FDIC

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Risk Management of Investments in Structured Credit Products

Summary: A number of insured banks with portfolio holdings in private label mortgage-backed securities, collateralized debt obligations (CDOs), or asset-backed securities (ABS) are facing heightened losses as a result of significant investments in these products. Certain structured credit products, particularly private label mortgage-backed securities (MBS) and CDOs, have experienced deteriorating collateral performance, price declines, and credit rating downgrades. Management due diligence regarding purchases of these products was often lacking. This Financial Institution Letter reiterates and clarifies existing supervisory guidance on the purchase and holding of complex structured credit products. It focuses on the various supervisory concerns related to these securities: pre-purchase analysis, suitability determination, risk limits, credit ratings, valuation, ongoing due diligence, adverse classification, and capital treatment.

Distribution:
FDIC-Supervised Banks (Commercial and Savings)

Suggested Routing:
Chief Executive Officer
Chief Financial Officer
Chief Investment Officer
Chief Risk Officer

Referenced Guidance:
Supervisory Policy Statement on Investment Securities and End-User Derivatives Activities, FIL-45-98
Uniform Agreement on the Classification of Assets and Appraisal of Securities, FIL-70-2004

Related Topics:
Risk-Based Capital Rules
12 CFR Part 325

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Highlights:

- Risk management of investments in structured credit products should include adequate due diligence, reasonable exposure limits, accurate risk measurement, an understanding of the tranched structure, knowledge of the collateral performance, and a determination of investment suitability.
- Institutions should consider credit ratings as a factor in the risk management process; however, credit ratings should not be the sole factor considered when evaluating the risk present in structured credit products.
- Institutions should have a reasonable, documented, and consistently applied approach to pricing high-risk, illiquid, complex structured credit products.
- Examiners' classification of structured credit products is governed by the guidance in the "Uniform Agreement on the Classification of Assets and Appraisal of Securities." This guidance permits examiners to adversely classify a security when supported by current credit information despite an investment grade credit rating.

Risk Management of Investments in Structured Credit Products

Background

A growing number of FDIC-supervised institutions are experiencing deterioration in financial performance as a result of investments in structured credit products.[1] The underlying collateral of certain structured credit products has performed poorly. As a result, the level of credit support for senior tranches has diminished, the volume and severity of credit rating downgrades have increased, liquidity has declined, prices are not transparent, and price volatility has increased. Consequently, an increasing number of financial institutions are recognizing other-than-temporary impairment (OTTI) charges and substantial fair value markdowns.

Some institutions have invested in structured products in volumes representing concentrations of capital. In some cases, significant purchases were initiated after the credit market turmoil began and, in some cases, funding came from brokered deposits or other volatile funding sources. The FDIC is concerned that financial institutions are not appropriately identifying and controlling the risks inherent in complex structured credit products. Examiners are identifying weaknesses in management's understanding of product risks, due diligence efforts, portfolio diversification standards, and application of proper accounting standards.

Purpose

This letter clarifies the application of existing supervisory guidance to structured credit products. Guidance referenced comes primarily from the 1998 "Supervisory Policy Statement on Investment Securities and End-User Derivatives Activities" (Policy Statement), and the "Uniform Agreement on the Classification of Assets and Appraisal of Securities" (Uniform Agreement).[2]

Topics addressed in this letter include investment suitability and due diligence, the use of external credit ratings, pricing and liquidity, and adverse classification of investment securities. FDIC-supervised institutions should revisit outstanding guidance and incorporate this document's clarifications into existing policies and processes. Banks should expect that risk management policies and procedures as well as investment portfolio composition, performance, and risks will be evaluated closely and that

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[1] The term structured credit products is broadly defined to refer to all structured investment products where repayment is derived from the performance of the underlying assets or other reference assets, or by third parties that serve to enhance or support the structure. Such products include, but are not limited to, asset-backed commercial paper programs (ABCP); mortgage-backed securities or collateralized mortgage obligations (MBS or CMO); and other asset-backed securities (ABS), such as automobile and credit card-backed securities;, structured investment vehicles (SIV), and collateralized debt obligations (CDO), including securities backed by trust preferred securities. This letter addresses concerns about the non-agency structured credit market. However, some of the clarifications in this guidance also are relevant for agency securities.

[2] The FDIC's *Risk Management Manual of Examination Policies* includes a sub-chapter titled "Securities and Derivatives" which heavily references these interagency guidance documents. Management of FDIC-supervised institutions should be familiar with the Risk Management Manual and outstanding interagency guidance.

weaknesses in these areas will be reflected in supervisory ratings and capital requirements.

Investment Suitability, Concentrations and Due Diligence

An institution should not invest in complex investments such as structured credit products if staff lacks the experience and expertise to properly understand, measure, monitor, and control applicable risks. And should experience and expertise be available, management should have policies that impose prudent limits on such investments.

Financial institutions should conduct pre-acquisition and periodic analysis of the price sensitivity of securities. Risk factors include, but are not limited to changing interest rates, credit risk deterioration, and reduced liquidity and marketability.

The 1998 Policy Statement provides guidance and sound principles to bankers for managing investment securities and risks. It makes clear the primary importance of board oversight and management supervision, and focuses on risk management, controls, and reporting. Management should approve, enforce, and review policy and procedure guidelines that are commensurate with the risks and complexity of investment activities. Although management may use external consultants and investment advisors, it cannot delegate its responsibilities to third parties and should understand and document review and acceptance of external due diligence information.

Notably, the Policy Statement:

- Emphasizes management's need to understand the risks and cash flow characteristics of its investments, particularly for products that have unusual, leveraged, or highly variable cash flows.
- Provides that financial institutions must identify and measure risks, prior to acquisition and periodically after purchase, and that management should conduct its own in-house pre-acquisition analyses or, to the extent necessary, make use of specific third-party analyses that are independent of the seller or counterparty.

As described in the Policy Statement, investment portfolio diversification is an important way an institution can manage and control portfolio risks. Institutions should strive to limit concentrations in any one investment category, especially complex, illiquid, and high-risk investments such as structured credit products. Purchasing distressed structured credit products that represent large concentrations of capital is considered an imprudent banking practice.

Institutions should ensure that internal risk management and reporting systems are tailored to the risk profile of the investment portfolio. Risk limits and stress testing requirements also should be commensurate with the portfolio's complexity and underlying risks.

Institutions should monitor and appropriately limit concentrations in:

- Investments with historically volatile market values or cash flows.
- Structured investments with underlying collateral comprised of higher-risk assets or those likely to have limited liquidity in a stress environment.
- Investments that do not have readily determinable market values (that is, where price estimates rely on models instead of actual trades).
- Investments that rely on a common risk mitigant, such as bond insurance.

Institutions with concentrations in structured credit products should track credit risk at the deal level, across securitization exposures, within and across business lines, and should attain reliable measures of aggregate risk. Management also should consider loan level risk limits. That is, management should restrict investment in securities backed by collateral with certain higher-risk characteristics, for example, low FICO scores, higher loan-to-value ratios, or high delinquency rates.

Indirect investment in structured credit products, for example, through mutual funds, also should be captured in the methods and processes used to measure, monitor, limit, and control risk. Management should understand the portfolio purchase and hold provisions in the prospectus and should consider permissibility and potential risks in such indirect investments, such as liquidity risk.

In short, policies and procedures should provide for adequate monitoring, measurement, and controls to ensure risks and positions are commensurate with the institution's risk tolerance, investment goals, and management expertise.

Understanding Structured Investments

Institutions should thoroughly understand the characteristics of the structured investments they purchase and how these investments will perform under various scenarios. Securitization documents explain how the various classes, or tranches, in a structure are repaid, which is referred to as the cash flow "waterfall." Documents also will typically contain waterfall-related performance triggers that redirect cash flows to senior bondholders when performance in the underlying assets or the bond deteriorates. Common triggers are based on losses on reference assets, deterioration of market value, or reduction in the credit enhancement within the structure.

Many complex structured securities initially received high investment grade credit ratings, but the risks were difficult to understand and estimate. The risk associated with structured investments is heavily dependent upon their position in the securitization structure. Subordinated positions, such as mezzanine tranches, residual interests, or income notes, are structured to absorb losses on the underlying collateral and serve as credit protection for senior classes. Although many institutions perceived mezzanine bonds as attractive and safe investments, investments in mezzanine tranches may expose an institution to elevated levels of credit, market, and liquidity risk. In severely distressed markets, the entire mezzanine level may be eliminated by higher than originally forecasted expected loss rates. This scenario effectively converts the structure's lower priority senior tranches into the sole support tranches for the most senior AAA bonds, the "super senior" tranches. Moreover, multiple AAA tranches within a given structure typically contain varying degrees of relative risk.

Management also should understand credit enhancements and deal-specific definitions of default. Institutions that purchase structured investments, particularly subordinated tranches, should conduct comprehensive analyses that capture performance, changes in the structure of payments, and allocation of losses under various scenarios. Changes in payment and loss allocations can have a material effect on the value of these securities.

Underlying Collateral Performance

Institutions must understand not only an investment's structural characteristics, but also the composition and credit characteristics of the underlying collateral. Management should conduct analysis at both the deal and pool level using information that sufficiently captures collateral characteristics. Such analysis should be conducted prior to acquisition and on an ongoing basis to monitor and limit risk exposures.

In some structured credit products, such as CDOs of ABS, hybrid CDOs, and synthetic CDOs, the underlying collateral may be in the form of a derivative instrument, often a credit derivative. Institutions should maintain information on the underlying structured tranches, such as the issuer name and credit quality, which will enable them to track the underlying collateral and credit information. Given the complexity associated with these types of structured credit products, management should conduct heightened due diligence and should ensure robust valuation processes.

Institutions with significant holdings of structured credit products also should have necessary systems in place to capture updated information, including market data and, if available, updated performance data from the securitization trustee or servicer. To conduct credit analysis of the structured investments at acquisition and on an ongoing basis, institutions are required to have (or have access to) quantitative tools, valuation models and stress tests of sufficient complexity to reliably assess risk.

Certain structured credit products relied in whole, or in part, on credit enhancements and guarantees provided by third parties. Bond insurers, routinely referred to as "monolines" or "financial guarantors," often provided insurance "wraps" on bonds and credit protection in the form of credit default swaps for CDOs of ABS, which may mitigate credit risk but add complexity. Institutions should monitor the counterparty credit risk associated with third party credit enhancers and also must monitor the creditworthiness and payment capacity of these parties to meet these obligations in normal and stressed market conditions.

Use of External Credit Ratings

The FDIC expects institutions will consider investment ratings as a factor in the risk management process. However, credit ratings should not be the sole factor considered when evaluating the risk present in structured credit products.

Credit ratings should not be used as a substitute for pre-purchase due diligence and ongoing risk monitoring. Institutions should understand that the rating scales for various types of debt (corporate bonds, structured finance investments, and municipal debt) can differ, and that the expected loss for a given rating may vary across products.

There are multiple risks other than credit risk which management should evaluate. These include loss given default, the potential for downgrade known as ratings volatility risk, market liquidity, and price discovery. In many types of structured credit products, these risks can be material and may result in significant losses. Credit analysis of structured credit products, notably CDOs, is particularly challenging. Potential buyers should be aware that the rating agencies and others may underestimate difficult-to-measure risk factors such as correlation.[3] Therefore, institutions should understand the processes and methodologies the ratings agencies use as well as the limitations associated with these metrics.

Pricing and Liquidity

Institutions must have timely information about the current carrying and market values of investments. Institutions with significant holdings of structured credit products should ensure they have the means to value their positions and understand the assumptions used to derive the value of these securities.

Many structured credit products can be difficult to price. Complex instruments may trade infrequently, even when markets are stable, making price discovery difficult or impossible. Marketability varies widely across the capital markets, with many small or complex issues in placement markets with limited or no secondary trade volume. Certain complex structured credit products contain contractual provisions that create economic characteristics that differ significantly from other seemingly similar products, which can limit the ability of an investor to value the product based solely on comparison to the traded price of a similar product.

Institutions should anticipate difficulty when they attempt to price illiquid and complex securities. Thus, they will be expected to understand assumptions used in valuing these securities, know how changes in assumptions can affect the valuation of these securities, and recognize limitations associated with pricing methodologies. Management should also consider the challenges that exist in pricing illiquid, complex instruments when setting portfolio concentration risk limits for structured credit products and other complex securities.

Institutions should have a reasonable, documented, and consistently applied approach to pricing complex securities. Furthermore, institutions should understand the quality of the securities pricing used for regulatory reporting purposes, specifically whether prices are modeled, proxy, actual traded prices, or bids to purchase. Familiarity and compliance with FAS 157 and other relevant accounting guidance is essential.

Additional expectations for pricing complex securities include:

[3] Correlation risk means the likelihood of an event that causes default of one credit increasing the likelihood of default in another credit.

- Management should know how prices are obtained, including whether prices are provided by a third party.
- Management should acquire several independent valuation estimates for illiquid securities and determine which, if any, give the most realistic valuation.
- Management should verify prices obtained from the broker who sold a security, the issuer of a security, or the underwriter of a security and should limit holdings of securities where independent pricing cannot be obtained.

Due to a lack of an active secondary market for structured products, some institutions have developed pricing models for illiquid and complex investments, or use modeled prices provided by others. With regard to modeled prices for complex structured credit products:

- Valuation modeling should be independent and unbiased, periodically validated, understood by users, and available for supervisory review.
- Management is expected to fully understand the basic assumptions used to value these securities, regardless of whether prices are modeled in house or by third parties.
- Management should understand and ensure the reasonableness of valuation assumptions. such as the default, recovery, prepayment, and discount rate.
- Examiners will review the reasonableness of these assumptions and consider and evaluate other pricing sources.

Amid the credit market turmoil, some institutions attracted to potentially higher yields, purchased illiquid and, in some instances, distressed structured credit securities at discounts to par. This strategy assumes the discount will provide a margin of safety against principal loss even given continual market stress, including ongoing deteriorating collateral performance and credit rating downgrades. Bonds bought at a discount can conceivably add a layer of protection for the informed investor. However, in many cases, the discount signals the market's well-founded concerns and risk perception. Institutions that purchase securities at a deep discount will be expected to perform pre-purchase analysis and ongoing due diligence that satisfactorily justifies investment in such securities.

Given the illiquidity in structured credit products, supervisors have serious concerns about institutions that purchase significant positions in these instruments, especially using volatile funds. Institutions that do so can expect close regulatory review of their asset liability management practices.

Adverse Classification of Investment Securities

The Uniform Agreement sets forth a methodology for using Nationally Recognized Statistical Rating Organization (NRSRO) ratings to assign adverse classifications to securities held by depository institutions. The agreement describes situations when examiners may depart from the general rules and assign a more or less severe adverse classification to the security.

The Uniform Agreement states:

- Investment quality debt securities generally include investment securities in the four highest rating categories provided by NRSROs and unrated debt securities of equivalent quality.
- Subinvestment quality debt securities are those with distinctly or predominantly speculative characteristics and generally include debt securities in grades below the four highest rating categories, unrated debt securities of equivalent quality, and defaulted debt securities.
- Examiners generally classify debt securities when one or more NRSRO assigns subinvestment grade ratings.
- Generally, investment grade securities are not subject to adverse classification; however, examiners may adversely classify a security despite an investment grade rating when supported by credit information the examiner believes is not reflected in the rating.

As stated in the Uniform Agreement, under accounting rules, institutions must assess whether a decline in fair value below the amortized cost of a security is temporary or OTTI. Management must conduct regular OTTI reviews, regardless of the size or sophistication of the bank, to comply with accounting standards and meet regulatory reporting requirements. Banks are encouraged to discuss this issue with their accountants.

Examiners should continue to follow the guidance set forth in the Uniform Agreement. Rapid deterioration in the performance of the underlying collateral and changes in the structure and allocation of losses in some complex structured credit products may justify departure from the general rules in the Uniform Agreement and allow for adverse classification of an investment grade security.

Regardless of the determination of adverse classification, examiners also should consider an investment portfolio's depreciation as well as the quality and support for its pricing in their assessment of capital, asset quality, earnings, and liquidity. Failure to provide adequate pricing and impairment analysis also will negatively influence the management rating.

Purchase of higher-risk structured finance securities at a discount from par does not preclude these securities from adverse classification or OTTI analysis. Despite their ratings, these securities may retain predominantly speculative or high-risk characteristics.

Publicly available sources of information exist that may assist management and examiners in their review of structured finance securities. These sources show underlying collateral performance, collateral characteristics, and issue performance, such as the level of overcollateralization remaining. Management is encouraged to use such information in initial and ongoing due diligence efforts.

Examiners should not limit analysis to credit risk, credit ratings or adverse classification when considering the impact of investment portfolio risks on supervisory ratings. Factors such as investment suitability, risk management, liquidity risk exposure, and unrealized depreciation also should be incorporated in examiners' consideration of supervisory ratings.

Capital Treatment and Adequacy

The general risk-based capital standards allow institutions to assign risk weights to ABS and MBS based on external credit ratings from NRSROs. At the institution's option, it may apply a risk weight according to Table 1 and Table 2 to an ABS or MBS instrument depending on the type of security (long term or short term) and the NRSRO rating assigned. The institution must use the lowest NRSRO rating if the ratings differ. If the institution elects not to use the ratings-based approach, the security is assigned a risk weight based on the obligor or the underlying collateral. For example, with a CMO or MBS, the underlying collateral would be residential mortgages.

Table 1 – Long-term rating category

	Risk Weight	Moody's	S&P	Fitch
Highest or second highest investment grade	20%	Aaa, Aa	AAA, AA	AAA, AA
Third highest investment grade	50%	A	A	A
Lowest investment grade	100%	Baa	BBB	BBB
One category below investment grade	200%	Ba	BB	BB

Table 2 – Short-term rating category

	Risk Weight	Moody's	S&P	Fitch
Highest investment grade	20%	P-1	A-1	A1
Second highest investment grade	50%	P-2	A-2	A2
Lowest investment grade	100%	P-3	A-3	A3

The general risk-based capital standards make an important distinction between senior securities and subordinated securities within a securitization structure. A subordinated security or a direct credit substitute is "an arrangement in which a bank assumes, in form or in substance, credit risk associated with an on- or off-balance sheet credit exposure that was not previously owned by the bank (third-party asset) and the risk assumed by the bank exceeds the pro rata share of the bank's interest in the third-party asset." A direct credit substitute includes the mezzanine and subordinate tranches of private label MBS or collateralized debt obligations. A senior tranche of a securitization would not be a direct credit substitute provided it does not absorb losses before another designated senior tranche.

At an institution's option, it may apply the appropriate risk weight from Table 1 or Table 2 to a direct credit substitute. If the security is rated more than one category below investment grade (e.g., below BB-) or unrated, the ratings-based approach would not apply. In this case, or if the institution elects not to use the ratings-based approach for a direct credit substitute, the risk-weighted asset calculation for the security would be based on the face amount of the investment[4] plus the pro rata portion of all the more senior positions it supports (that is, the institution's proportional ownership of the subordinated security multiplied by all of the more senior securities in the securitization).

If the resulting risk-based capital requirement (the total amount of risk-weighted assets for the subordinated security multiplied by the risk weight of the obligor or collateral multiplied by 8.0 percent) is greater than the face amount of the institution's investment in the subordinated security, the institution may apply the low-level exposure rule.[5] The low-level exposure rule limits the risk-based capital requirement for the purchased subordinated security to the institution's maximum contractual exposure, less any recourse liability account established in accordance with generally accepted accounting principles. If the purchased security is deeply subordinated, the low-level exposure rule likely will result in a dollar-for-dollar capital requirement. If the purchased security is deeply subordinated, the low-level exposure rule likely will result in the equivalent of a dollar-for-dollar capital requirement.

The calculations used to determine an institution's risk-based capital ratios do not consider many other factors that can affect bank financial condition and capital adequacy, such as the quality and liquidity of its investments. When assessing the adequacy of capital at an institution with significant holdings of ABS and MBS, particularly those that have been or are likely to be downgraded, examiners should ensure their assessment includes a comprehensive evaluation of the risks inherent in these securities. Even when an institution's capital exceeds the minimum ratios, it remains imperative for examiners to determine whether the bank is holding capital commensurate with the level and nature of the risks to which it is exposed.

The capital requirements set forth in the FDIC's Rules and Regulations are minimum capital requirements that generally only apply to the credit risk associated with a given exposure. Supervisors generally expect institutions to operate above their minimum capital requirements as institutions are generally exposed to other risks beyond credit that can also result in losses.

Structured credit products can expose an institution to other forms of risk, such as market risk, liquidity risk, and operational risk-- risks that have generated significant losses during the recent credit market turmoil. Therefore, institutions are expected to consider these additional risks in their capital planning process and should generally expect to hold capital above the regulatory minimums set forth in the FDIC Rules and Regulations.

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[4] As defined in the FDIC's risk-based capital standards, "face amount" is the amortized cost of an asset not held for trading purposes and the fair value of a trading asset. (12 CFR Part 325, Appendix A, Section.II.B.5.(a)(7)).

[5] 12 CFR Part 325, Appendix A, Section II.B.5.(h)(1).