

Capital Markets Bureau *Market Buzz*

COLLATERALIZED DEBT OBLIGATIONS (CDOs)

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Executive Summary

- Collateralized Debt Obligations (CDOs) are structured finance securities collateralized by a pool of bonds and loans.
 - CDOs collateralized by corporate bonds may be referred to as Collateralized Bond Obligations, or CBOs.
 - ***Note that CDOs DO NOT include Collateralized Loan Obligations (CLOs) which are primarily secured by leveraged bank loans.***
- Since the financial crisis, there has been minimal new issuance of CDOs:
 - According to Leveraged Commentary & Data (LCD) and S&P Global Ratings (S&P), about 15 CDOs have been issued since 2015 (as of November 2018).
- Historically U.S. insurers' exposure to CDOs has been insignificant in terms of book/adjusted carrying value (less than 1% of total cash and invested assets).
 - One insurer group accounted for the majority of recent U.S. CDO exposure.

What is a CDO?

Structured finance security that is collateralized (predominantly) by a pool of one of the following bond types:

- Corporate bonds (investment grade and/or high-yield);
- Asset-backed securities (ABS);
- Residential mortgage-backed securities (RMBS);
- Commercial mortgage-backed securities (CMBS);
- Trust Preferred Securities (TruPS); or
- Emerging Market corporate and/or sovereign bonds.

Basic Mechanics

Principal and interest generated by the underlying collateral is used to pay interest and principal when due on the CDO debt.

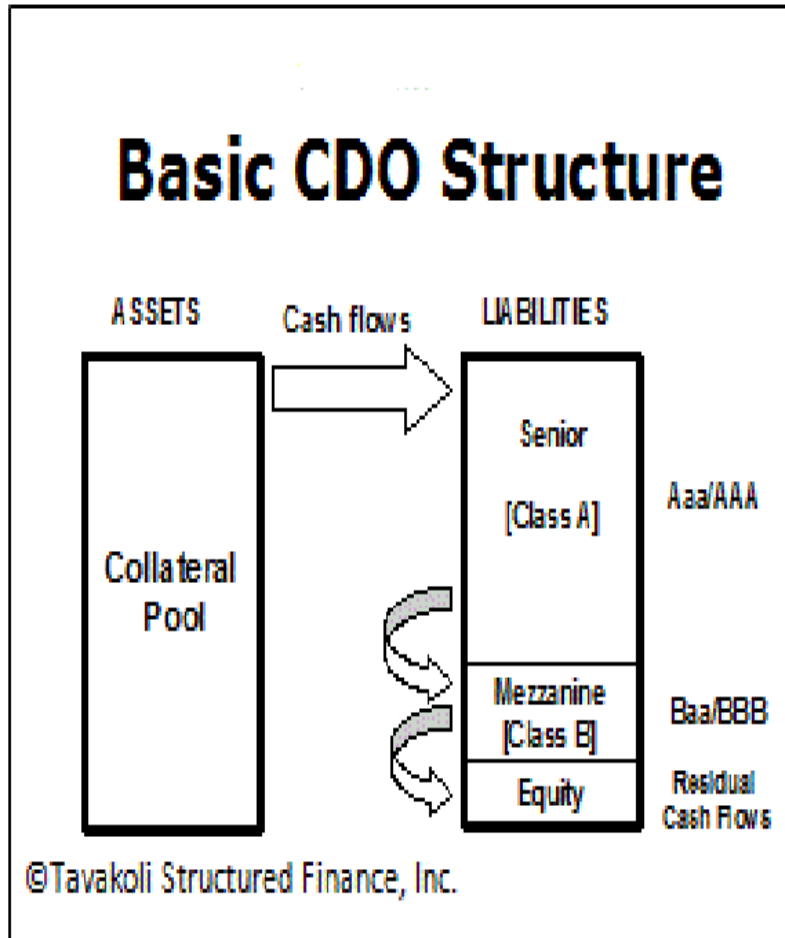


CDOs are structured with several rated layers, or “tranches”, of debt and an unrated equity tranche that serves as the first loss position.



The spread differential – or the interest earned on the underlying collateral net the interest due on the CDO tranches - is known as ‘arbitrage’.

CDO Structure



- Cash flows from the collateral pool are used to pay debt service on the different classes of notes (i.e. senior, mezzanine/subordinated) with any remaining excess funds (residual cash flows) flowing through to equity holders.
- Senior-most noteholders are paid first, then cash flows down to the lower-rated noteholders per the 'waterfall' (or flow of funds) as outlined in the deal documents.
- The higher the credit rating on the notes, the more credit enhancement is required to support them and absorb any losses.

What Are The Risks?

Credit Risk

- A decrease in credit quality (i.e. downgrades) of the underlying bonds in the collateral pool, could result in delinquencies and/or defaults so that insufficient funds are available to make full and timely debt service to the CDO noteholders.

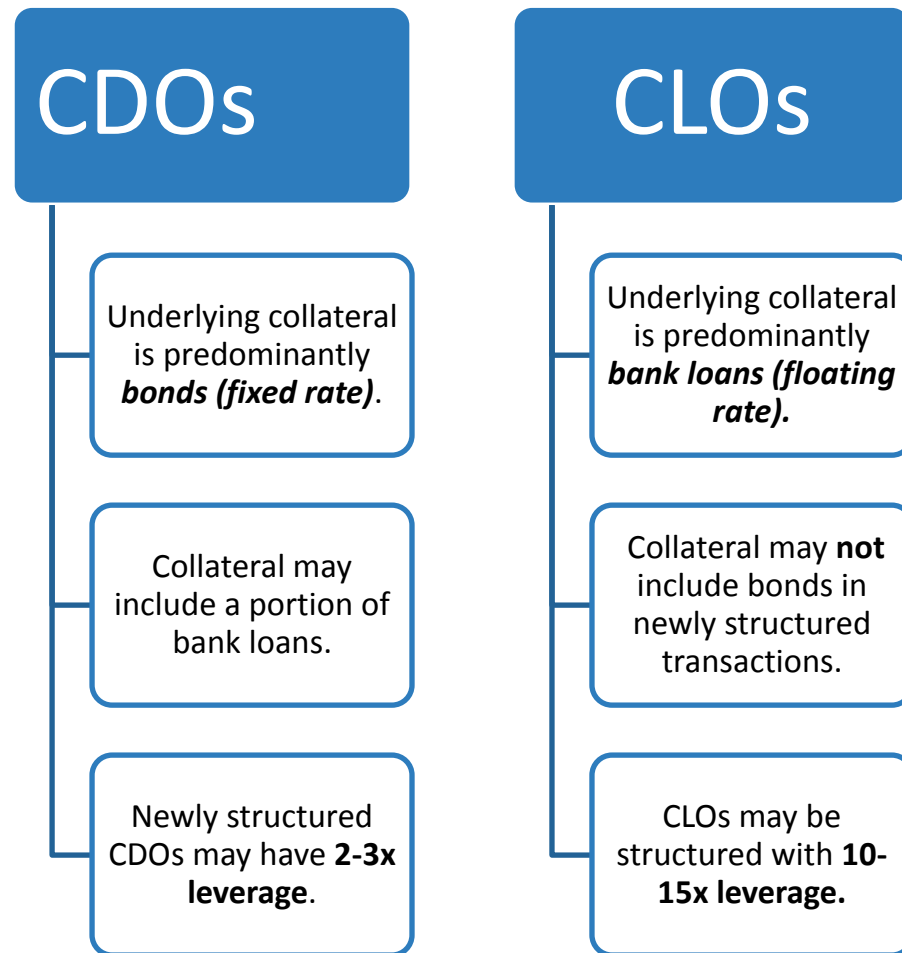
Issuer Diversification Risk

- A large amount of overlap can occur across CDO portfolios when demand for the underlying assets (i.e. corporate bonds) outpaces supply. This is particularly evident across CDOs of the same vintage (year of origination).

CDO Manager Risk

- CDO managers must have appropriate infrastructure in place to properly manage CDOs, including not only seasoned portfolio managers and credit analysts with experience in the particular underlying collateral type, but also experienced administrative and operations professionals and appropriate data systems.

Basic Differences between Current CDO & CLO Structures



Basic Similarities Between Current CDOs & CLOs

Both are structured finance transactions collateralized by a pool of financial assets.

The collateral is subject to overcollateralization and interest coverage tests, as well as issuer and industry diversification limits and credit quality limits.


The collateral pool is managed by an investment manager.

Most bonds issued to investors are floating rate (usually at a spread over 3 month-LIBOR).


An equity tranche serves as a first-loss position in the event of defaults that result in losses.

Current CDO Market Trends

In 2018, \$3.5 billion in CDOs had been issued (through early November), which is double the volume for each of the prior three years.



The newly issued CDOs include corporate bonds as collateral (not structured finance securities such as RMBS or ABS), and do not comply with the Volcker Rule in that they have the flexibility to acquire leveraged bank loans:
In the 15 newly issued CDOs since 2015, the underlying portfolios generally contain at least 30-35% in senior secured loans or notes; and up to 65-70% in second lien loans and unsecured loans and bonds, and subordinated bonds.



Newly issued CDOs have been structured with less leverage – at 2-3x – than current CLO structures (10 - 13x).

Questions About CDO Investments In U.S. Insurer Investment Portfolios

What type of assets are in the underlying portfolio (i.e. high-yield bonds? Investment grade bonds, ABS, etc)?

What is the credit quality of the assets in the portfolio (and are any on watch for downgrade and are there limits on below investment grade assets, particularly those rated CCC)?

What is the weighted average life (duration) and weighted average spread of the portfolio?

How much excess spread is there – that is, how does the weighted average spread of the portfolio compare to the weighted average interest due on the rated notes?

How much credit enhancement is there relative to the overcollateralization tests (i.e. how much cushion is there in the event of any losses)?

Is the underlying portfolio diversified by issuer and industries (i.e. are there limits on issuer and industry concentrations)?

Who is the CDO manager (including the portfolio managers, credit analysts and administrative staff), and what is their historical experience managing CDOs of this asset type?