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Insurance Risk CDOs: What? Why? Now?

Measuring and Managing Catastrophe Risk: Second Annual PRMIA, CAA and MAF Conference on ERM

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Insurance Risk CDOs: What? Why? Now?

- Insurance risk CDOs allow portfolio investors the opportunity to participate in insurance linked-markets and bring discipline, transparency and liquidity to these markets
- Insurance risk CDOs also allow insurance and reinsurance companies to more easily optimize risk portfolios and better manage economic and regulatory capital efficiency

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Insurance Risk CDOs: What? Why? Now?

- According to Merrill Lynch, collateralized debt obligations (CDOs) are the "most complex financial instruments ever to go mainstream"
- CDOs are a successful refinement and application of sophisticated securitization techniques developed to facilitate the U.S. thrift crisis in the 1980s.
- Over $490Bn of CDOs were issued in 2006, making CDOs the second-largest term ABS. Over $1Tn of CDOs are currently outstanding.

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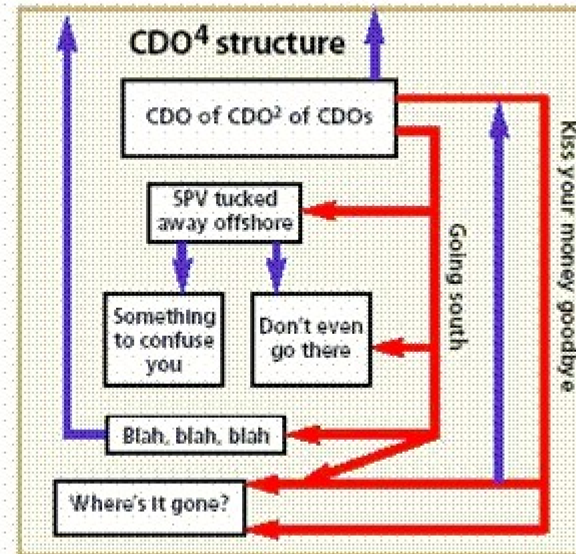
CDO⁴ launch mystifies market

ThirdBank has today launched what it claims is "the most ridiculously complex and impenetrable credit derivative known to man".

The CDO⁴ takes traditional CDO-squared technology and logarithmically doubles it using innovative "extra-dimensional tranching", effectively creating credit risk to the power of four. Head of structured credit at ThirdBank, Abe Smith, says: "Investors are now able to select the juiciest chunks from a four-dimensional credit risk matrix to extract value."

ThirdBank CEO Walter Fruff hailed the new product. "While I cannot even begin to understand the nature of our structured credit team's achievement, rest assured they will all be awarded gargantuan bonuses," he says.



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- CDOs were originally applied to bank loans and high-yield bonds, but have been extended to a wide variety of financial assets, including:
  - Mezzanine and subordinated ABS
  - REIT debt
  - Trust preferred (a debt/equity hybrid)
  - Project finance
  - Alternative investments (private equity/hedge funds)
  - Equity default swaps and, most recently,
  - Commodities

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- The current credit crisis has called into question the viability of CDOs, although the data indicates that ABS CDOs are mostly affected
  - Moody's recently reported that in 2007 the downgrade count for CDOs soared to 834%, while upgrades declined to 16%. In contrast, in both 2005 and 2006 upgrades slightly outpaced downgrades
  - Of the 1448 CDO tranches downgraded, 92% (1331 tranches) were resecuritization CDOs (i.e., ABS CDOs) that were concentrated heavily in 2006 and 2007 vintages

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- However, a prominent CDO researcher has characterized these events as the “greatest risk management failure ever” in light of the 13-notch downgrades for many ABS CDOs and the real likelihood that AAA/Aaa-rated CDO securities will suffer significant loss of principal
- The primary lesson to be drawn from this is that proper assumptions are essential to accurately predicting financial performance and critical mis-estimations were made regarding the degree of correlation of subprime RMBS

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- More positively, CDOs have previously dramatically and beneficially affected the pre-existing markets for the related underlying CDO assets.
- For example, CLOs have added substantial liquidity and transparency to the corporate leveraged loan market and now account for over 60% of the syndicated loan market

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- CDO core concept:

  A pool of defined financial assets will perform in a predictable manner – with default rates, loss severity/recovery amounts and recovery periods that can be reliably forecast – and, with appropriate levels of credit enhancement applied thereto, can be financed in a cost-efficient fashion to reveal and capture the 'arbitrage' between the interest and other yield on the underlying CDO assets and the interest and yield expense of the CDO liabilities that were issued to finance these assets.

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- Different ‘types’ of CDOs:
  - CLOs (loans), CBOs (bonds), CSOs (swaps), CFOs (funds), CCOs (commodities)
  - ‘balance sheet’ or ‘arbitrage’
  - ‘funded’ or ‘synthetic’ (or ‘hybrid’ combining elements of both)
- Arbitrage CDOs are either ‘cash flow’ or ‘market value’

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- Type of CDO and nature of underlying CDO assets will affect the structure:
  - For example, market value CDOs usually have substantial revolving capital that allows the CDO to manage the capital structure of the related CDO and trade underlying CDO assets efficiently
  - Market value CDOs require liquid markets for the underlying CDO assets so that such assets can be reliably valued

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- A synthetic CDO can be thought of as an arrangement whereby the CDO investors “sell” credit risk protection on the underlying CDO portfolio (other risks, such as currency and interest rate, are typically hedged) to the more “senior” investors in the CDO since their investment will absorb losses on such portfolio before that of the senior investors.
- Similarly, a CDO can “sell” risk protection against other risks – the insurance risk CDO.

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- CDOs are not particularly sensitive to accounting, tax and regulatory capital considerations that potentially distort traditional risk transfer pricing
- CDOs can 'acquire' risk exposure in a variety of ways:
  - Traditional insurance/reinsurance
  - Industry loss waivers
  - Event/loss swaps
  - Exchange-traded derivatives

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- Why?
  - Diversified risk portfolio
  - Risk/reward (relative value) choice in CDO tranched structure
  - Portfolio diversification benefits
  - Absence of 'cliff' risk common to other ILS
  - Additional risk transfer capacity
  - Liquidity and transparency for risk transfer-pricing
  - Efficient risk financing in rating-optimized capital structure

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- Now?
  - Bay Haven (Caitlin/ABN Amro) - $200Mn AA/BBB notes covering 4th-9th specified natural catastrophes (Caitlin retained the first three)
  - Fremantle (Brit Insurance/ABN Amro) - $200Mn AA-/BB- notes covering 4th-10th specified natural catastrophes (Brit retained the first three)
  - Puma Capital (Bridge Re/Dresdner) - $182Mn BBB+/B notes covering expected underwriting by Bridge Re
  - Gamut Re (Nephila/Goldman) - $310Mn A-/BB- notes for an actively managed risk portfolio
  - Merlin (Hannover Re/Calyon) – Hannover Re acquired credit protection from Merlin for a portfolio of referenced obligor that effectively hedged reinsurance recoverable exposure to such obligors

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- Questions?

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