

Letter from the Editors

Vol. 6, Nos. 1-4, 2003

Securitize This! Collateralized Debt Obligations

When two markets offer different values for the same or nearly the same commodity an arbitrage opportunity may present itself. An example of these one-commodity two-value-scenarios is the market for corporate loans and the market for securities backed by corporate loans—the market for collateralized loan obligations (CLOs). When the market for CLOs is more efficient than the corporate loan market itself the potential for an arbitrage opportunity exists. Transaction costs including any necessary hedging that locks in the price differential between the two markets must be factored into the arbitrage calculation. Strictly speaking an arbitrage profit is a risk free profit that is earned on zero net investment. Traders execute arbitrage transactions by selling the commodity or derivative of the commodity in the market where values are relatively high and covering the sale by purchasing the same commodity or derivative thereof in the relatively cheap market. In the mortgage market a banker can originate (buy) mortgages in the forward or cash market of the primary mortgage market and securitize (sell) the same mortgages in the forward market of the secondary mortgage market which is called the “to be announced or TBA” market. In the primary mortgage market a financial institution makes committed offers to borrowers for mortgage credit at a quoted rate for up to sixty days prior to the actual closing of the mortgage contract. This commitment to lend can be thought of as a forward purchase of mortgages in the primary market. In the secondary market the mortgage banker makes a commitment to deliver on a future date a pool of mortgages with a specified yield for a specified price to a bank or to FNMA or Freddie Mac. The mortgage pools delivered in the TBA market are used as collateral for mortgage backed securities which are issued in the TBA market. Delivery of mortgage pools to satisfy TBA commitments are transactions on the secondary mortgage market. In other words investors are making commitments to purchase MBS collateralized by pools of mortgages which fill the yield commitments of the forward sale of mortgages. This com-

mitment to deliver the pool of mortgages is made before the mortgage collateral has been originated. Depending upon the timing of each leg of the transaction, forward markets in the primary and secondary mortgage markets can be used to hedge risk, to speculate in price changes across markets or to take advantage of temporary arbitrage opportunities.

It is possible and quite common to launch a CLO transaction before all the loans that will ultimately back the securities have been acquired by the collateral manager on behalf of the special purpose entity (SPE) that issues the CLOs. The period over which the collateral manager accumulates the loans that will collateralize the asset-backed securities is the ramp up period. Issuing the CLOs before all of the initial loan collateral has been purchased offers the opportunity of taking advantage of good pricing in the securities market while seeking out the best and cheapest collateral in the loan market. The time gap between issuing securities and purchasing collateral is a source of risk to investors. There is a chance that once the CLO securities are issued sufficient collateral can not be acquired at the price that supports their value. It follows that shorter ramp up periods for a small percentage of the collateral are less risky than long ramp up periods for a large per cent of the collateral. Funds raised in the initial issuance of CLOs that are not immediately used to purchase loans are invested in highly rated liquid securities. The yield on the short term investments during the ramp up period will be lower than the yield the SPE must pay to finance the CLOs. This cost of carry must be managed so that it does not impede on the economics of the arbitrage between the corporate loan market and the asset-backed CLO market.

In the structured finance community the “risk free” and “zero net investment” components of the arbitrage definition are relaxed so that when financiers and bankers speak about arbitrage CLOs they are really talking about playing two markets for a single commodity. An asset manager that discovers value in corporate loans can pur-

chase the loans and refinance them in the securities market by means of a securitization transaction. The collateral manager's reputation is an important marketing factor and is a consideration of the rating agencies that rate the CLOs, so it follows that collateral manager reputation has an impact on the pricing of the deal. A manager is evaluated on his/her ability to value corporate loans correctly, trade these loans effectively for the CLO special purpose vehicle and work out distressed loans to the best possible outcome for the investors in the CLOs.

A CLO transaction may be privately placed or publicly offered, the former is more common for arbitrage CLOs which tend to be for smaller amounts than CLO transactions launched to liquidate segments of a financial institutions balance sheet.

Securitized loans are frequently accomplished through a master trust or master vehicle that is able to issue new series of CLOs to finance new acquisitions of loans. All of the series issued by the master vehicle are collateralized by a common pool of assets and are governed by the same legal documents and distinguished from other series by a prospectus or offering supplement. The issuing vehicle will be established as a special purpose entity (SPE) that is insulated from the bankruptcy risk of other institutions involved with the transaction, specifically the transaction sponsor, the collateral manager, underwriters of the CLOs and any counterparties that are committed to exchange cash flows or value with the SPE. Like all true securitizations, the separation and insulation of the vehicle that owns the collateral and issues the asset-backed securities from all other institutions is of paramount importance from the point of view of investors and the agencies that monitor the securities for investors, namely the rating agencies, S&P, Moody's and Fitch. In addition to the isolation of the SPE from bankruptcy risk, the documentation governing the transaction, asset sales and asset purchase agreements, offering circulars, and trust indentures, constrain both sides of the SPE balance sheet so that it truly is a special purpose vehicle established to fund a narrowly defined pool of assets. It is the insulation of the SPE along with the constraints on the assets and liabilities of the SPE which allows investors to evaluate CLOs based primarily on the expected performance of the underlying collateral.

The SPE purchases loans from the sponsor of the transaction which has either originated the loans or acquired them in the loan market; it finances the loans through an issue of a series of CLOs composed of multiple classes. Each class will bear a different degree of credit risk and interest rate risk. Interest rate risk differences across the classes are created by tranching cash flows from the underlying assets in a manner such that each class amortizes

in sequence. Credit risk differences across the CLO classes are a result of structuring the CLO classes in an order of priority with respect to cash flows. Delinquencies and defaults on the underlying assets are first allocated to the most subordinate class before they are allocated to the next most subordinate class and so on until the most senior class (least subordinate) bears losses.

The SPE can issue further series after the initial issue, to support the acquisition of additional collateral. These purchases of new collateral which enlarge the pool of assets owned by the master trust are in addition to the purchase of collateral financed with the proceeds of amortizing collateral that take place during the revolving phase of a series. Classes of CLO series issued by master trusts are designed to have two distinct phases, the revolving phase and the controlled amortization phase. During the revolving phase the proceeds of collateral supporting a class of the CLO that liquidates is reinvested in new collateral. The collateral manager makes the investment decision within the constraints of the offering documentation of the series. Once the controlled amortization phase commences, liquidating principal is allocated to an account where it is invested in liquid securities so that it is available to investors on the appropriate dates.

An example of a cash flow arbitrage CLO is North Westerly CLO I B.V. launched in June of 2003. North Westerly CLO I is a Dutch special purpose company that has been established to purchase corporate loans and finance the purchases by issuing collateralized loan obligations. The assets purchased by North Westerly are senior secured and mezzanine loans. North Westerly is sponsored by NIB Capital, a Dutch merchant bank. NIB is also the collateral manager for North Westerly CLO I B.V. The acquisition finance group within NIB originated and booked the loans that make up the collateral for North Westerly CLO I B.V. The first series of CLOs issued by North Westerly consisted of eight different classes for a total principal value of 376 million Euros. Approximately 70% of the principal value was financed with Classes I-A and I-B both rated AAA by S&P. Four percent of the securities issued by North Westerly were rated BBB, 4.8% were rated BB- and class IV-B which was 11.8% of the notes were unrated and in the most subordinate position *vis a vis* the other classes. Each class issued by North Westerly benefits from credit enhancement provided by the other classes that are subordinate to it as well as excess spread derived from the difference between the interest generated by the loans and interest due on the CLO securities. Class I-B is supported by classes I-B, II, II-A, III-B, III-C, IV-A, and IV-B. The coupons on the classes ranged from Euribor plus 35 basis points for the most senior class up to Euribor plus 700 basis points for the most subordinate class. All of the classes, with the excep-

tion of III-C, are denominated in Euros. Class III-C is U.S. dollar denominated. Since the assets are denominated in both Euros and U.S. dollars, the structure incorporates currency swaps to mitigate exchange rate risk. We have used the Standard and Poor's presale report published on April 23rd, 2003 for the information on North Westerly. The S&P analysts that wrote the presale report for North Westerly are Brian Kane in London and Elke Neumann in Frankfurt. We also included an excerpt from an NIB Capital Press release concerning their 2003 annual figures. NIB is using securitization for both the management of their balance sheet and to take advantage of arbitrage opportunities between the loan and securities markets.

“Eight securitisations have been placed in 2003, valued at a total of EUR 6 billion, of which EUR 3.3 billion related to the distribution of NIB Capital's own portfolio. The latter relates to the sale of a portfolio of acquisition loans by means of the “North Westerly” Collateralised Loan Obligation (CLO), and three securitisations of the Bank's own mortgage loan portfolios for a total of EUR 3 billion. These securitisations and the lower US dollar exchange rate have a tempered impact on the development of the balance sheet. The increase in total assets is the result of an increase in the trading portfolio of interest-bearing securities. The development of the balance sheet is in line with NIB Capital's objective of increasing the turnover rate of assets and steadying the growth of the balance sheet.

The Bank's Tier-1 ratio increases from 11.0% at end 2002 to 12.8% at end 2003 (after the proposed dividend payment). This indicates a further improvement in the

Bank's capital structure (minimum requirement is 4%). This increase is primarily the result of a decline in the risk-weighted assets by 3.5% and of the successful issue of hybrid Tier 1 Capital of USD 200 million in the US market.” (*Press Release, 9 February 2004, NIB Capital N.V. Annual Figures, 2003*)

There are quantitative and qualitative constraints on the type of collateral that North Westerly CLO can own. Restrictions and diversification rules are used to moderate the severity of collateral delinquencies and defaults that will stress the cash flows used to amortize each CLO class over the life of the transaction. In addition to the risk reduction effect the collateral constraints have, they also have the important effect of making the CLO risk transparent and therefore quantifiable.

Standard and Poor's inputs data about the CLO portfolio into their proprietary default model to calculate the portfolio's base default risk. This default risk summarized by a default frequency can be altered by changing the model inputs. Outputs from the default model are fed into the S&P cash flow model. Cash flow simulations across the default frequencies are used to arrive at appropriate credit enhancement levels for each class of the CLO and each rating category. Ratings of the CLO classes are fundamental information used by investors to evaluate securities in this market.

Charles A. Stone, *Université Paris Dauphine*
Anne Zissu, *Temple University*

Collateralised Loan Obligations (CLOs) – A Primer

Andreas A. Jobst

***London School of Economics and Political Science (LSE) and
J.W. Goethe Universität Frankfurt am Main***

The following descriptive paper surveys the various types of asset-backed securitisation (ABS) and provides a working definition of so-called collateralised loan obligations (CLOs), which allow issuers to sell large portfolios of commercial loans and their attendant credit risk directly to capital markets. Free of the common rhetoric and slogans, which sometimes substitute for understanding of the complex nature of structured finance, we describe the theoretical foundations of this specialised form of loan securitisation. The paper considers not only the distinctive properties and benefits of CLOs, but also the information inherent in the transfer of credit risk, in order to equally privilege the critical aspects of security design affecting the structure of CLO transactions.

I. INTRODUCTION

In the lexicon of previous decades financial intermediation occurred when banks and non-bank financial institutions, such as insurance companies, accepted funds from depositors or other investors and channelled these funds at some margin to businesses and households by means of lending. Originators of loans used to hold such loans on the books until these asset claims matured, rolled over or terminated once debtors went insolvent. The corresponding credit risk was the prime focus of banks and non-banks, which applied forecasting models to estimate the probability of incurring bad debt, whereas interest rate risk could be managed by ensuring that the contractual interest rate on the loan varied with the cost of funds.

Over the last two decades, however, non-bank financial service providers, such as investment banks, captive finance companies and insurance firms have posed a formidable challenge as contenders in the intermediation

process, employing the same technological advances as banks. Since the 1980s important technological changes have been taking place in the “old-fashioned” business of financial intermediation. Chief among the innovations introduced at major banks has been securitisation, which – in a general sense – reflects the substitution of credit finance by capital market-based finance. Generally, securitisation represents a structured finance transaction, where receivables from a designated asset portfolio are sold as contingent claims on cash flows from repayment in the bid to increase the issuer’s liquidity position and to support a broadening of lending business (refinancing) without increasing the capital base (funding motive). Aside from being a funding instrument, securitisation also serves (i) to reduce both economic cost of capital and regulatory minimum capital requirements as a balance sheet restructuring tool (regulatory and economic motive), (ii) to diversify asset exposures (especially interest rate risk and currency risk) as issuers repackage receivables into securitisable asset pools (collateral)