PF2 SECURITIES EVALUATIONS, INC.

Informational Asymmetries in the CDO Market

Evaluation Considerations and the Way Forward

Board of Governors of the Federal Reserve System

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Agenda

- Introduction
- Informational Asymmetries
- Topical Considerations: Transparency, Responsibility, and Systemic Risk

Introduction

Introduction

Securitizations & CDOs

Securitization as an art form has been tainted by the poor application and execution of its practitioners.

- Example: CLO demand, essentially a source of funding, stimulated lending:
    - At its peak, CLO market was able to absorb $100 billion of new-issue U.S. secured corporate loans on a yearly basis
    - Primarily broadly-syndicated loans but also middle market companies

Informational Asymmetries

Informational Asymmetries

Overview

Each CDO analysis requires appreciation of both qualitative and quantitative factors pertaining to the deal. Each has its own challenges.

- Qualitative Analysis
  - Review Available Documents
  - Evaluate Manager

Informational Asymmetries

Documentation Terms

Critical "qualitative" terms vary from deal to deal. Can be key in determining CDO's cashflows.

- Examples
  - par build-up (deep discounts, purchase/redemption of CDO's notes)
  - par haircuts (credit deterioration)
  - principal to interest (IOs, combination securities, trading gains)
  - interest to principal (reinvestment OC test)
  - reinvestment (criteria, after reinvestment period end)
  - "Event of Default" (definition/process)
  - "Defaulted Securities" (definition/carrying value)
  - "Market Value" (definition)
  - "key man" provision, if any

Informational Asymmetries

Collateral Manager

- Senior CMF* (e.g., 0.2% p.a. on AUM)
- Subordinate CMF (e.g. 0.3% p.a on AUM)
- Incentive CMF
  - Not always present
  - When present, typically subject to CDO's residual tranche having achieved a certain rate of return hurdle (range usually 12-15% IRR)
- Equity Tranche Participation
  - More prevalent prior to 2005

* Collateral Management Fees (CMFs) are based off assets under management (i.e., in the CDO's collateral pool) and are paid out of the deal's proceeds.

Informational Asymmetries

CM Exposure	Waterfall	Notes
	Admin / Taxes / Rating Agency Fees	
	Hedges (if applicable)	
→	Senior CMF	
	AAA	Senior Debt (±75%)
	AA	2nd Priority Debt (±5%)
	A	3rd Priority Debt (±5%)
	BBB	4th Priority Debt (±3%)
	BB	5th Priority Debt (±3%)
→	Subordinated CMF	
→	Incentive CMF (if applicable)	
→	Equity	Residual Component (±8%)

Arrows indicate typical or potential collateral manager exposures

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Collateral Manager

Funds flow down the CDO liability structure (“waterfall”), from top to bottom.

Via their subordinated interest in cashflows, CMs are supposed to be incentivized to manage across the capital structure.

But this doesn’t always work out so well. Why?

Informational Asymmetries

Qualitative Analysis – Collateral Manager

Each distribution date (e.g., quarterly, monthly) the CDO's interest proceeds (IP) and principal proceeds (PP) typically follow different waterfall paths. One key distinction comes at the end:

- Interest Proceeds
  - Flush out of the deal (i.e., they go to residual noteholders, much like a dividend)
- Principal Proceeds
  - Either reinvested in substitute collateral or
  - Used to pay down senior tranches

Informational Asymmetries

Qualitative Analysis – Collateral Manager

Consequently, the ability to “flush” interest down to equity may prove appealing to any manager who owns equity, or who owns earns an incentive fee based upon return to equity.

The alternative – principal proceeds – may be used to pay down (or “amortize”) the senior noteholders. This may not be in the CM’s best interests: CM typically doesn’t hold exposure to senior notes, and the senior notes are CM’s cheapest source of funding.

The generation of IP, as opposed to PP, is therefore part of the “game.”

Informational Asymmetries

Collateral Manager Behavior – IP Generation (vs. PP)

IP generated through creating additional excess spread to the deal:

- Purchase of high yielding (low quality) assets vs. low-yielding strong quality
- Even among similar quality assets: Choice to purchase high-yielding assets at par vs. cheaper assets that pay less "interest"
- Willingness to negotiate debt covenant waivers for corporate borrowers, in exchange for additional spread (on corporate loans)

Informational Asymmetries

Other Collateral Manager Considerations

- Key Considerations:
  - experience managing assets of that asset class
  - size and years in business
  - credit selection process
  - staffing and resources, personnel turnover
  - financing options and availability / liquidity management
  - market positioning / strategy / business plan
  - diversification of liabilities, clients, products
  - internal audit and control

Topical Considerations

Topical Considerations

- Transparency
- Systemic Risk
- Rating Agencies and Responsibility / Accountability

Topical Considerations

Transparency

- Transparency as to who owns equity tranche (incl. CM) and who is the Controlling Class is *almost* universally helpful.
- Asset transparency (incl. covenant information) universally helpful too, though more work for CM. (Loans are a particularly difficult market to track in terms of prices and ownership.)

Topical Considerations

Transparency

- PF2 Posture: Modeling and pricing consistency will help create clarity in the market. Any model used must account for future cashflows and must incorporate ratings-based haircuts. *Consistency, clarity, and transparency together calm the markets.*

Topical Considerations

Systemic Risk

- PF2 Posture: Systemic Risk issues need to be combated from the base upwards: not via the purchase of "Toxic Assets," but via injections into the underlying markets. Dual benefit of "Toxic Assets" becoming less toxic, as a by-product.

- PF2 Posture: Thus – if possible -- more interested in seeing TALF-type funding used to purchase corporate bonds and loans than highly-rated CLO tranches.

Topical Considerations

Rating Agencies

- PF2 Posture: Investor-pay model may not be perfect solution: any solution implemented should strive to decrease the inherent conflict-of-interest.

- Ratings are key to managing or mitigating against systemic risk issues: ratings deeply embedded throughout financial system.

- Proliferation of ratings “shopping” is a key concern.

Questions

Principals

- Guillaume Fillebeen is a director at PF2. Prior to joining PF2, Guillaume was part of RBS Greenwich Capital's credit markets department, where his responsibilities included a wide range of underwriting activities relating to the issuance of corporate, CRE, and ABS CDOs. He began his structured finance career at Moody's Investors Service, where he was primarily responsible for the modeling of cash-flow, hybrid and synthetic credit derivatives. Guillaume holds a BA degree in mathematics from Washington University in St. Louis.

- Mark Froeba is a director at PF2, with more than 12 years of experience in structured finance, most recently as senior vice president and CLO team leader with Moody's Derivatives Group. He is best known for his contributions to the development of CLO rating criteria. Mark started his career in structured finance at Skadden, Arps, Slate, Meager & Flom LLP as a tax attorney where he provided tax analysis for structured finance transactions, primarily credit card securitizations. Mark earned his BA, summa cum laude, from St. John's University in Minnesota, and his JD, cum laude, from Harvard University. Mark is a member of the New York and Illinois bars

- Gene Phillips is a Director at PF2. Gene joined PF2 in March 2008 from Citigroup Alternative Investments' Fixed Income Alternatives division, where he was responsible for the surveillance of parts of their structured finance portfolio and played various roles in the operations and procedures of their multi-strategy hedge fund platform. He also has experience as a surveillance associate in Moody's Derivatives Group. Gene earned his BSc degree in mathematics and applied mathematics, with distinction, and holds a BSc Hons degree in the Advanced Mathematics of Financial Derivatives, from the University of the Witwatersrand in South Africa.