CHAPTER 1

Securitization Terminology

Structured finance is a generic term referring to financings more complicated than traditional loans, generic bonds, and common equity. Relatively simple transactions that lower corporations' funding costs by converting floating rate obligations to fixed rate obligations (or the opposite) through the use of interest rate swaps are traditionally considered structured finance transactions. Financial engineering involving special purpose entities (SPEs) is also considered a part of structured finance. Extremely complicated leveraged products such as constant proportion debt obligations (CPDOs) and complicated securitizations such as collateralized debt obligations *of* collateralized debt obligations (CDO^n) are also included in the definition of structured finance.

Key motivations for using structured finance include lowering funding costs, changes in debt and equity composition of the balance sheet, taking companies public or private, freeing up balance sheet capacity, monetizing balance sheet assets, financing assets, regulatory capital arbitrage, sheltering corporations from operating liabilities, tax management, financing leveraged buyouts, poison pill takeover defenses, hedge fund speculation, accounting rule compliance, and leverage. The structures may address several issues at once including risk transfer, accounting, taxation, bankruptcy, and credit enhancement.

Securitization is a generic term for a subset of structured finance. A securitization is simply the creation and issuance of securities backed by a pool of assets, also called the portfolio, usually with multiple obligors. A *synthetic securitization* employs credit derivatives technology to transfer asset risk (see also Chapter 3, "Credit Derivatives and Total Rate of Return Swaps"). Securitization offers the possibility of portfolio diversification, even when it doesn't always deliver on this promise. Virtually any combination of financial assets or stream of cash flows can be securitized. In the early 1990s Prudential brought so-called death bonds to the market. These were securitizations of the life insurance premiums owed to Prudential. The firm

provided actuarial information showing dropout rates and potential death rates of the premium payers so investors could get an idea of the future cash flows. Investors learned a new meaning for the term *deadbeat*. This structure was one of the early *future flows* deals. The risk was in whether the projected future cash flows would be realized, due to the ultimate lack of future of the premium payers.

Collateralized debt obligation (CDO) is a generic term for a subset of securitizations. Collateralized debt obligations can be backed by any type or combination of types of debt: tranches of other collateralized debt obligations, asset-backed bonds, notes issued by a special purpose entity that purchases other underlying assets that are used as collateral to back the notes, hedge fund obligations, bonds, loans, future receivables, or any other type of debt.

The term *collateralized debt obligation* encompasses collateralized bond obligations (CBOs), collateralized mortgage obligations (CMOs), collateralized fund obligations (CFOs), asset-backed securities (ABSs), synthetic credit structures, and more. In the U.S. capital markets, the term *asset-backed securities* was originally used to describe deals backed by credit card receivables and auto loans. In recent years, this term has also been used to describe residential mortgage-backed securities (RMBS) and commercial mortgage-backed securities (CMBS).

Terms used in the mortgage market are sometimes difficult to interpret. Collateralized mortgage obligations usually refer to mortgage-backed securities with strict underwriting standards, where risk is primarily defined by the allocation of principal and interest payments. RMBS and CMBS are terms usually reserved for deals backed by a portfolio of mortgage loans tranched into various classes of credit risk. Similarly, *mortgage-backed CDO* is a term usually reserved for deals backed by a portfolio of mortgage-backed *bonds* that are tranched into various classes of credit risk.

Credit derivative is the generic term for any derivative contract used to transfer credit risk on a reference entity or reference obligor between a credit protection seller that is short the credit risk, and a credit protection buyer that is long the credit risk. A *credit default swap* is a bilateral contract between the protection buyer that is short the credit risk and the protection seller that is long the credit risk.

A *total return swap* (TRS), also known as a *total rate of return swap* (TRORS), is considered a type of credit derivative, and it is fundamentally a form of financing. An investor uses financing (i.e., leverage) and obtains the economic benefits of an asset (or assets) without owning the asset or ballooning its balance sheet. The investor is the receiver of the total return on a reference asset or assets, including interest, capital gains/losses, or other economic benefits during the predefined payment period. The

investor's counterparty finances the transaction and receives a specified fixed or floating cash flow usually related to the creditworthiness of the investor. The reference asset may be virtually any financial obligation.

Special purpose entities (SPEs) are powerful structured finance tools frequently used in securitizations and CDOs. *Special purpose entity* is a global term and is used interchangeably with the term *special purpose vehicle* (SPV) and *special purpose corporation* (SPC). Special purpose entities can be trusts or companies. They house asset risk either through the purchase of the assets or in synthetic form. The assets are then used as collateral for notes or other forms of risk transfer (see also Chapter 2).

Market professionals agree all CDOs are structured products, but total agreement usually ends there. Market professionals often disagree on the definitions, so I attempt to be clear at all times how I am using terminology in specific examples throughout this book. Some market definitions are confusing and redundant. We deal in a global market with people with a wide variety of professional backgrounds and ethnic origins. It is always best to agree on definitions of terms before engaging in any new transaction.

Structured finance benefits participants in various ways:

- Securitization may provide funding and liquidity by converting illiquid assets into cash.
- Structured finance can reduce borrowing costs. Often captive finance companies and independent companies can obtain capital at rates better than those obtainable for the originator of the securitized assets.
- Securitization may transfer the risk of assets or liabilities to allow an asset originator to do additional business without ballooning its balance sheet. Corporations use structured finance vehicles to finance assets used in the course of their business.
- Securitization can enable a financial institution to exploit regulatory capital arbitrage. At times, both banks and insurance companies engage in regulatory capital arbitrage as a prime motivation for securitization of assets that offer a low return on regulatory capital.
- Structured finance vehicles can be used to shelter corporations from potential operating liabilities.
- Securitizations and structured finance vehicles can be used for tax management.

To do all of these things, structures must address issues of bankruptcy, accounting issues, tax issues, and credit enhancement.

Traditionally securitization has been a means for financial institutions to reduce the size of their balance sheets and to reduce the risk on their balance sheets. This allowed them to do more business and allowed investors access

to diversified pools of assets to which they otherwise would not have had access. Securitization was a good deal for almost everyone.

SIMPLIFIED CASH CDO

A simple cash collateralized debt obligation is based on a portfolio of corporate bonds. The bonds throw off coupon income and are redeemed at par at maturity. In practice, cash CDOs have a target average life and target final maturity due to the varied maturities of the underlying bonds. At the final maturity, the bonds are redeemed at par. Figure 1.1 shows the basic CDO structure.

A CDO backed by the portfolio of bonds might be tranched into four classes of risk with the following ratings: a senior ("AAA") tranche, two mezzanine tranches (rated "A" and "BBB" respectively and shown in the figure as one block), and one unrated first-loss or equity tranche. First-loss risk is also called *equity*, or *preferred shares*, or *residual*, or *junior tranche* (especially used for the highly leveraged first-loss slice of a portfolio of highly rated assets), or by other names, but it is not to be confused with common equity or preferred shares issued by corporations with ongoing businesses.

A special purpose entity usually houses the collateral pool and becomes the issuer of the various classes of debt. By this means, the deal arranger/structurer isolates the risks and opportunities. Investors want to have exposure to a specific pool of assets, but they have various appetites for risk.

The deal arranger is typically the underwriter selling or retaining all of the tranches at market prices. The difference between the income from the

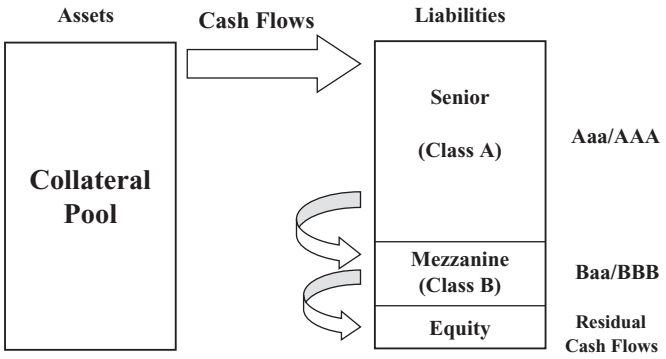

FIGURE 1.1 Basic CDO Structure

portfolio and the cash owed to the investors (the liabilities), less the deal expenses (legal, rating agencies, structuring fees, and more), is known as the *CDO arbitrage*. In particular, the investment bank arranger will normally presell the first-loss tranche, the riskiest tranche, also called the equity. The implied internal rate of return at which this equity risk can be sold to an outside investor is a key determinant of the CDO arbitrage.

THE CDO ARBITRAGE

In practice, there is actually no such thing as a CDO arbitrage. An *arbitrage* is a money pump. A true arbitrage guarantees a positive payoff in some scenario, with no possibility of a negative payoff and with no net investment. The opportunity to borrow and lend at two different fixed rates of interest, leading to an assured profit, is an arbitrage. Another example is the ability to *simultaneously* buy and sell the *same* security in different marketplaces and earn a profit at no cost and with no risk. The efficient market hypothesis asserts that the market will take into account all relevant information and price risk accordingly. Therefore, arbitrageurs will force the rates to converge and drive the arbitrage out of the market. In other words, it shouldn't be possible to make a guaranteed risk-free profit.

Note that the process of buying bonds on the bid side of the market for later resale to customers at the offer side of the market is called *trading*. Often both sides of the trade do not occur simultaneously; traders must assume market risk, and so trading isn't considered an arbitrage. Profits are not guaranteed. We often loosely and incorrectly use the word *arbitrage* to describe a hedged position that made money. For instance, we might say that a long bond position was arbitraged by a short sale.

Structurers of CDOs buy collateral and resell the collateral risk in another form at a lower all-in cost. As we shall see later, sometimes the risk is not completely sold and is held in a trading book due to distribution challenges. Sometimes the risk represented in the CDO tranches (the notes or liabilities issued by the CDO) is not the same risk represented by the collateral of the CDO. Sometimes the residual risk is deliberately held in a trading book and *dynamically hedged*. Sometimes an entire tranche, usually the super senior tranche, is held in the trading book with no hedge whatsoever, and is *marked-to-market* in theory, but not in actual practice.

Structuring groups that have separate profit and loss statements (P&Ls) from trading desks can with some truth claim that they benefit from a CDO arbitrage, but their financial institution does not. The structuring group means that they put together a deal, pay themselves a structuring fee, pass the risk of distribution and management of the tranches to the trading

desk, and declare victory for the structuring group. They have acted as middlemen, taken out a fee, and washed their hands of the risk management and distribution challenges. Many deal arrangers are set up this way. They recognize this moral hazard, link structuring and trading P&L, and track CDO profitability throughout the deal life, but many deal arrangers do not.

Financial institutions that structure CDOs come closest to approaching an arbitrage when they buy the collateral, tranche the exact risk represented by the collateral, and sell every tranche of the collateral through their distribution network. Time elapses between the accumulation of collateral and the closing of the transaction, especially in a cash asset-backed deal. During this warehouse period, there may be significant market and credit risk that must be hedged, if possible. The hedge may generate gains or losses, and this risk (or reward) is usually borne by the deal arranger—usually an investment bank or commercial bank—but it may be borne by the equity investor(s) if it is pre-agreed. Once the deal closes, there may be further risk to the bank arranger due to holding tranches in trading book inventory before the deal is entirely sold.

Financial institutions also make a secondary market in the CDO tranches, and these positions are usually hedged. Reserves are held as a cushion for the residual risk of ongoing trading and risk management. The financial institutions that use this business model have the cleanest type of transaction management from the arbitrage point of view, but it is still not strictly an arbitrage.

It is more correct to call the cash calculation of the CDO the *economics* rather than the *arbitrage*. The economics of a typical CDO are calculated as follows:

> *Cash thrown off by the collateral plus interest on collateral, if any,* minus *structuring fees;* plus/minus *hedging gains/losses;* minus *underwriting fees or sales fees (of the tranches or liabilities);* minus *legal fees, trustee fees, and management fees, if any;* minus *administration fees, special purpose vehicle fees, rating agency fees, and listing fees;* minus *the payments due on the CDO notes (the tranches, which are the liabilities, of the CDO), equals profit.*

Later we look at the CDO economics in more detail. We examine the failure of arbitrage terminology to describe the fluctuating profitability, and sometimes the loss, in these transactions, especially for financial institutions that do not distribute all of the liabilities of the CDO.