td>
<td>7,844</td>
<td>37,636</td>
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1End-year average of Moody’s and Standard & Poor’s ratings from CreditTrade transactions.
### Sovereign Credit-Default Swaps

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<th>Country</th>
<th>Last</th>
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<th>% Change</th>
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<tr>
<td>Austria 5-YR</td>
<td>197.085</td>
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<td>Belgium 5-YR</td>
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<td>China 5-YR</td>
<td>173.67</td>
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<td>Denmark 5-YR</td>
<td>133.33</td>
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<td>+0.25%</td>
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<tr>
<td>Dubai 5-YR</td>
<td>388.67</td>
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<tr>
<td>Egypt 5-YR</td>
<td>642.90</td>
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<tr>
<td>Finland 5-YR</td>
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<td>France 5-YR</td>
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<tr>
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<tr>
<td>Greece 5-YR</td>
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<td>Hungary 5-YR</td>
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<td>Indonesia 5-YR</td>
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<td>Ireland 5-YR</td>
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<td>Italy 5-YR</td>
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<td>Japan 5-YR</td>
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<td>Slovakia 5-YR</td>
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<td>Spain 5-YR</td>
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<td>United States 5-YR</td>
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Source: CMA

This page provides a daily update of selected countries' credit-default swaps. Other essential rates can be found on the CNBC Bonds and Markets pages. Data provided by CMA Datavision.

http://www.cnbc.com/id/38451750
Default Probabilities
Estimated 5 Yr Cumulative Probability of Default (CPD) & 5Yr Credit Default Swaps (5Y CDS)

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<thead>
<tr>
<th>CDS</th>
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<td>35,2%</td>
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<td>65,3%</td>
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<td>11,2%</td>
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<td>410</td>
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<td>610</td>
<td>35,7%</td>
<td>775</td>
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<td>290</td>
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<td>680</td>
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<td>51,8%</td>
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<td>52,9%</td>
<td>1475</td>
<td>75,1%</td>
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</tr>
</tbody>
</table>

Calculated from 2010 CMA Global Sovereign Credit Risk Report
(CPD = 0.0016 5Y CDS \(0.843\) \(R^2=0.9908\))

http://workforall.net/CDS-Credit-default-Swaps.html
<table>
<thead>
<tr>
<th>S&amp;P Rating</th>
<th>Average CDS</th>
<th>Cumulative Default Probability 5Y</th>
</tr>
</thead>
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<tr>
<td>AAA</td>
<td>114</td>
<td>8.40</td>
</tr>
<tr>
<td>AA</td>
<td>200</td>
<td>13.80</td>
</tr>
<tr>
<td>A</td>
<td>242</td>
<td>16.50</td>
</tr>
<tr>
<td>BBB</td>
<td>295</td>
<td>21.10</td>
</tr>
<tr>
<td>BB</td>
<td>360</td>
<td>23.10</td>
</tr>
<tr>
<td>B</td>
<td>807</td>
<td>41.70</td>
</tr>
<tr>
<td>CC (*)</td>
<td>9055</td>
<td>97.30</td>
</tr>
</tbody>
</table>

Averages Calculated from 60 County Data week 52 - 2011

(*) Greece Only Country Rated CC
Most and Least Risky States:

<table>
<thead>
<tr>
<th>Position</th>
<th>Country</th>
<th>5 Year CPD (%)</th>
<th>CMA Implied Rating</th>
<th>5 Year CDS Mid (bps)</th>
<th>Previous Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Norway</td>
<td>1.9</td>
<td>CMA_aaa</td>
<td>21.1</td>
<td>1 (No Change)</td>
</tr>
<tr>
<td>2</td>
<td>Sweden</td>
<td>2.4</td>
<td>CMA_aaa</td>
<td>27.1</td>
<td>2 (No Change)</td>
</tr>
<tr>
<td>3</td>
<td>Finland</td>
<td>3.1</td>
<td>CMA_aaa</td>
<td>35.3</td>
<td>3 (No Change)</td>
</tr>
<tr>
<td>4</td>
<td>Netherlands</td>
<td>3.4</td>
<td>CMA_aaa</td>
<td>38.0</td>
<td>5 (up 1)</td>
</tr>
<tr>
<td>5</td>
<td>Germany</td>
<td>3.6</td>
<td>CMA_aaa</td>
<td>40.9</td>
<td>9 (up 4)</td>
</tr>
<tr>
<td>6</td>
<td>Denmark</td>
<td>3.9</td>
<td>CMA_aaa</td>
<td>44.5</td>
<td>6 (No Change)</td>
</tr>
<tr>
<td>7</td>
<td>USA</td>
<td>4.4</td>
<td>CMA_aa+</td>
<td>50.5</td>
<td>8 (up 1)</td>
</tr>
<tr>
<td>8</td>
<td>Hong Kong</td>
<td>4.5</td>
<td>CMA_aa+</td>
<td>56.6</td>
<td>7 (down 1)</td>
</tr>
<tr>
<td>9</td>
<td>Australia</td>
<td>5.0</td>
<td>CMA_aa+</td>
<td>57.1</td>
<td>New Entry</td>
</tr>
<tr>
<td>10</td>
<td>Chile</td>
<td>5.2</td>
<td>CMA_aa+</td>
<td>74.2</td>
<td>10 (No Change)</td>
</tr>
</tbody>
</table>

http://workforall.net/CDS-Credit-default-Swaps.html
## Top 10 Most Risky

<table>
<thead>
<tr>
<th>Position Q4</th>
<th>Country</th>
<th>5 Year CPD (%)</th>
<th>CMA Implied Rating</th>
<th>5 Year CDS Mid (bps)</th>
<th>Previous Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Greece</td>
<td>80.6</td>
<td>CMA_cc-</td>
<td>2100.3 (35.8% U.F)</td>
<td>1 (no change)</td>
</tr>
<tr>
<td>2</td>
<td>Venezuela</td>
<td>51.4</td>
<td>CMA_ccc</td>
<td>987.9 (18.5% U.F)</td>
<td>2 (no change)</td>
</tr>
<tr>
<td>3</td>
<td>Portugal</td>
<td>47.6</td>
<td>CMA_ccc</td>
<td>798.3</td>
<td>4 (down 1)</td>
</tr>
<tr>
<td>4</td>
<td>Ireland</td>
<td>47.2</td>
<td>CMA_ccc</td>
<td>791.6</td>
<td>3 (up 1)</td>
</tr>
<tr>
<td>5</td>
<td>Pakistan</td>
<td>44.9</td>
<td>CMA_ccc+</td>
<td>811.6</td>
<td>New entry</td>
</tr>
<tr>
<td>6</td>
<td>Argentina</td>
<td>34.9</td>
<td>CMA_b-</td>
<td>588.1</td>
<td>5 (up 1)</td>
</tr>
<tr>
<td>7</td>
<td>Ukraine</td>
<td>28.6</td>
<td>CMA_b+</td>
<td>462.7</td>
<td>6 (up 1)</td>
</tr>
<tr>
<td>8</td>
<td>Lebanon</td>
<td>22.2</td>
<td>CMA_bb-</td>
<td>351.0</td>
<td>8 (no change)</td>
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<tr>
<td>9</td>
<td>Vietnam</td>
<td>21.8</td>
<td>CMA_bb</td>
<td>319.3</td>
<td>New entry</td>
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<td>10</td>
<td>Dubai</td>
<td>21.7</td>
<td>CMA_bb</td>
<td>335.6</td>
<td>New entry</td>
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</tbody>
</table>

Source: [July 2011 CMA Sovereign Risk Report](http://workforall.net/CDS-Credit-default-Swaps.html)
OTC Credit Default Swaps Data From DTCC’s Trade Information Warehouse

Figure 4

Top 10 Single-Name Reference Entities
As of 12/30/11 compared with 12/31/10

Net Positions of Major Players in CDS Market

• ISDA reports that the notional amount outstanding of credit default swaps (CDS) was $26.3 trillion at mid-year 2010.

• Bought protection notional amount was approximately $13.3 trillion and sold protection was about $13.0 trillion, with a net bought notional amount of $359.0 billion.
Net Positions of Major Players in CDS Market

Figure 5

Net Positions of Major Players in CDS Market

- Global Banks: -229
- Insurers (All): 137
- Life, Health, P&C: 105
- Reinsurance: 32
- Financial Guarantors: 166
- Hedge Funds: ?
Valuation of CDS

• Value of CDS (to the protection buyer) =

\[ PV \ [\text{contingent leg}] - PV \ [\text{fixed (premium) leg}] \]

Taken from Credit Default Swap (CDS) Primer, Nomura Fixed Income Research, May 12, 2004
PV[fixed leg] = \sum_{i=1}^{N} D(t_i)q(t_i)Sd_i + \sum_{i=1}^{N} D(t_i)\{q(t_{i-1})-q(t_i)\}S\frac{d_i}{2}

PV [contingent leg] = (1-R)\sum_{i=1}^{N} D(t_i)\{q(t_{i-1})-q(t_i)\}
\[
\sum_{i=1}^{N} D(t_i)q(t_i)SD_i + \sum_{i=1}^{N} D(t_i)\{q(t_{i-1})-q(t_i)\}S_{d_i}^{1} = (1-R)\sum_{i=1}^{N} D(t_i)\{q(t_{i-1})-q(t_i)\}
\]

\[
S = \frac{(1-R)\sum_{i=1}^{N} D(t_i)(q_{i-1}-q_i)}{\sum_{i=1}^{N} D(t_i)q(t_i)d_i + \sum_{i=1}^{N} D(t_i)(q_{i-1}-q_i)^2}^{d_i}^{2}
\]
Credit linked notes

• CLNs are structured to combine a credit derivative with a regular bond.
• The buyer of protection transfers credit risk to an investor through an intermediary which can be the buyer itself or a special purpose vehicle, SPV.
Credit linked notes

• An example of the first case is a bank with an exposure to say ROP. The bank issues a note with an embedded CDS on ROP. The note pays a high yield but will lose some (or all) of its principal if ROP defaults on its debt.
Credit linked notes

Figure 6 Credit-Linked Note
Use of CDS in the Philippines

• In the article “Synthetic securitization in the Philippines”, Morales discussed the use of funded credit derivatives (e.g. credit linked notes or CLNs) and unfunded credit derivatives (e.g. credit default swaps) as embedded structures in synthetic securitization.
Use of CDS in the Philippines

• The Bangko Sentral ng Pilipinas (BSP) issued BSP Circular No. 417, Series of 2004, laying down the guidelines on credit linked notes (CLNs), credit linked deposits (CLDs), and credit linked loans (CLLs).

• These regulations were approved by the Monetary Board per its Resolution No. 1845 dated 18 December 2003.
Use of CDS in the Philippines

“In principle, these (sovereign debts) should have been issued overseas and held onto by outside investors, but if you follow the cycle, the risk is actually turned around and returned to us by way of credit derivatives being sold to local banks. It is a complication that we are now tracking very closely.”

BSP Deputy Governor Nestor Espenilla, Jr.
How did CDS figure in the 2008 financial crisis?

• By the end of May 2007, 16.3 percent of all subprime borrowers in the US were more than 60 days past due, up from just 7.3 percent a decade before.

• Moreover, by the end of June 2007, the past due rate had further risen to over 17 percent.
How did CDS figure in the 2008 financial crisis?

• Since most CDS were sold as protection to cover exotic financial instruments that created and spread the subprime housing crisis, massive defaults on mortgage payments rendered those mortgage-backed-securities or MBS virtually worthless; banks and other institutions selling CDS had to pay out.
How did CDS figure in the 2008 financial crisis?

• By their nature, many institutions are closely linked by CDS. The default of one counterparty starts a chain reaction that raises the risk of others losing money.

• This "counter party risk" is what has triggered investors to sell off assets and a credit crunch among lenders.
What went wrong with AIG?

• In the wake of the decline in real estate prices, the market value of MBS declined.
• Under accounting rules that were established after the downfall of Enron – implemented to require rapid disclosure of investment losses – AIG marked down the value of its MBS portfolio.
• These investment losses resulted in a reduction of AIG’s capital reserves – the core measure of its financial strength.

“CDS, the Collapse of AIG and Addressing the Crisis of Confidence” by David Paul, The Huffington Post, November 24, 2008
What went wrong with AIG?

• As a result of the decline in AIG’s capital reserves, Standard & Poor’s and Moody’s Investors Service downgraded AIG from triple-A to single-A level.

• These rating downgrades to the single-A level triggered collateralization requirements under AIG’s CDS contracts.

• The amount of the collateral that AIG had to produce under its estimated $450 billion of CDS contracts approximated $100 billion.
Greek debt and credit default swaps

“It’s the $616 billion question: Does the euro crisis have a hidden AIG?”

• The figure comes from the estimate that the exposure to CDS of the most financially pressed European Union countries – Portugal, Italy, Ireland, Greece and Spain – is about $616 billion.

• In the case of Greece, the estimate is, about $78.7 billion are currently outstanding CDS on Greek debt.
Greek debt and credit default swaps

• Some investors entered into CDS on Greece to protect themselves against a Greek default.

• There were also those who entered CDS contracts for speculation purposes.

• Before Greek’s capacity to pay became doubtful, the CDS were cheap to buy.
Greek debt and credit default swaps

• It is reported that at the start of 2008, it cost only $22,000 annually to buy a 5-year CDS on $10 million of Greek debt.

• Before the ISDA ruling, the same CDS cost $7.68 million upfront and $100,000 annually.
Greek debt and credit default swaps

• Of the estimated more than $70 billion outstanding CDS on Greek debt, only an estimated $3.2 billion remains after buyers and sellers net out their positions.

• According to the DTCC, CDS on Greek debt cover only $3.16 billion of debt, down from about $6 billion last year.
Greek debt and credit default swaps

• ISDA Chief Executive Officer Robert Pickel is reported to have said that “the actual payout will be much smaller than the net amount reported by DTCC”.

• Another report quotes Pickel saying “we saw today that the credit default swap market worked. Market participants expected it to work”.
How Bruno Iksil/JP Morgan lost $2 billion

• In early February, Boaz Weinstein, revealed his “biggest trade” idea in the Harbor Investment Conference (held at JP Morgan’s Madison Avenue office)

• He said “Buy CDX.NA.IG.9” (Investment Grade Series 9, 10-year Index CDS maturing on 12/20/2017). “They are very attractive,” he explained, adding that they can be bought at a “very good discount.”

http://blogs.reuters.com/felix-salmon/2012/05/16/how-bruno-iksil-lost-2-billion/
http://www.ft.com/intl/cms/s/2/6197eb2a-9f64-11e1-8b84-00144feabdc0.html#axzz1w4z7inS5
How Bruno Iksil/JP Morgan lost $2 billion

• What exactly was JP Morgan up to? BASIS TRADE

• Essentially, Iksil took CDX.NA.IG.9 positions as second-order hedge, designed to offset volatility in JP Morgan’s first-order hedge, which was designed to offset credit risk in the rest of the bank’s portfolio.
How Bruno Iksil/JP Morgan lost $2 billion

• First-order hedge: Iksil seems to have bought “tranches” of CDS indices, which would pay off if some (but not all) credits suddenly got into trouble.

• Second-order hedge: The bank had to sell far more units of cheap protection on the IG.9 as a whole than it bought on short, more expensive tranches.
How Bruno Iksil/JP Morgan lost $2 billion

• The two legs of JP Morgan’s trade did not move according to the relationship the bank had expected, meaning the position became imperfectly hedged.

• Like many credit models before it, JP Morgan appeared to misjudge correlation – one of the hardest market phenomena to accurately capture in mathematics.
How Bruno Iksil/JP Morgan lost $2 billion

• In order to try and stay risk neutral, the dynamic hedge required even more long protection to be sold.

• The bank continued to write swaps on the IG.9, causing a pricing distortion that was spotted by more and more hedge funds seeking profit.

• The rest is history!
The Volcker Rule

The “Volcker Rule” prohibits an insured depository institution and its affiliates from:

▪ engaging in “proprietary trading”;
▪ acquiring or retaining any equity, partnership, or other ownership interest in a hedge fund or private equity fund; and
▪ sponsoring a hedge fund or a private equity fund.

Dodd-Frank
Financial Regulation Legislation

Among other measures, the Act includes corporate governance and executive compensation reforms, new registration requirements for hedge fund and private equity fund advisers, heightened regulation of over-the-counter derivatives and asset-backed securities and new rules for credit rating agencies.

http://doddfranksummary.com
A new poll from American Banker shows that 57% of Americans believe that the Dodd-Frank Act has not given regulators the power to let big banks fail.

Is Fed Chairman Bernanke correct in saying Dodd-Frank gives regulators power to let the biggest banks fail?

Yes — living wills and other mechanisms have ended TBTF

No — the biggest banks are bigger and crisis management is more political than ever

Maybe — a lone big bank might be allowed to fail, but not during an industrywide crisis

VOTE on next week’s question at AmericanBanker.com

WEAPONS OF MASS DESTRUCTION

“The derivatives genie is now well out of the bottle, and these instruments will almost certainly multiply in variety and number until some event makes their toxicity clear ... In my view, derivatives are financial weapons of mass destruction, carrying dangers that, while now latent, are potentially lethal.”

Warren Buffet, 2002
BSP reviews banks’ derivatives activities

Seven have “Type 1” authority

- Citibank N.A.
- HSBC Ltd.
- Philippines
- ING Bank
- Standard Chartered Bank
- JP Morgan Chase Bank
- ANZ Banking Group, and
- Deutsche Bank AG
BSP reviews banks’ derivatives activities

Ten banks have “Type 2” authority

- Metrobank
- Bank of the Philippine Islands
- BDO Unibank
- BDO Private Bank
- Rizal Commercial Banking Corp.
- Security Bank Corp.
- Union Bank of the Philippines
- Bank of America
- Bank of Tokyo, and
- Mizuho Corporate Bank
BSP reviews banks’ derivatives activities

• Meantime, three thrift banks with additional derivatives authority are

  — Philippine Savings Bank,
  — HSBC Savings Bank, and
  — Sterling Bank of Asia
Conclusions and recommendations

1. We must learn our lessons
   • Financial institutions and regulators have learned a lot from the 2008 experience and have instituted changes to strengthen the derivatives market
     – AIG, Lehman; collateralization requirements (e.g. 90% of CDS transactions are now collateralized)
     – Benefits to the Greek credit event
Conclusions and recommendations

1. We must learn our lessons
   • Financial crisis
     • Better regulations
       – e.g. Dodd-Frank Act, Volcker Rule
     • Basel III capital requirements
   • Control Issues
     • e.g. London Whale
     • Did Dimon see what was coming?
Conclusions and recommendations

2. “Allow” entry of increasingly opaque and complex financial products
   • Financial markets development
   • Some “bad things” must happen to learn new lessons and insights
     — Banks and other financial institutions
     — BSP
Conclusions and recommendations

3. Back to basic!

• Root Causes of the Current Crisis
  – Declaration of the Summit on Financial Markets and the World Economy, G20, November 15, 2008
Conclusions and recommendations

3. Back to basic!

• *During a period of strong global growth, growing capital flows, and prolonged stability earlier this decade, market participants sought higher yields without an adequate appreciation of the risks and failed to exercise proper due diligence.*
Conclusions and recommendations

3. Back to basic!

• At the same time, weak underwriting standards, unsound risk management practices, increasingly complex and opaque financial products, and consequent excessive leverage combined to create vulnerabilities in the system.
Conclusions and recommendations

3. Back to basic!

• Policy-makers, regulators and supervisors, in some advanced countries, did not adequately appreciate and address the risks building up in financial markets, keep pace with financial innovation, or take into account the systematic ramifications of domestic regulatory actions.
It is not that derivatives are evil, but the wrong use of derivatives is!
THANK YOU