April 14, 2017

Hon. Michael Crapo
Chairman
U.S. Senate Committee on Banking, Housing, and Urban Affairs
239 Dirksen Senate Building
Washington, DC 20510

Hon. Sherrod Brown
Ranking Member
U.S. Senate Committee on Banking, Housing, and Urban Affairs
713 Hart Senate Office Building
Washington, DC 20510

Re: Response to Request for Economic Growth Proposals: Credit Risk Retention Requirement for Managers of Qualified CLO Assets

Dear Chairman Crapo and Ranking Member Brown,

In response to your request for legislative proposals designed to foster economic growth (March 20, 2017), I write on behalf of the Loan Syndications and Trading Association ("LSTA"). The proposal described below would significantly advance the interests of American businesses and their employees, as well as investors and consumers, by increasing the availability – and lowering the cost – of a crucial type of financing that is especially important to growing American companies as they seek to invest to create jobs and improve services.

This letter first provides background to the proposal, including the importance of Collateralized Loan Obligations ("CLOs") in providing financing to American businesses. The second portion describes the proposal, in particular explaining how it further aligns the interests of CLO managers and their investors. The final portion of this letter describes the risk retention rulemaking and how the proposal provides for commonsense adjustments to the credit risk retention rule.

Background to the Proposal.

A nearly identical version of this proposal was recently passed, in a bipartisan vote of 42 to 15, by the House Committee on Financial Services. *See* H.R. 4166, 114th Cong., 2d Sess. ("Expanding Proven Financing for American Employers Act").

This proposal is designed to increase the availability and decrease the costs of a vital source of financing for growing American companies. Syndicated leveraged loans provide approximately $1.4 trillion of financing to U.S. companies. The companies receiving these loans

are generally not eligible for investment grade loans; this should not be considered a mark against them as more than 70 percent of U.S. companies are not investment grade.

CLOs have for many years been the single largest source of capital that supports these loans and the extensive range of American companies that depend on them to expand operations, create jobs, improve their goods and services, and otherwise increase competition and economic growth. In fact, CLOs provide more than $440 billion in financing to companies in nearly every state and every sector. For example, California and New York companies both receive more than $29 billion in financing from CLOs, helping more than 200 companies that collectively employ more than one million people. More than 50 Ohio companies, employing more than 350,000 people, receive more than $12 billion in loans from CLOs. CLOs provide more than $32 billion collectively to companies in Maryland, New Jersey, North Carolina and Virginia, which collectively employ more than 600,000 people.[1] Who are these companies? They range from airlines like Delta to computer companies like Dell, apparel companies like Hanes, phone companies like Cincinnati Bell, broadcasting companies like Sinclair Broadcast Group, theme parks like Six Flags, food stores like Albertsons, restaurants like Burger King, and manufacturers like Federal Mogul and Metaldyne.

Issuers of CLOs increase the availability of capital to these companies by securitizing pools of syndicated corporate loans, selling notes with varying degrees of credit risk to sophisticated investors with a broad range of risk appetites and investment objectives – including investors who would not or could not directly lend to companies that need these loans.[2] According to S&P Global Market Intelligence, capital provided by CLO issuers has ranged from $50 billion to $125 billion annually.

Description of the Proposal.

CLOs can continue to provide that capital for financing these companies efficiently, as long as they are not subject to unnecessary and excessive risk retention requirements. This proposal seeks to accomplish that goal by recommending a structure for risk retention that aligns what the Dodd-Frank Act requires and what the industry can bear.

Specifically, the legislative proposal provides that managers of certain qualified CLOs can enter or remain in the market by bearing an amount of credit risk somewhat above the baseline 5 percent level that the Dodd-Frank Act described. It mandates that managers must retain risk by holding an interest with value equivalent to 5 percent of the equity of their securitization transactions, with 70 percent of that held in equity notes. That holding alone is a significant amount of the benchmark level because almost all credit risk is contained in a

[1] Source: www.loansmeanbusiness.com

[2] Importantly, as discussed later in this letter, the CLO structure also provides for very substantial protections for investors. In fact, the long-term default rate on CLOs has been *one-tenth to one-fifth* that of equivalently rated corporate bonds.

securitization's equity tranche, and managers also retain risk through their deeply subordinated compensation structure.[3]

The proposed relief would be available only to managers of qualified CLOs that adopt a series of structural protections designed to buttress the retention of credit risk and protect investors. Specifically, a qualified CLO is one that has specified:

- Asset quality protections (*e.g.*, assets comprised of senior secured loans provided to companies);

- Asset portfolio protections (*e.g.*, limits on the percentage of loan assets related to any company or industry sector);

- Structural protections (*e.g.*, limits on leverage);

- Additional requirements to maintain alignment of manager and investor interests (*e.g.*, exclusion of balance sheet securitizations and investor rights in relation to the manager);

- Regulatory oversight requirements (*e.g.*, SEC oversight of managers); and

- Requirements relating to transparency and disclosure (*e.g.*, reporting of loan characteristics and performance to investors).

These protections are designed to increase CLO activity and the financing available through them only for CLOs that meet industry "best practices" demanded by the most sophisticated, large investors.

The proposal applies only to risk retention by independent managers of the assets of CLO issuers. Such managers are regulated by the SEC as registered investment advisers and focused on and rewarded for delivering returns to investors. Issuers with this type of independent manager, many of whom are small and thinly capitalized, stand in contrast to "balance sheet" CLO issuers, which are used to securitize pools of loans provided by a well-capitalized originating bank rather than loans purchased on the open market by an independent manager. Balance sheet CLOs would not be permitted to utilize this risk retention proposal.

A copy of proposed legislative language implementing these provisions is attached to this letter. Attach. A.

[3] As discussed later, research by Harvard Business School Professor Victoria Ivashina indicated that this form of risk retention more than meets the Dodd-Frank threshold of 5 percent of the credit risk of the assets being securitized.

Background to the Risk Retention Rulemaking and Reasons for Commonsense Adjustments to the Rule's Requirements

Section 941 of the Dodd-Frank Act required the SEC, FDIC, OCC and Federal Reserve (and for housing-related securitizations, HUD and the Federal Housing Finance Agency) to promulgate rules requiring certain "securitizers" to retain at least five percent of the credit risk associated with the securitized assets.[4] In the rulemaking that followed, managers of CLO assets argued that, not being "originate-to-distribute" securitizations, the rule was not intended to apply to them at all. However, if it did, they argued that they should be permitted to hold a lower, appropriate level of credit risk due to the risk retention required of them already by investors, the adverse consequences of subjecting them to expensive additional risk retention requirements, and the investor protections and alignment of interests inherent in the CLO business model – reflected in the remarkable performance of CLOs during the 2008 crisis. They further argued that any risk retention obligation should be based on *credit risk* as the statute required rather than fair value, which would require punitive capital commitments.

In their final rules, the agencies required that CLO managers purchase and retain 5 percent of the *fair value* of a CLO's notes.[5] As a result, CLO managers must often purchase and retain far more than the 5 percent credit risk mandated by the Dodd-Frank Act. Fair value is quite different from credit risk and, if applied to the most subordinated tranche of a securitization's notes (which managers of CLO assets often would purchase and retain), requires retention of high levels of credit risk. Using conservative estimates, Harvard Business School Professor Victoria Ivashina has estimated that a 5 percent holding of the full amount of a CLO in the form of CLO equity notes (measured by fair value) reflects retention of *45 percent* of the assets' credit risk – or *nine times* the benchmark amount otherwise deemed adequate by the agencies. Attach. B.

The proposal seeks to reverse this result and ensure that managers of CLO assets retain only the amount of credit risk that aligns their interests with investors – and not excessive levels that impede capital formation. Excessive risk retention requirements impose costs upon independent asset managers that they struggle to bear, forcing them to restructure or to retreat from the market or to pass those effects to borrowers and eventually consumers in the form of higher costs or reduced service. Like many other asset managers, most independent managers of CLO assets are thinly capitalized. They are agents rather than principals and design their services to benefit investors. The agencies' credit risk retention rule, however, requires these asset managers to undertake large outlays as principal investors.

In the absence of the proposed legislative relief, the resulting capital outlay requirements can be expected to deter the formation of independent CLOs. LSTA surveys indicated that CLO formation may ultimately be reduced by half, and the agencies' own analysis conceded that the rule would significantly impair CLO formation and the resulting capital available from CLOs to

[4] *See* 15 U.S.C. § 78o-11 (codifying the principal provisions of Section 941).
[5] Because these CLOs are not "originate-to-distribute" securitizations, the CLO manager does not own the assets at origination and does not have the option simply to retain a portion of the assets being securitized. Instead, the CLO manager must raise capital and purchase the CLO notes in the market in order to "retain" them.

support the loan syndication market. They disagreed with LSTA's analysis only with respect to the particular degree of impairment.[6] That analysis acknowledged that the increased capital outlay requirements, or holding of excess credit risk, will inevitably reduce CLO formation, increase lending costs, and reduce the efficiency of the affected capital markets.[7] Moreover, CLOs that continue to be formed will be managed by a smaller group of competitors as smaller, less capitalized managers are acquired or squeezed out of the market, and the surviving CLOs likely will be priced and structured less efficiently because the manager must depart from the market-based, asset management business model. The agencies' own analysis confirmed these points.

Preliminary market performance since the release of the rules confirms these predictions. The rules became formally effective at the end of 2016. However, the market began reacting to the new risk retention requirements – by rewarding presumed "survivors" and penalizing presumed "casualties" – once the rule was published in December 2014. The decline in CLO issuance in the interim has been significant: in 2014, before the rulemaking was completed, $124 billion of CLO notes were issued; in 2015 and 2016 the comparable figures were $98 billion and $74 billion. Thus, CLO formation declined 40 percent in just the run-up to the introduction of risk retention requirements. Similarly, the predicted consolidation and contraction among managers has already commenced. There has already been material consolidation in the market and lessened activity from smaller fund managers that had been active in the sector. And, although the agencies justified imposing the risk retention requirements on independent managers in part based on the availability of a "lead arranger" alternative designed to reduce the adverse effect on CLO issuance,[8] no CLO issuance has occurred using that option – precisely as industry commenters predicted.

The proposal thus seeks to ensure that these adverse market effects will not be borne by borrowers and investors and, only slightly less directly, by consumers. In fact, recently increased investor interest in higher-yielding assets has partially masked the adverse effects of a contracting CLO market. However, as the risk retention rules are implemented and CLO formation continues to shrink, the basic laws of supply and demand ensure that the cost of credit will be higher and the availability of credit will be lower than they otherwise would have been. The decline of the CLO investor will increase the relative costs of borrowing and decrease the scope of lending in the syndicated corporate loan market. Those increased costs and reduced access to capital, in turn, mean that American companies will be less able to maintain or expand their businesses, hire employees, or invest to improve their services. Consumers and the economy are ultimately harmed.

The proposal is also designed to buttress market stability. The agencies claimed that the acknowledged costs of the rules were justified largely by the purported market benefits of reducing capital available to support the syndicated corporate loan market. This rationale conflicted with the statutory direction to increase access to capital and failed to recognize the public benefits associated with making capital more widely available to businesses. In any

[6] *See, e.g.*, 79 Fed. Reg. 77602, 77729–730 (Dec. 24, 2014).

[7] *See id.*; *id.* at 77657.

[8] *See id.* at 77658.

event, the agencies' own analysis undermined that rationale. The agencies reasoned that hedge and mutual funds would partially fill the gap in capital previously provided by CLOs.[9] However, this view may be short-sighted. Hedge funds and mutual funds are subject to investor redemptions, which can exacerbate market downturns. CLOs, on the other hand, are long term, match-funded investors with no "mark-to-market" or redemption pressures. As a result, they can hold fast – and even buy – when others are motivated sellers. This stabilizes the market – as it did during the 2008/2009 financial crisis. Thus, as applied to independent managers of CLO assets, the agencies' high level of risk retention actually reduces market stability.

Finally, the proposal seeks to ensure that investors are protected as it provides for lower credit risk retention only for managers of the assets of CLOs that adopt industry "best practices." As described above, those practices include a series of requirements related to asset quality, portfolio diversification, structural protections, investor control, transparency, and regulatory oversight. They build on an industry model that already provides very significant investor protections. Managers of CLO assets are focused on delivering returns to their client investors, who are extremely sophisticated and have developed an industry model that is carefully designed to align investor and manager incentives. The standard independent CLO securitization accomplishes this by providing that a principal form of the manager's compensation depends on the eventual returns received by holders of the CLO issuer's equity, ensuring that returns on those equity interests (and, thus, returns to the manager) occur after obligations to debt holders have been satisfied, and through other investor protections. The independent managers effectively hold a deeply subordinated interest in the performance of the CLO assets, which Harvard Business School Professor Ivashina assessed at approximately five percent of the assets' credit risk.

In fact, this structure and these safeguards have protected investors admirably: CLOs performed remarkably well during the financial crisis. Out of 6,141 CLO tranches rated by S&P between 1994 and 2013, just eight investment grade tranches defaulted and 17 high yield tranches defaulted. In that 20-year period, not a single AAA or AA CLO tranche defaulted. In contrast, the 10-year default rate on AAA and AA corporate bonds was 0.87% and 1.13%, respectively. The 1994–2013 default rate on A, BBB, BB and B rated CLO notes was 0.45%, 0.47%, 2.26% and 2.61%, respectively. The 10-year default rate on A, BBB, BB and B rated corporate bonds was 2.07%, 5.06%, 15.96% and 29%, respectively. In effect, the default rate on CLOs was *one-tenth to one-fifth* that of equivalently rated corporate bonds. Clearly, CLOs proved to be remarkably resilient and served investors extremely well, especially compared to most other types of investments, including in particular other types of securitizations.

The legislative proposal, an almost identical version of which was passed by the House Committee on Financial Services in a strong bipartisan vote, is designed to build on these traditional strengths of the CLO model and ensure that they provide even greater protection for investors. And by protecting investors, the proposal ensures that all market participants – investors, American companies and their employees, and the consumers dependent on them – all benefit and contribute to greater economic growth and stability.

[9] *See id.* at 77657, 77729–730.

* * * *

We would be pleased to elaborate any of these points and would welcome the opportunity to work with you and your colleagues to achieve legislative reform that will benefit investors, U.S. companies, other market participants, and consumers.

Respectfully,

R. Bram Smith
Executor Director

ATTACHMENT A

A BILL

To amend the Securities Exchange Act of 1934 to provide specific credit risk retention requirements to certain qualifying collateralized loan obligations.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "XXX".

SEC. 2. RISK RETENTION REQUIREMENT FOR QUALIFIED COLLATERALIZED LOAN OBLIGATIONS.

Section 15G(e) of the Securities Exchange Act of 1934 (15 U.S.C. 780–11(e)) is amended by inserting after paragraph (6) the following new paragraphs:

"(7) REQUIREMENTS FOR QUALIFIED COLLATERALIZED LOAN OBLIGATIONS.—

"(A) RISK RETENTION REQUIREMENT.—Notwithstanding any other provision of this section, as of the effective date set forth in subsection (i)(2), the risk retention requirement for qualified collateralized loan obligations may be met by the purchase and, during the applicable duration of risk retention specified by the rules of the Federal banking agencies under subsection (c)(1)(C)(ii), holding (without hedging or otherwise transferring the credit risk), of securities of the collateralized loan obligation with the value of no less than five percent of the equity of the collateralized loan obligation by the manager of the qualified collateralized loan obligation or one or more of the majority-owned affiliates of the manager or its knowledgeable employees and other employees. Of that amount, 70% shall be held in the form of equity securities and the remainder shall be held ratably in securities of all other tranches of the securitization.

"(B) QUALIFIED COLLATERALIZED LOAN OBLIGATIONS.—For purposes of this paragraph, a qualified collateralized loan obligation is a collateralized loan obligation that meets all of the following requirements:

"(i) ASSET QUALITY PROTECTIONS.—The collateralized loan obligation shall—

"(I) have at least 100 percent of its assets comprised of senior secured loans and cash equivalents;

"(II) have 100 percent of its loan assets issued by companies;

"(III) have no assets that are asset-backed securities or derivatives, except that this limitation shall not prohibit a qualified collateralized loan obligation from acquiring a loan participation or any interest related to or in a letter of credit, or entering into derivative transactions to hedge interest rate or currency rate mismatches;

"(IV) not purchase assets in default, margin stock, or equity convertible securities;

"(V) acquire only loans held or acquired by three or more investors or lenders unaffiliated with the manager;

"(VI) hold only loans to borrowers whose financial statements are subject to an annual audit from an independent, accredited accounting firm;

"(VII) have no more than 60 percent of its assets comprised of covenant lite loans, except that each asset shall require the disclosure of unaudited financial statements quarterly within 60 days of the end of the quarter and audited financial statements annually within 120 days of the end of the fiscal year; and

"(VIII) at the time of purchase of any asset, comply with the requirements of subclauses (I) and (VII) and clause (ii) of this subparagraph, or, if not in compliance with any such requirement, maintain or improve the level of compliance after giving effect to such purchase.

"(ii) ASSET PORTFOLIO PROTECTIONS.—

"(I) No more than 3.5 percent of the assets of the collateralized loan obligation may relate to any single borrower.

"(II) No more than 15 percent of the assets of the collateralized loan obligation may relate to any single industry.

"(iii) STRUCTURAL PROTECTIONS.—

"(I) The collateralized loan obligation's equity shall be at least 8 percent of the value of its assets.

"(II) The governing transaction documents of the collateralized loan obligation specify over-collateralization and interest coverage tests, and if

any such test falls below the required level specified for the collateralized loan obligation in such documents, available interest collections (and if necessary, available principal collections) must be applied to repay the collateralized loan obligation's debt in order of seniority until compliance with the applicable test is restored.

"(iv) REQUIREMENT TO MAINTAIN ALIGNMENT OF MANAGER AND INVESTOR INTERESTS.—

"(I) The collateralized loan obligation shall be an open market collateralized loan obligation.

"(II) The holders of the equity of the collateralized loan obligation (excluding the risk retention equity held as required by subparagraph (A)) shall have the right to remove by vote the manager for cause.

"(III) A majority of the manager's fees, including any incentive fee, shall be subordinated to payments then due in relation to the collateralized loan obligation's debt securities.

"(IV) The manager's discretionary sales of assets on behalf of the issuer of the collateralized loan obligation shall be limited each year to not more than 30 percent of the principal amount of the assets of the collateralized loan obligation (other than sales of defaulted or credit-deteriorated, credit-risk, or credit-improved loans).

"(V) The risk retention equity requirement set forth in subparagraph (A) is met.

"(VI) All holders of collateralized loan obligation securities that are U.S. persons within the meaning of Regulation S (17 C.F.R. 230; 249) under the Securities Act of 1933, are qualified investors.

"(v) REGULATORY OVERSIGHT REQUIREMENTS.—

"(I) The manager of the collateralized loan obligation shall be registered with the Commission as an investment adviser under section 203 of the Investment Advisers Act of 1940 (15 U.S.C. 80b–3).

"(II) All purchases and sales of the assets of the collateralized loan obligation shall be conducted on an arm's-length basis and in compliance with any applicable provisions of the Investment Advisers Act of 1940.

"(vi) REQUIREMENTS RELATING TO TRANSPARENCY AND DISCLOSURE.—A monthly report shall be made available to holders of debt securities of the collateralized loan obligation, which includes information regarding—

"(I) a list of assets of the collateralized loan obligation, including, with respect to each asset, the obligor name; the CUSIP (or security identifier) if applicable, the interest rate and maturity date, the type of asset, and the market price for each asset where available;

"(II) with respect to the portfolio of assets, the aggregate principal balance and aggregate adjusted collateral principal amount (adjusted as required by the collateralized loan obligation governing transaction documents) and the percentage of such aggregate adjusted collateral principal represented by each asset;

"(III) information relating to each applicable over-collateralization test and interest coverage test and the level of compliance in relation to each test;

"(IV) all purchases, repayments, and sales of assets; and

"(V) the identity of each defaulted asset as defined in the related transaction documents.

"(8) DEFINITIONS FOR PURPOSES OF PARAGRAPH (7).—For purposes of paragraph (7), the following definitions apply:

"(A) BALANCE SHEET COLLATERALIZED LOAN OBLIGATION.—The term 'balance sheet collateralized loan obligation' means a collateralized loan obligation—

"(i) whose assets consist predominantly of loans originated and transferred to the collateralized loan obligation by one or more of its affiliates other than in—

"(I) open market transactions;

"(II) from an open market collateralized loan obligation; or

"(III) from a collateralized loan obligation in existence as of the effective date of this paragraph that is not a balance sheet collateralized loan obligation; and

"(ii) the assets and liabilities of which are, immediately after issuance of its asset-backed securities in a securitization transaction, included under generally accepted accounting principles in the consolidated balance sheet of one or more of its affiliates.

"(B) COLLATERALIZED LOAN OBLIGATION.—The term 'collateralized loan obligation' means any issuing entity of an asset-backed security, as defined in section 3(a)(79) of the Securities Exchange Act of 1934 (15 U.S.C. 78c(a)(79)), that is comprised primarily of commercial loans.

"(C) COVENANT LITE LOAN.—The term 'covenant lite loan' means, at the time the collateralized loan obligation enters into a commitment to acquire such loan, a loan for which the underlying instruments neither—

"(i) require the obligor to comply with any maintenance covenant; nor

"(ii) contain a cross-default provision to a financing facility of the obligor that requires the obligor to comply with a maintenance covenant (including one that may apply only upon the funding of such other loan or financing facility); except that if such loan is pari passu with another loan of the obligor that would not be a covenant lite loan under the criteria in this clause, such loan shall be deemed not to be a covenant lite loan. For purposes of this clause, the term 'pari passu' means treated equally and without preference.

"(D) EQUITY.—The term 'equity' means the most junior class of securities issued by the collateralized loan obligation (excluding any non-economic security such as the issuer's common stock) and any additional class(es) of securities junior to the collateralized loan obligation's debt securities.

"(E) MANAGER.—The term 'manager' means an investment manager that is responsible for managing a collateralized loan obligation under the collateralized loan obligation's governing transaction documents.

"(F) OPEN MARKET COLLATERALIZED LOAN OBLIGATION.—The term 'open market collateralized loan obligation' means a collateralized loan obligation—

"(i) whose assets consist predominantly of senior, secured syndicated loans acquired by such collateralized loan obligation directly from the sellers thereof in an open market transaction or from another collateralized loan obligation and of temporary investments;

"(ii) that is managed by a manager; and

"(iii) that is not a balance sheet collateralized loan obligation.

"(G) OPEN MARKET TRANSACTION.—The term 'open market transaction' means—

"(i) either an initial loan syndication transaction or a secondary market transaction in which a seller offers senior, secured syndicated loans to prospective purchasers in the loan market on market terms on an arm's length basis, which prospective purchasers include, but are not limited to, entities that are not affiliated with the seller; or

"(ii) a reverse inquiry from a prospective purchaser of a senior, secured syndicated loan through a dealer in the loan market to purchase a senior, secured syndicated loan to be sourced by the dealer in the loan market.

"(H) QUALIFIED INVESTOR.—The term 'qualified investor' means—

"(i) with respect to securities that require the payment of principal and interest, an investor that is a qualified purchaser, within the meaning of section 3(c)(7) of the Investment Company Act of 1940 (15 U.S.C. 80a–3(c)(7)) or an entity owned exclusively by one or more qualified purchasers; or

"(ii) with respect to securities that do not require the payment of principal and interest—

"(I) if the qualified collateralized loan obligation relies on such section for its exclusion from the definition of investment company under the Investment Company Act of 1940—

"(aa) a qualified purchaser;

"(bb) a knowledgeable employee, within the meaning of Rule 3c–5 promulgated under the Investment Company Act of 1940; or

"(cc) an entity owned exclusively by such a qualified purchaser or knowledgeable employee; or

"(II) if the qualified collateralized loan obligation relies on Rule 3a–7 promulgated under the Investment Company Act of 1940 for its exclusion from the definition of investment company under that Act and such securities are not fixed-income securities, as defined in such rule—

"(aa) a qualified institutional buyer, within the meaning of Rule 144A under the Securities Act of 1933;

"(bb) a person (other than any rating organization rating the issuer's securities) involved in the organization or operation of the issuer or an affiliate of such a person, as defined in Rule 405 under the Securities Act of 1933; or

"(cc) any entity in which all of the equity owners are such qualified institutional buyers as described in item (aa) or persons described in item (bb).".

ATTACHMENT B

April 1, 2013

Directors, Commissioners, and Staff Members of Financial Regulatory Agencies:

Re: **Notice of Proposed Rulemaking, Credit Risk Retention**
SEC (Release No. 34-64148; File No. S7-14-11); FDIC (RIN 3064-AD74);
OCC (Docket No. OCC-2011-0002); FRB (Docket No. 2011-1411);
FHFA (RIN 2590-AA43); HUD (RIN 2501-AD53)

This letter comments on the assessment of credit risk in the context of a Collateralized Loan Obligations (CLOs) with a particular emphasis on the risk borne by the equity holders of a CLO.

I. Assessment of the Credit Risk

Credit risk is the risk associated with the debtor defaulting on its payment obligations. It is typically measured as expected loss borne by investors, where expected loss is the difference between promised payoff and expected payoff. For example, credit rating—a measure of credit risk—is a relative assessment of expected losses.[1] At a high level, expected loss is a function of probability of default and anticipated loss given default projected over the maturity of the asset.

The assessment of the credit risk of CLO obligations follows a two-step approach: first, assessment of the collateral pool default distribution and, second, structural modeling of the cash flows to CLO obligations based on the specifics of the CLO deal. These two steps map into the two fundamental steps of creating a CLO: (i) creation of the collateral pool, and (ii) structuring (or "tranching") of the cash flows from the collateral, a process that enables creation of new obligations of a differential seniority. Diversification coming from pooling of the collateral *reduces* the aggregate risk of the CLO obligations and assessment of credit risk needs to account for it. However, tranching of the collateral pool does not change the aggregate credit risk of the securitized pool. The aggregate expected loss of a CLO is independent of the obligations structure.

CLO obligations are issued on portfolios of loans. To assess the risk embedded in CLO collateral pool, one needs to determine not only the default probabilities of the individual

[1] The rest of this letter uses "credit risk" and "expected loss" interchangeably.

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instruments in the CLO collateral pool[2], but also the default correlation among these instruments. This means that the calibration of credit risk borne by CLO obligations requires a quantitative model that maps scenarios of collateral losses to the probabilities of such events occurring (a model of the CLO-collateral default distribution).

There is a range of statistical methods to assess the CLO-default distribution. The most popular models are based on either binomial expansion methods or Monte Carlo simulations. The trade-off in choosing a computational approach is between technical tractability and modeling efficiency on the one hand, and amount of explicit modeling assumptions (or expected precision of the model fit) on the other hand. However, different computational approaches are not mutually exclusive, and are usually used in parallel. Furthermore, the actual ratings assigned by the credit rating agencies are likely to be based not only on the quantitative factors, but also on the qualitative input.

The second step in assessing expected loss of CLO obligations models cash flows to individual securities. As mentioned before, while the risk of the underlying collateral pool is fixed, tranching reallocates this risk toward more junior CLO obligations. Thus, the modeling of the cash flows is meant to accurately capture priority of payment (the "waterfall") under different scenarios and overcollateralization requirements. Typically, different scenarios of timing of default, recovery delays, reinvestment assumptions, interest rate scenarios, and exchange rate risk (in cases of currency exposure) are also explicitly modeled as part of the cash flows (as opposed to default distribution).

II. Credit Risk of CLO Obligations and Implications for Credit Risk Retention Rule

The purpose of securitization is to create claims with differential risk characteristics by *concentrating* credit risk in the more junior tranches through contractual subordination. Expected loss is an additive measure of risk; expected loss on the collateral pool is the value-weighted sum of expected losses on the CLO tranches.

To illustrate the risk distribution across different tranches of a typical CLO, I first use Moody's simplified Binomial Expansion Technique ("BET") methodology.[3] In the example used in Moody's "The Binomial Expansion Method Applied to CBO/CLO Analysis," December 1996, the aggregate expected loss rate (expected loss scaled by promised payoff) of the collateral

[2] Default rates of single-name securities can be determined based on the historical default rates or implied from market prices.

[3] BET is an analytically tractable methodology used for rating CLO obligation that implicitly models default correlations of the underlying collateral. Diversity Score (a statistical parameter in a binomial distribution) captures the degree of correlation of the underlying assets, with higher Diversity Score indicating lower correlation across collateral assets. The CLO collateral pool is a portfolio of heterogeneous correlated securities with different probabilities of default. BET approximated the default distribution of the actual collateral pool with an equivalent portfolio of homogeneous and independent securities each having the same probability of default. Once the Diversity Score and probability of default are assigned, default distribution is computed using binomial formula. The degree of diversification of collateral (captured by correlation of default of the underlying assets) is typically assessed based on diversification across different geographical regions and industries.

pool is roughly 15.2%. The expected loss rate on the senior tranche (80% of the CLO notional value) is estimated at 0.067%. The residual risk is carried by the junior claims representing 20% of the notional. This means that the expected loss rate of the junior tranches is roughly 75.7%.[4] So, 99.6% of the credit risk of the CLO pool is carried by the junior claims, which in this example represent 20% of the CLO notional.

The precise economic magnitudes of the expected losses depend on the assumptions (which should be specific CLO in questions). One way to approximate a representative credit risk distribution across different tranches is to look at the historical numbers. Approximately 75% of the notional amount of CLO obligations corresponds to AAA-rated securities with the corresponding expected loss around 0.01%[5]. If the expected loss of the collateral pool is 15.2% (taken from the Moody's example above)[6], then the difference in expected losses must accrue to the junior 25% of CLO claims on value weighted bases. This means that 99.95% of the credit risk of the CLO pool is carried by the junior claims that represent 25% of the CLO notional.

A vertical retention rule abstracts from the structure of the CLO obligation. Any complete vertical slice of the CLO will have the expected loss of the collateral pool. Taking the BET-based example above, a retention rule of a 5% of a vertical slice of the CLO (5% of the notional amount) has an expected loss rate of 15.2%. If the CLO manager retains such vertical slice, *in expectation*, he/she would lose \$0.76 for each \$100 of the CLO notional amount ($= \$100 * 5\% * 15.2\%$).

99.6% of the expected dollar losses is coming from the junior 20% component of the vertical slice. In this example, retention of junior component (which could be composed of several junior notes and equity) in amount equal to 5% of the par value of all CLO notes (\$5 in equity for each \$100 of the CLO notional amount) would increase expected dollar losses on the retained piece to \$3.79 ($= \$100 * 5\% * 75.7\%$). That is, in this example, the same notional amount in equity carries nearly five times (roughly $1/0.2$) the expected losses of the vertical slice. This simple calculation highlights the fact that the notional exposure in the context of CLO obligations does not factor in allocation of risk. In this example, to match the credit risk exposure of a 5% vertical slice, an investor would need to hold only 1.004% of notional amount in junior obligations.

These calculations illustrate the sharp increase in expected losses to the junior tranches (as compared to the senior tranches) and its implications for the risk-retention rules. In a typical CLO, the junior piece is further tranched into increasingly subordinated securities, with equity carrying most of the risk. For example, obligations immediately senior to CLO equity on average

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[4] $75.7\% = (15.2\% - 80\% * 0.067\%)/20\%$.

[5] Computed using representative structure of a 2006 vintage CLO from "What are CLO's and how do they work?", *Babson Capital White Paper*, July 2009, an average maturity of six years and Moody's historical expected losses.

[6] Based on Moody's historical data, 15.2% default rate is equivalent to an average pool rating of B3. This overstates the underlying risk given that, on average, CLO collateral pool is rated "B1"/"B+".

are rated "BB". Based on historical numbers, the corresponding expected loss of these notes is approximately 5.4%. This again points to the fact that most of the credit risk is carried by the first-loss position (equity).

In what follows, I provide a simplified calibration of credit risk embedded in different risk-retention scenarios. Specifically, I comment on the risk retention proposal as formulated by Loan Syndication and Trading Association ("LSTA") in their third supplemental comments in response to the joint Notice of Proposed Rulemaking, 76 Fed. Reg. 24090, concerning risk retention and the implementation of Section 941 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (draft dated March 14, 2013). These calibrations are grounded in the principles outlined above.

Unless otherwise stated, the calculations below build on numbers and assumptions used in the benchmark projections provided to me by LSTA. My comments should not be interpreted as an evaluation of the LSTA benchmark CLO model, but rather as an evaluation of allocation of credit risk in the context of this model. The representative CLO structure used in the LSTA model is reported in Table 1.

Table 1: Assumed CLO Capital Structure

Tranche	% Par Subordination	% Capital	Notional
Class A-1	36.0%	62.3%	256,000,000
Class A-2	24.5%	11.2%	46,000,000
Class B	16.5%	7.8%	32,000,000
Class C	11.5%	4.9%	20,000,000
Class D	7.5%	3.9%	16,000,000
Equity		10.0%	41,000,000
TOTAL			**$411,000,000**

Source: LSTA.

A. Horizontal Retention Rule

"Horizontal retention rule" is defined as manager's purchase of 5% of the CLO's equity securities.

I use Moody's idealized expected losses rates[7] to back up the expected loss for each tranche. Moody's ratings for each tranche are assigned based on the ratings of a 2006 vintage CLO[8]. (These calculations are rough and should be treated as an approximation. Where possible,

[7] Source: "Moody's Approach to Rating Collateralized Loan Obligations," *Moody's Investors Service*, June 22, 2011.

[8] Source: "What are CLO's and how do they work?", *Babson Capital White Paper*, July 2009.

I took a conservative approach.) The expected losses on equity are computed as a residual risk based on a 7% and 8% average expected loss of the CLO pool for the 6- and 10-year scenarios respectively. [9] The calculations take into consideration the fee structure (described below). The numbers are reported in Table 2.

Table 2: Expected Losses of the CLO Capital Structure

Tranche	% Capital	Moody's Rating	Expected Loss Rate (of Each Tranche)	
Scenario			**6 Years**	**10 Years**
Class A-1	62.3%	Aaa	0.0022%	0.0055%
Class A-2	11.2%	Aa1/Aa2	0.023%-0.049%	0.055%-0.110%
Class B	7.8%	Aa3/A2	0.101%-0.321%	0.220%-0.660%
Class C	4.9%	Baa1	0.754%	1.430%
Class D	3.9%	Ba2	5.374%	7.425%
Equity	10.0%		66.08%-66.11%	73.84%-74.24%

Under these assumptions, by holding 5% of the CLO equity CLO manager is exposed to 4.55% of CLO credit risk in the 6-year scenario and 4.45%-4.47% of CLO credit risk in the 10-year scenario.[10]

B. Class M Notes

"Class M Notes" are structured to condition CLO manager's fees on the performance of the CLO's securities. "Subordinated" Class M Notes are paid pari passu with other notes issued by the CLO. "Incentive Notes" are paid only after the holders of the CLO equity securities have realized an IRR of 12%.

Given the unfunded nature of these notes, unlike funded CLO obligations, these notes cannot experience loss of *financial* capital. However, CLO manager has an opportunity cost of his/her time and effort. In addition, there is potentially a significant reputation capital at stake (intangible equity). In this sense, the manager is not indifferent to the outcomes where he/she receives no fees because there is no compensation for his/her time and effort, and potential damage to the intangible equity. The fair value—present value, since these securities are not traded—of the stream of fees is *not* zero because it reflects the market value of manager's input. (There is a direct conceptual parallel with the way a corporate CEO compensation is set up.)

[9] The 6-year scenario assumes that surviving loans are paid at par ("called") at the end of year 6. The 10-year scenario is more conservative. The 7% and 8% average default rates for the 6- and 10- year scenarios are in line with LSTA projections. Note that because I rely on historical (i.e., fixed) expected losses for senior tranches, a lower average collateral default rate leads to a more conservative interpretation of the risk retention rules.

[10] Conceptually, the 10-year scenario is riskier than the 6-year scenario, so credit risk of the equity tranches (or any fixed portion of it) should be higher. In this letter, expected losses on equity are computed as a residual risk so one does not see such increase. In other words, the two scenarios presented in Table 2 are meant to be interpreted as a sensitivity analysis and not as a strict comparison of the two scenarios.

Under the assumption that the CLO market is competitive, the present value of the fee stream reflects manager's fair compensation.

Table 3 reports CLO manager's expected losses (loss of fair compensation) based on the fee cash-flows and discount rates provided by LSTA.

Table 3: Expected losses of Class M Notes

Scenario	% of the CLO Notional	Expected Loss 6 Years	Expected Loss 10 Years
Senior Notes[11]	1.03%	0.0%	0.0%
Subordinated Notes	2.01%	1.4%	2.5%
Incentive Notes	0.48%	73.3%	87.8%

Source: LSTA.

Based on the numbers in Table 3, in the 6-year scenario, Incentive Notes and Subordinated Notes are respectively exposed to 5.22% and 0.33% of the CLO credit risk (total of 5.55% of the CLO credit risk). In the 10-year scenario, Incentive Notes and Subordinated Notes are respectively exposed to 5.24% and 0.63% of the CLO credit risk (total of 5.87% of the CLO credit risk).

In conclusion, under the assumption specified above, if a manager retains 5% of the equity and receives fees from the Class M note structure, the manager would be retaining at least 10.1% of the CLO credit risk.

Sincerely,

Victoria Ivashina
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Hellman Faculty Fellow

[11] For Senior Notes, I assume expected loss of 0%. Other numbers in Table 3 are based on the LSTA projections.