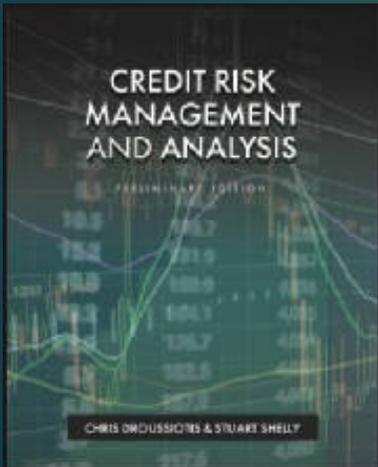


Chapter 10: Leveraged Loans, Private Credit and Collateralized Loan Obligations (CLO)



Chapter 10

“Credit Risk Management & Analysis”

CREDIT MARKETS - AN OVERVIEW

- ▶ The secondary loan market sprung up in the late 1990s and early 2000s with the creation of the institutional loan market, also referred to as the Term Loan B market, since the traditional term loan (Term Loan A) was financed by commercial banks.
- ▶ The growth came from the establishment of collateralized loan obligations (CLOs) that became most of the syndication market.
- ▶ These loans evolved into many types, depending on the purpose of the loan, the investor providing the loan, and the market demand-supply dynamics.
- ▶ Also, when Standard & Poor's (S&P) and Moody's expanded their rating services to loans from bonds, the secondary market opened, and many funds were created that were designed to frequently trade these loans.

The Bank Loan or Credit Markets

The secondary loan market is divided into two distinct markets:

- ▶ Investment-grade (IG)
 - ▶ Non-IG or leverage loan (LevFin) markets.
- ▶ The IG secondary market consists primarily of commercial banks trading with one another to reduce or increase the exposure of certain borrowers.
 - ▶ In the case of non-IG and leveraged transactions, the parties that trade these loans consist of financial companies and institutional investors such as CLOs, loan mutual funds, business development companies (BDCs), and other direct lenders and hedge funds.
 - ▶ Since the IG secondary market involves trading between commercial banks whose cost of capital is relatively low, the pricing is not as important as the LevFin secondary market.
 - ▶ These commercial banks, often called relationship banks, are more interested in providing other banking products to the company. Thus, they see the transaction as a source of increasing their exposure to obtain customers or up-tier their relationship with the company.
 - ▶ The participants in LevFin secondary market, on the other hand, care more about the loan's price based on the credit quality of the issuer and their personal risk appetite.

The Case of Loans as an Investment Class

The leveraged loan asset class has been relatively attractive for many portfolio managers due to the following investment characteristics:

- ▶ **Insulation From Interest Rate Risk.** Both the revenues and cost of the CLO are based on floating-rate interest (London Interbank Offered Rate (LIBOR) based) that is reset at least every 90 days, so even if the interest rate rises for the CLO's loan obligations, the rates will also rise at the same level for the individual portfolio of companies, enabling natural arbitrage for the CLO manager.
- ▶ **Low Price Volatility.** In general, LevFins experience reduced volatility resulting from a low correlation and covariance with other assets. The floating-rate nature of leveraged loans contributes to its low correlation with other security types. Only short-term Treasury bills (considered risk-free) consistently exhibit lower volatility.
- ▶ **Defensive Strategy.** Senior loan funds have historically provided consistent, higher risk-adjusted returns compared to other asset classes, which may make them attractive to investors during volatile markets.

Pricing and Loan Yields

Then the pricing is set based on an initial spread over a base rate (usually LIBOR) at set original issuance discount (OID), which represents the additional “fee” the investor receives. The loan yield formula is as follows:

$$\text{Annual loan yield} = \text{LIBOR} + \text{spread} + \frac{\left(\frac{100 - \text{OID}}{4 \text{ years}}\right)}{100}$$

- ▶ Please note that this conventional formula is based on 4 years' average life of the loan.
- ▶ A typical press announcement from the lead arranger bank will be as follows:
 - ▶ “The term loan B price is set at LIBOR + 4.5% at 99.0 OID and is now free to trade.”
- ▶ Based on this example and assuming the starting LIBOR is 2.50%, the initial loan yield is then calculated as follows:
 - ▶ **$\text{Annual loan yield} = 2.5\% + 4.5\% + \left(\frac{100 - 99}{4 \text{ years}}\right) / 100 = 2.5\% + 4.5\% + 0.25\% = 7.25\%$**

Pricing and Loan Yields

- ▶ The Loan Syndication and Trading Association (LSTA) was established in the mid 1990s to develop liquidity and transparency in the secondary market for bank loans.
- ▶ LSTA provides dealer-secondary quotes based on market-to-market and other relevant information including the most volatile loans, the list of the biggest price movers, and the listing of the newest deals.
- ▶ The LSTA, in conjunction with Standard & Poor's Leveraged Commentary & Data (LCD), has developed a LevFin index as a benchmark representing a weighted average of the 100 largest loan facilities.
- ▶ The index, S&P/LSTA Index is a total return index of the leverage loans. Loan portfolio managers use this as a benchmark to compare the portfolio performance and other asset class to the market.
- ▶ A list of loan secondary trading level examples is shown in figure 10.1.

SECONDARY LOAN MARKET									LIBOR (3M)=	2.25%
Companies	Corporate Rating	Facility	Spread bps	Remaining Avg Life Years	OID %	Secondary Bid Price %	Secondary Ask Price %	Difference to OID	Current Yield %	
Axell Corporation	B+/B1	TL B	400	3.50	98.500%	97.500%	97.625%	-1.000%	6.964%	
Buzz Tech. Corp.	B/B2	TL B	475	3.75	99.000%	99.500%	99.525%	0.500%	7.133%	
Cite Inc.	B+/B1	TL A	375	4.00	99.500%	99.750%	99.850%	0.250%	6.063%	
Delmon Company	B-/B3	TL B	525	2.50	97.000%	100.500%	101.100%	3.500%	7.300%	
Excelent Hotel Corp.	B+/B2	TL B	450	2.25	98.250%	97.500%	98.000%	-0.750%	7.861%	
Filarmo Inc.	B-/B2	TL B	545	3.50	98.250%	97.500%	97.750%	-0.750%	8.414%	
Gray Tech Inc.	B+/B2	TL B	425	2.00	99.250%	97.500%	98.000%	-1.750%	7.750%	
Holifas Saas Co.	B/B1	TL B	400	1.75	98.750%	97.500%	97.750%	-1.250%	7.679%	
Intergem Inc.	B/B2	TL B	475	2.00	99.250%	97.500%	97.875%	-1.750%	8.250%	
Jasminsen Corp.	BB-/Ba3	TL B	325	3.25	99.750%	97.500%	98.000%	-2.250%	6.269%	
Kapko Company	B+/B1	TL B	425	3.50	99.000%	97.500%	97.750%	-1.500%	7.214%	

Figure 10.1

Secondary Loan Terms - Concepts

- ▶ Loan participation: A loan participation, sometimes called “silent participation,” is an agreement between two or more lenders in which a primary lender sells specific rights in a loan to other lenders (participants)
- ▶ Loan assignments: Defined in the credit agreement, assignments are the sale or transfer of all or portion of the loan from one bank (assignor) to another bank (assignee). With the purchase, the assignee has the same rights and obligations as all the other banks listed in the agreement as a lender of record
- ▶ Most-favored Nation: Most agreements for leverage loans include “most-favored nation” (MFN) pricing protection.
- ▶ Sunset provision: A sunset provision is a clause in the loan agreement that would allow the MFN protection to expire after a set period, typically 90–180 days.

Collateralized Loan Obligations (CLOs)

- ▶ Collateralized loan obligations (CLOs) are funds created with a pool of corporate loans.
- ▶ Typically, these corporate loans are comprised of leveraged loans with lower credit ratings with higher expected returns. In exchange for taking on higher risk, the investor in a CLO is offered higher diversity and better-than-average returns.
- ▶ A typical CLO fund will include a portfolio of 100 –250 first-lien bank loans that the manager of such funds is actively buying and selling in the secondary loan market.
- ▶ To fund the initial purchase of these loans, the CLO raises funds from outside investors in structures called tranches.
- ▶ Each tranche is ranked with a priority of payment when and if the CLO fund liquidates. The tranches are comprised of debt and equity investments

Collateralized Loan Obligations (CLOs)

- ▶ The investments in the debt tranches are rated by Moody's based on risk of default, where the equity investments in CLOs are not ranked and are the last to get paid in a liquidation.
- ▶ Investors who are paid out first have lower overall risk, but they receive smaller interest payments as a result.
- ▶ Investors who are in later tranches, referred to as equity tranches, are paid last, and thus expect higher interest payments.
- ▶ The highest priority tranches, referred to as debt tranches, are treated just like bonds and have credit ratings as well as set coupon payments.
- ▶ These debt tranches are structured and rated in a specific pecking order.

Structuring the Tranches of CLOs

Metanext CLO Fund IV (MCLO)

COLLATERALIZED LOAN OBLIGATION (CLO) STRUCTURE

* MCLO Summary Income Statement		
Revenues	5.00%	\$ 25.00 mm
Interest Exp.	2.50%	(11.25)
Mgmt Fee	0.50%	(2.50)
Total Income		\$ 11.25 mm
ROE %		22.50%

* LIBOR offsets

METANEXT CLO INVESTMENT & PORTFOLIO MANAGEMENT COMPANY

LEVERAGED LOAN FUND:

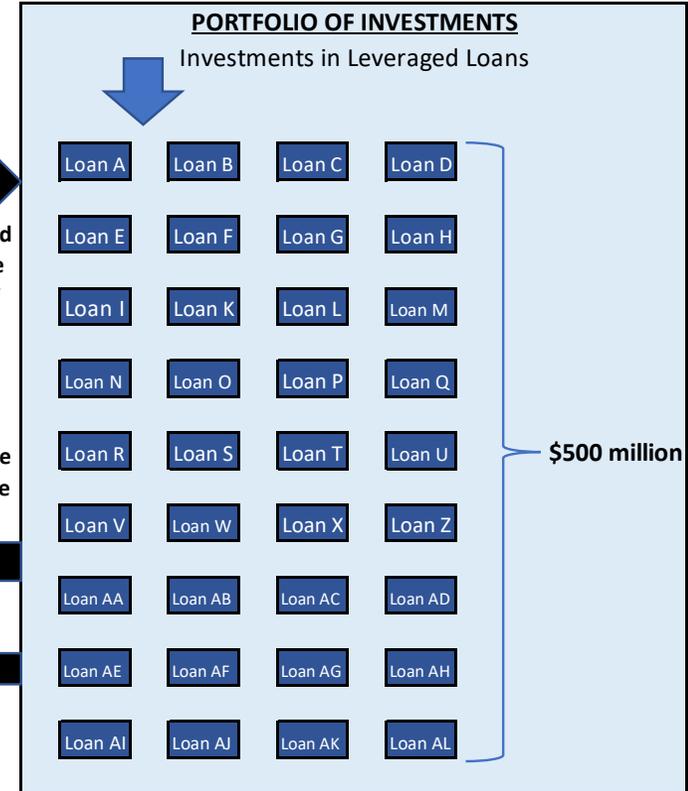
Capital Raising as follows:

DEBT TRANCHES:

Tranche A }
 Tranche B } \$450
 Tranche C } million
 Tranche D }
 Tranche E }



Weighted Average Cost of Debt L+2.5%



Weighted Average Portfolio Revenue L+5.0%

Portfolio Management Fee 0.5%



Figure 10.3

Structuring the Tranches of CLOs

CLO funds are structured to meet certain criteria set by the credit agencies such as Moody's including portfolio diversification factors by industry, company and credit ratings discussed further in this chapter.

These loans are primarily leveraged loans given the higher yield characteristics.

The CLO investment platforms are as follows:

- ▶ Intermediate Investing: Warehouse Financing
- ▶ Capital Raising
- ▶ Investing the Capital Raised

Structuring the Tranches of CLOs

Intermediate Investing: Warehouse Financing

- ▶ Typically, before raising the capital, the CLO manager obtains a warehouse facility.
- ▶ This is basically a credit facility obtained by a commercial bank (typically by the underwriter for the intended new-issue CLO).
- ▶ This will serve as a short-term financing for the purchase (or warehousing) of leverage loans before the launch of the CLO. Especially with new issuance of CLOs, companies need to show their success of ramping up the portfolio before they obtain more permanent financing.
- ▶ Also, since the permanent financing requires diversification, this arrangement is built toward securing that.
- ▶ The terms and conditions of the warehouse facility are relatively straightforward.
- ▶ Such facility, similar to revolving credit facility, could have several classes of loans with differing seniority levels, and the short-term equity during the ramp up is typically funded by the CLO manager or affiliates.
- ▶ The borrower is often the special purpose vehicle or entity (e.g., Metanext CLO Fund IV Ltd.) that will raise the permanent financing shortly after a significant percentage of the ramp up has occurred.
- ▶ This borrower will pledge the corporate loans purchased as security to the warehouse lenders.
- ▶ This credit agreement (warehouse facility agreement) typically has specific criteria of what loan can be purchased.

Structuring the Tranches of CLOs

Intermediate Investing: Warehouse Financing

- ▶ The most significant risk to a manager who provides the warehouse facility is market risk, a loss that various commercial banks experienced during the financial crisis of 2008/2009 when the secondary loan market plummeted due lack of liquidity.
- ▶ Given the potential fluctuations of the secondary loan markets, these loans are vulnerable to price movements.
- ▶ To mitigate this market risk, a typical warehouse lender requires that the manager who provides the short-term equity maintain a pre-negotiated level of loan-to-value ratio, so if the market value of loans decreases above the set loan-to-value ratio, the manager must provide additional funding to maintain the required level of loan-to-value ratio stated in the agreement (similar to a margin loan).
- ▶ In recent years, a lot of seasoned CLO managers have successfully launched new-issue CLOs without relying on a warehouse facility, as it seems very costly for the equity investor in a ramp-up stage.
- ▶ Banks have been very innovative in creating various structures that encourage the manager to use these warehouse facilities by using various cash flow techniques such as higher overcollateralization during the ramp up.
- ▶ Overcollateralization ratio tests (OC tests) are used to maintain a par amount of the warehouse portfolio, in aggregate, instead secondary market value-based tests.

Structuring the Tranches of CLOs

Capital Raising

- ▶ Once the ramp up is successful (typically 70% of the fund used), the manager moves to raise a more permanent finance for the CLO investments (typical 10–14 years).
- ▶ The CLO manager will reach out to an advisor (typically the provider of the warehouse facility) to assist with capital raising for the next CLO portfolio.
- ▶ The capital raising includes the debt and equity.
- ▶ As mentioned, the debt is divided by tranche based on probability of default assigned by third-party rating agency for each tranche.
- ▶ Typically, each tranche is raised by different investors based on their risk appetite. Historically, commercial banks invest in the AAA- and AA-rated tranches, and any tranches below that (BBB–BB) involve other institutional investors such as insurance companies, pension funds, and hedge funds.

Mezzanine Loans and Notes (Continued)

- ▶ Mezzanine financing is placed between senior loans and equity, hence the name “mezzanine.”
- ▶ A typical structure would be a hybrid of debt and equity financing that gives the lender the right to convert to an equity interest in the company in case of default on the loan.
- ▶ Given the financial risk, pricing is set much higher than on senior loans (12% to 20%). Mezzanine financing is structured to replace part of the capital equity investors would otherwise have to provide the company.
- ▶ For example, a company would seek financing for \$20 million and put in \$30 million of its own funds for the buyout (the purchased company's assets are generally placed as collateral for the loan).
- ▶ The mezzanine lenders will look to gain equity in the business through structured warrants allowing the purchase of equity later, sometimes at an agreed-on rate. Basically, mezzanines are structured originally as debt that entitles the issuer to receive interest payments with the upside of equity returns if the company succeeds.
- ▶ The borrowers could prefer mezzanine debt instead of equity if there is enough support because the interest is tax deductible. Also, since the mezzanine investor has the best interest of the company in mind (potential equity ownership), he or she might be willing to amend certain terms to help the company through tough times.

Mezzanine Loans and Notes (Continued)

Figure 9.2 shows an example of Colorado Dental LBO structure purchased by a private equity firm for \$1.08 billion that includes bank loans, mezzanine notes, and equity.

Colorado Dental

TRANSACTION SOURCES & USES

Sources	Interest Rate	Term (Years)	Committed (\$ 000's)	Funded (\$ 000's)	% Cap	EBITDA x	Uses	Amount (\$ 000's)
Revolving Credit	0.50%/LIBOR+3.5%		100,000	-			Cash	-
Term Loan A	LIBOR + 3.5%	5	180,000	180,000	18.4%	1.5x	Purchase of Equity (100% share)	740,000
Term Loan B	LIBOR + 4.0%	7	200,000	200,000	20.4%	1.7x	Refinance Existing Debt	220,000
Total Bank Debt			480,000	380,000	38.8%	3.2x	Transaction Fees & Expenses	20,000
Senior Unsecured / Subordinated Notes	10% FIXED		200,000	200,000	20.4%	1.7x		
Total Debt			680,000	580,000	59.2%	4.8x		
Cash Equity			400,000	400,000	40.8%	3.3x		
Total Sources			1,080,000	980,000	100.0%	8.2x	Total Uses	980,000

Acquisition Target EBITDA =

Figure 9.2

Unitranche Term Loans

- ▶ Unitranche debt is a type of structured debt that combines senior and junior loans into one debt vehicle.
- ▶ These senior and junior loans are awarded different priority of payment or pricing in one loan agreement during the structuring of the security.
- ▶ This type of loan is obtained from one or multiple participants that are interested in the combination of the different term structures.
- ▶ It is typically arranged by financial institutions and not your traditional bank and allows the borrower to raise funds with a one-stop-shop arrangement that only requires one approval process.
- ▶ Combining different debt structures from different investors that have their own risk assessment and purposes allows the total debt package to be more comprehensive, tailored, and marketable in the secondary market.
- ▶ The borrower in this case will make one interest payment to one lender with the cost of the loan (interest rate) being a blend between a traditional bank-secured loan and a subordinated loan such as a second-lien and/or mezzanine loan.

Structuring the Tranches of CLOs

Investing the Capital Raised

- ▶ Moody's and Standard Poor's set various parameters for CLO managers to follow when building a portfolio of investments including certain diversification levels across companies, industries, and ratings levels.
- ▶ The typical investment is between \$5–\$15 for a \$500-million loan.

CLO Investment Vehicles

Bank Loan Funds (BLF)

These are closed-end funds that trade leveraged loans.

BLFs are sometimes called floating rate funds because the loans in these funds are LIBOR or prime rate based on floating rate loans.

- ▶ These funds trade based on the market value of the individual loans that create BLFs' net asset value and are structured like CLOs except they provide daily information such as liquidity and diversification across borrowers and industries.
- ▶ The market values in these funds may fluctuate based on individual loan and industry performance.
- ▶ These loans are typically repaid without penalty at any time and cause the expected income stream to end before the stated maturity. Such prepayment is caused by an upgrade of the rating of the borrower, a declining interest rate environment, and favorable market conditions.

CLO Investment Vehicles

Business Development Company (BDC)

- ▶ A business development company (BDC) is a firm that also invests in leveraged loans. To qualify as a business development company, a company must be registered in compliance with Section 54 of the Investment Company Act of 1940.
- ▶ Many financial institutions are set up to have both CLOs and BDC structures. A major difference between a BDC and a CLO fund is that BDCs allow smaller, non-accredited investors to invest in these funds.
- ▶ The other difference is that BDCs have a maximum leverage of 1:1 equity and debt.
- ▶ Due to lower leverage than CLOs, many BDCs invest in junior debt that carries higher yields.
- ▶ BDC funds are typically closed-end funds that make investments in middle-market companies. BDCs provide the investors with exposure to debt and equity investments in predominantly privately owned companies.
- ▶ Because BDCs are regulated investment companies, they must distribute over 90% of their profits to shareholders, which results in above-average dividend yields.

Other CLO-Like Credit Platforms – Lender Finance

- ▶ Various commercial banks provide securitization financing directly to asset managers and BDCs in the leveraged loan asset class.
- ▶ This is basically a revolver line of credit with the purpose of supporting their institutional clients by providing liquidity and leverage for their managed funds and special purpose vehicles (SPV).

Other CLO-Like Credit Platforms – Lender Finance

This securitization product is like a CLO structure where there is a LTV proxy for measuring this product's risk. From the bank's point of view, the risk is partially mitigated from the following factors:

- ▶ Given the LTV (approximately set at 65%–70%), there is an equity cushion in which the risk is lower than the bank directly lending to companies.
- ▶ The underlying assets have cross-collateralized each other, the loss of one loan will be covered by other loans' interest revenue.
- ▶ Although spread pricing for this indirect lending through the SPV is significantly lower than direct lending (i.e., 2.0% versus 4.0% spread pricing), the analysis is focusing on the probability of default of the portfolio adjusting for recovery rates.
- ▶ Banks that provide this securitization product take a bottom-up approach in which each individual asset added to the SPV's fund is reviewed and approved with some exceptions stipulated by the external ratings of these loans if available. For example, a corporate loan that was bought in the leveraged loan secondary market that is rated BB- could be put in the fund with the approval of the bank that provides the lender finance credit.

Lender Finance Structure

▶ Participants in the leveraged loan lenders' finance asset class include asset managers that manage middle-market leveraged loans, such as Antares Capital, Golub Capital, and Ares Management Corp. Figure 10.3 shows the lender's finance business chart showing the funds flowing from the commercial bank to a loan fund via an arranger invested in the SPV. Figure 10.2 also shows the flow of the equity funds into the SPV platform as equity.

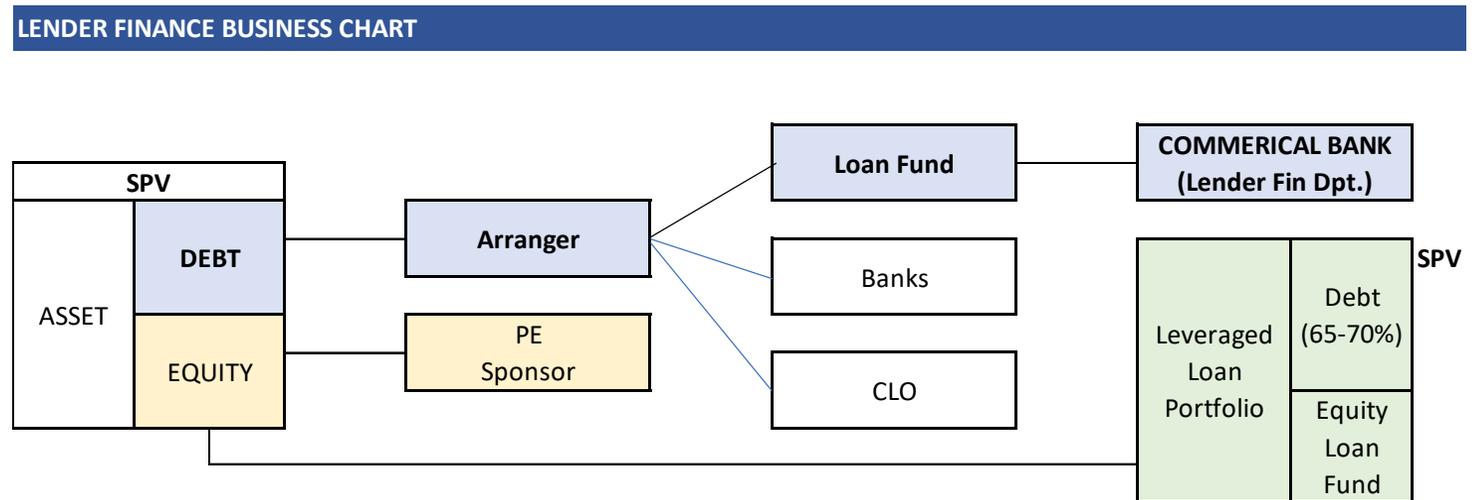


Figure 10.2

Lender Finance Structure

- ▶ Lender finance structures vary depending on the asset class discussed in more detail in Chapter 15. An example of a lender finance term sheet of a structure in the leveraged loans for middle-market companies is as follows:

SPV Borrower	KINVEN LLP
Facility (Phase I)—at Close	\$250 million revolver credit (RC) \$250 million delayed term loan (DTL) with a 12 months' draw period
Facility (Phase II)—in 6 months	Up to \$500 million upside (split between RC and DTL)
Tenor	5 years (3 years investment/2 years amortization)
Advance Rates	First-lien loans: 65% First-lien last out: 55.0% Second lien: 35%
Spread	Unused fee: grid based, 35–87.5 basis points Delayed draw ticking fee: 37.5 basis points SOFR + 2.25%
Liquidity Cost	70 basis points (based on slated maturity)
Up-Front Fee	100 basis points
Expected Collateral Value	\$750–\$900 million
Veto Rights	Veto rights on collateral until the underlying portfolio consists of 20 or more assets
Ramp Period	9 months

Credit Analysis of Leveraged Loans “Interagency Guidance on Leveraged Lending”

Based on the March 21, 2013, letter by the board of governors of the Federal Reserve Systems, the Federal Deposit Insurance Corporation, and the Office of the Comptroller of the Currency with the subject “Interagency Guidance on Leveraged Lending” to the banking institutions, the banks that underwrite and manage leveraged loans need to establish a comprehensive assessment of financial, business, industry, and management risks, including whether:

- ▶ 1. cash flow analyses rely on overly optimistic or unsubstantiated projections of sales, margins, and merger and acquisition synergies;
- ▶ 2. liquidity analyses include performance metrics appropriate for the borrower’s industry, predictability of the borrower’s cash flow, measurement of the borrower’s operating cash needs, and ability to meet debt maturities;
- ▶ 3. projections exhibit an adequate margin for unanticipated merger-related integration costs;
- ▶ 4. projections are stress tested for one or more downside scenarios, including a covenant breach;
- ▶ 5. transactions are reviewed at least quarterly to determine variance from the plan, the related risk implications, and the accuracy of risk ratings and accrual status, and from inception, the credit file should contain a chronological rationale for an analysis of all substantive changes to the borrower’s operating plan and variance from expected financial performance;
- ▶ 6. enterprise and collateral valuations are independently derived or validated outside of the origination function, are timely, and consider potential value erosion;
- ▶ 7. collateral liquidation and asset sale estimates are based on current market conditions and trends; potential collateral shortfalls are identified and factored into risk ratings and accrual decisions, contingency plans anticipate changing conditions in debt, or equity markets when exposures rely on refinancing or the issuance of new equity; and
- ▶ 8. the borrower is adequately protected from interest rate and foreign exchange risk.