

## **Capital Interpretations**

### **Synthetic Collateralized Loan Obligations**

**November 15, 1999**

Credit derivatives are now being used to synthetically replicate collateralized loan obligations (CLOs). As discussed in previous guidance of the Federal Reserve Board and the Office of the Comptroller of the Currency (Agencies), credit derivatives are on- and off-balance sheet financial instruments that permit banking organizations to assume or transfer credit risk on a specified or “referenced” asset or pool of assets. Banking organizations can utilize CLOs and their synthetic variants to manage their balance sheets and, in some instances, transfer credit risk to the capital markets. Such transactions allow economic capital to be more efficiently allocated, resulting in, among other things, improved shareholders’ returns.

These Capital Interpretations provide guidance on how synthetic CLOs should be treated under the Agencies’ current leverage and risk-based capital guidelines.<sup>1</sup> The treatment set forth in this guidance will require supervisors and examiners to fully understand these complex structures, identify the relative degree of transference and retention of the securitized portfolio’s credit risk, and determine whether the institution’s regulatory capital is adequate given the retained credit exposures.

A CLO is an asset-backed security that is usually supported by a variety of assets, including whole commercial loans, revolving credit facilities, letters of credit, bankers’ acceptances, or other asset-backed securities. In a typical CLO transaction, the sponsoring banking organization transfers the loans and other assets to a bankruptcy-remote special purpose vehicle (SPV), which then issues asset-backed securities consisting of one or more classes of debt. This type of transaction represents a so-called “cash flow CLO.” It enables the sponsoring institution to reduce its leverage and risk-based capital requirements, improve its liquidity, and manage credit concentrations.

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<sup>1</sup> The Basel Committee on Banking Supervision issued a consultative paper on June 3, 1999 that, if implemented, would result in a comprehensive reform of the Basel Accord and that could change the treatment outlined in this letter.

The first synthetic CLO issued in 1997 utilized credit-linked notes (CLNs).<sup>2</sup> Rather than transferring assets to the SPV, the sponsoring bank issued CLNs to the SPV individually referencing the payment obligation of a particular company or “reference obligor.” In that particular transaction, the notional amount of the CLNs issued equaled the dollar amount of the reference assets the sponsor was hedging on its balance sheet. Since that time, other structures have evolved that also use credit default swaps to transfer credit risk and create different levels of risk exposure, but hedge only a portion of the notional amount of the overall reference portfolio.<sup>3</sup>

In most traditional CLO structures, assets are actually transferred into the SPV. In synthetic securitizations, the underlying exposures that comprise the reference portfolio remain in the institution’s banking book. The credit risk is transferred into the SPV through credit default swaps or CLNs. In this way, the institution is able to avoid sensitive client relationship issues arising from loan transfer notification requirements, loan assignment provisions, and loan participation restrictions. Client confidentiality also can be maintained.

### **Regulatory Capital Treatment**

At the time the Basel Accord was implemented, it did not contemplate transactions such as securitizations, let alone synthetically-created securitizations. Under the current risk-based capital guidelines, corporate credits are assigned to the 100 percent risk category and are assessed 8 percent capital. In the case of high quality investment grade corporate exposures, the 8 percent capital requirement may exceed the economic capital that a bank sets aside to cover the credit risk of the transaction. Clearly, one of the motivations behind CLOs and other securitizations is to more closely align the sponsoring institution’s regulatory capital requirements with the economic capital required by the market.

With the introduction of synthetic CLOs, questions have been raised regarding their treatment for purposes of calculating the Agencies’ leverage and risk-based capital ratios. This section will discuss the capital treatment from the perspective of both investors and sponsoring banking organizations for three types of transactions:

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<sup>2</sup> CLNs are obligations whose principal repayment is conditioned upon the performance of a referenced asset or portfolio. The assets’ performance may be based on a variety of measures, such as movements in price or credit spread, or the occurrence of default.

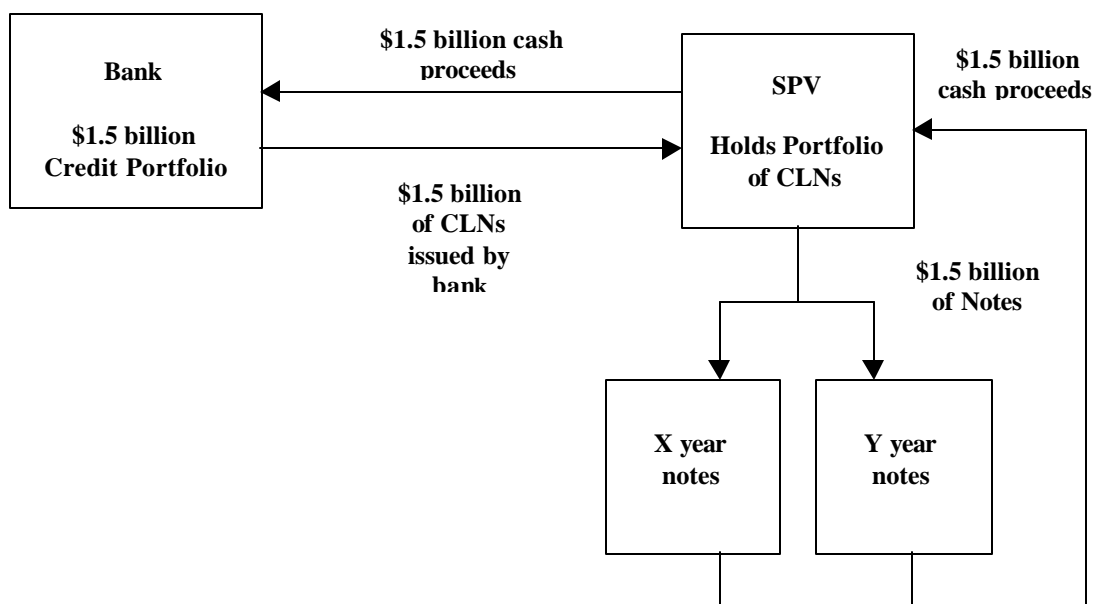
<sup>3</sup> A credit default swap is similar to a financial standby letter of credit in that the institution writing the swap provides, for a fee, credit protection against credit losses associated with a default on a specified reference asset or pool of assets.

- 1) The sponsoring banking organization, through a synthetic CLO, hedges the entire notional amount of a reference asset portfolio;
- 2) The sponsoring banking organization hedges a portion of the reference portfolio and retains a high quality senior risk position that absorbs only those credit losses in excess of the junior loss positions; and
- 3) The sponsoring banking organization retains a subordinated position that absorbs first losses in a reference portfolio.

Entire Notional Amount of the Reference Portfolio is Hedged

In this type of synthetic securitization, an SPV acquires the credit risk on a reference portfolio by purchasing CLNs issued by the sponsoring banking organization. The SPV funds the purchase of the CLNs by issuing a series of notes in several tranches to third-party investors. The investor notes are in effect collateralized by the CLNs. Each CLN represents one obligor and the bank's credit risk exposure to that obligor, which may take the form of, for example, bonds, commitments, loans, and counterparty exposures. Since the noteholders are exposed to the full amount of credit risk associated with the individual reference obligors, all of the credit risk of the reference portfolio is shifted from the sponsoring bank to the capital markets. The dollar amount of notes issued to investors equals the notional amount of the reference portfolio. In the example shown in Figure 1 below, this amount is \$1.5 billion.

**Figure 1**



If there is a default of any obligor linked to a CLN in the SPV, the institution will call the individual note and redeem it based on the repayment terms specified in the note agreement. The term of each CLN is set such that the credit exposure to which it is linked matures prior to the maturity of the CLN. This ensures that the CLN will be in place for the full term of the exposure to which it is linked.

An investor in the notes issued by the SPV is exposed to the risk of default of the underlying reference assets, as well as to the risk that the sponsoring institution will not repay principal at the maturity of the notes. Because of the linkage between the credit quality of the sponsoring institution and the issued notes, a downgrade of the sponsor's credit rating most likely will result in the notes also being downgraded. Thus, a banking organization investing in this type of synthetic CLO should assign the notes to the higher of the risk categories appropriate to the underlying reference assets or the issuing entity.

For purposes of risk-based capital, the sponsoring banking organizations may treat the cash proceeds from the sale of CLNs that provide protection against underlying reference assets as cash collateralizing these assets.<sup>4</sup> This would permit the reference assets, if carried on the sponsoring institution's books, to be assigned to the zero percent risk category to the extent that their notional amount is fully collateralized by cash. This treatment may be applied even if the cash collateral is transferred directly into the general operating funds of the institution and is not deposited in a segregated account. The synthetic CLO would not confer any benefits to the sponsoring banking organization for purposes of calculating its Tier 1 leverage ratio because the reference assets remain on the organization's balance sheet.

#### High Quality, Senior Risk Position in the Reference Portfolio is Retained

In some recent synthetic CLOs, the sponsoring banking organization uses a combination of credit default swaps and CLNs to essentially transfer to the capital markets the credit risk of a designated portfolio of the organization's credit exposures. Such a transaction allows the sponsoring institution to allocate economic capital more efficiently and to significantly reduce its regulatory capital requirements.

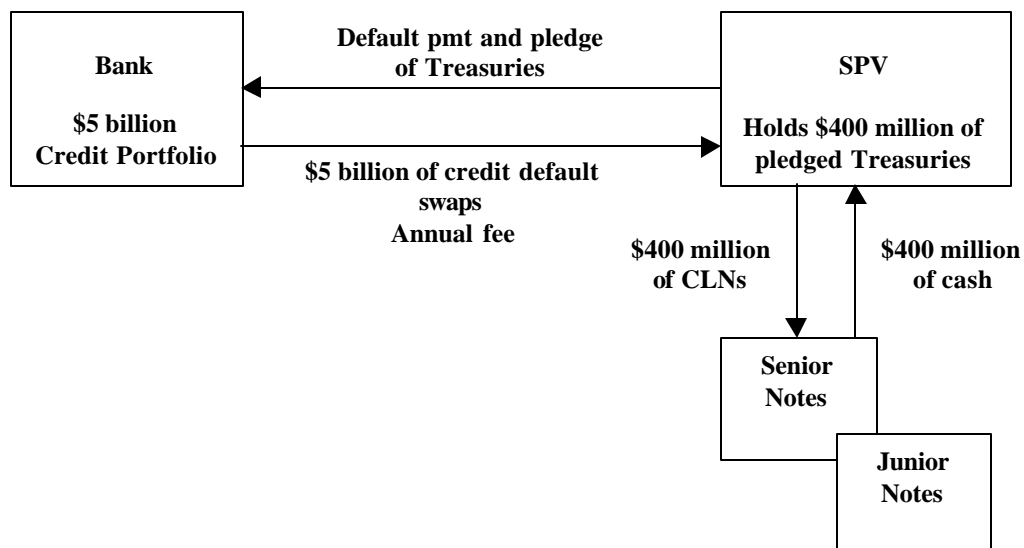
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<sup>4</sup> The CLNs should not contain terms that would significantly limit the credit protection provided against the underlying reference assets, e.g., a materiality threshold that requires a relatively high percentage of loss to occur before CLN payments are adversely affected, or a structuring of CLN post-default payments in a manner that does not adequately pass through credit-related losses on the reference assets to investors in the CLNs.

In this structure, the sponsoring banking organization purchases default protection from an SPV for a specifically identified portfolio of banking book credit exposures, which may include letters of credit and loan commitments. The credit risk on the identified reference portfolio (which continues to remain in the sponsor’s banking book) is transferred to the SPV through the use of credit default swaps. In exchange for the credit protection, the sponsoring institution pays the SPV an annual fee. The default swaps on each of the obligors in the reference portfolio are structured to pay the average default losses on all senior unsecured obligations of defaulted borrowers. (See Figure 2 below for an example of this structure.)

In order to support its guarantee, the SPV sells CLNs to investors and uses the cash proceeds to purchase U.S. Government Treasury notes. The SPV then pledges the Treasuries to the sponsoring banking organization to cover any default losses.<sup>5</sup> The CLNs are often issued in multiple tranches of differing seniority and in an aggregate amount that is significantly less than the notional amount of the reference portfolio. The amount of notes issued typically is set at a level sufficient to cover some multiple of expected losses, but well below the notional amount of the reference portfolio being hedged.

**Figure 2**



There may be several levels of loss in this type of synthetic securitization. The first-loss position may be a small cash reserve, sufficient to cover expected losses, that

<sup>5</sup> The names of corporate obligors included in the reference portfolio may be disclosed to investors in the CLNs.

accumulates over a period of years and is funded from the excess of the SPV's income (i.e., the yield on the Treasury securities plus the credit default swap fee) over the interest paid to investors on the notes. The investors in the SPV assume a second-loss position through their investment in the SPV's senior and junior notes, which tend to be rated AAA and BB, respectively. Finally, the sponsoring banking organization retains a high quality senior risk position that would absorb any credit losses in the reference portfolio that exceed the first- and second-loss positions.

Typically, no default payments are made until the overall transaction's maturity, regardless of when a reference obligor defaults. While operationally important to the sponsoring banking organization, this feature has the effect of ignoring the time value of money. Thus, the Agencies expect that when the reference obligor defaults under the terms of the credit derivative and the reference asset falls significantly in value, the sponsoring banking organization should, in accordance with generally accepted accounting principles, make appropriate adjustments in its regulatory reports to reflect the estimated loss relating to the time value of money.

For risk-based capital purposes, banking organizations investing in the notes must assign them to the risk weight appropriate to the underlying reference assets.<sup>6</sup> A banking organization sponsoring such a transaction must include in its risk-weighted assets its retained senior exposures in the reference portfolio, to the extent these are held in its banking book. The portion of the reference portfolio that is collateralized by the pledged Treasury securities may be assigned a zero percent risk weight. The remainder of the portfolio should be risk weighted according to the obligor of the exposures, unless certain stringent minimum conditions are met.

Where the sponsoring institution has virtually eliminated its credit risk exposure to the reference portfolio through the issuance of CLNs and the other stringent minimum requirements are met, the institution may assign the uncollateralized portion of its retained senior position in the reference portfolio to the 20 percent risk weight. To the extent that the reference portfolio includes loans and other balance sheet assets in the banking book, a banking organization that sponsors this type of synthetic securitization would not realize any benefits with respect to the determination of its leverage ratio.

The stringent minimum requirements, which are discussed more fully in the Annex, include: 1) the probability of loss on the retained senior position is extremely low due to

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<sup>6</sup> Under this type of transaction, if a structure exposes investing banking organizations to the creditworthiness of a substantive issuer, e.g., the sponsoring institution, then the investing institutions should assign the notes to the higher of the risk categories appropriate to the underlying reference assets or the sponsoring institution.

the high credit quality of the reference portfolio and the amount of prior credit protection; 2) market discipline is injected into the process through the sale of CLNs into the market, the most senior of which must be rated AAA by a nationally recognized credit rating agency; and 3) the sponsoring institution performs rigorous and robust stress testing and demonstrates that the level of credit enhancement is sufficient to protect itself from losses under scenarios appropriate to the specific transaction. The Agencies may impose other requirements as they deem necessary to ensure that the sponsoring institution has virtually eliminated all of its credit exposure. Furthermore, the Agencies retain the discretion to increase the risk-based capital requirement assessed against the retained senior exposure in these structures, if the underlying asset pool deteriorates significantly.

Staff of the appropriate Agency will make a case-by-case determination, based on a qualitative review, of whether the senior retained portion of a sponsoring banking organization's synthetic securitization qualifies for the 20 percent risk weight. The sponsoring institution must be able to demonstrate that virtually all of the credit risk of the reference portfolio has been transferred from the banking book to the capital markets. As is the case with organizations engaging in more traditional securitization activities, examiners must carefully evaluate whether the institution is fully capable of assessing the credit risk it retains in its banking book and whether it is adequately capitalized given its residual risk exposure. The Agencies will require the sponsoring organization to maintain higher levels of capital if it is not deemed to be adequately capitalized given the retained residual risks. In addition, an institution sponsoring synthetic securitizations must make adequate disclosure to the marketplace of the effect of the transaction on its risk profile and capital adequacy.

A failure on the part of the sponsoring banking organization to require the investors in the CLNs to absorb the credit losses that they contractually agreed to assume may be considered an unsafe and unsound banking practice. In addition, such a failure generally would constitute "implicit recourse" or support to the transaction that would result in the sponsoring banking organization losing the preferential capital treatment on its retained senior position.

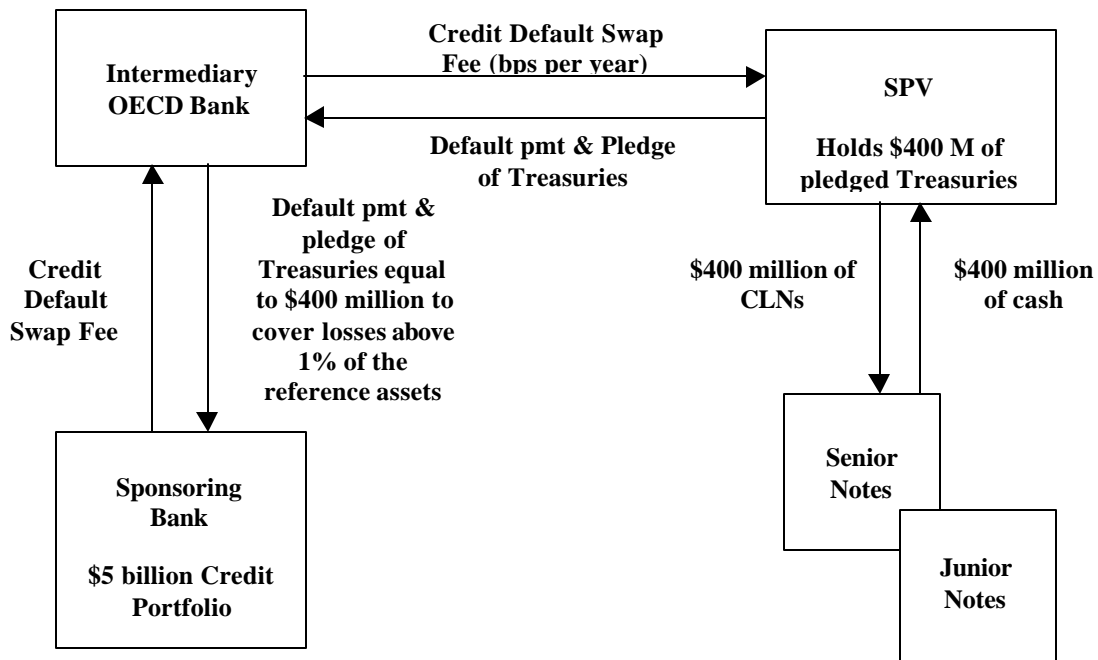
If an organization sponsoring a synthetic securitization does not meet these stringent minimum criteria, it still may reduce the risk-based capital requirement on the senior risk position retained in the banking book by transferring the remaining credit risk to a third-party OECD bank through the use of a credit derivative. Provided the credit derivative transaction qualifies as a guarantee under the risk-based capital guidelines, the risk weight on the

senior position may be reduced from 100 percent to 20 percent. Institutions may not enter into non-substantive transactions that transfer banking book items into the trading account in order to obtain lower regulatory capital requirements.<sup>7</sup>

### Retention of a First Loss Position

In certain synthetic transactions, the sponsoring banking organization may retain the credit risk associated with a first loss position and, through the use of credit default swaps, pass the second and senior loss positions to a third-party entity, most often an OECD bank. The third-party entity, acting as an intermediary, enters into offsetting credit default swaps with an SPV, thus transferring its credit risk associated with the second loss position to the SPV.<sup>8</sup> As described in the previous transaction type, the SPV then issues CLNs to the capital markets for a portion of the reference portfolio and purchases Treasury collateral to cover some multiple of expected losses on the underlying exposures.

**Figure 3**



<sup>7</sup> For instance, a lower risk weight would not be applied to a non-substantive transaction where the sponsoring institution enters into a credit derivative to pass the credit risk of the senior retained portion held in its banking book to an OECD bank, and then enters into a second credit derivative transaction with the same OECD bank in which it reassumes into its trading account the credit risk initially transferred.

<sup>8</sup> Because the credit risk of the senior position is not transferred to the capital markets, but instead, remains with the intermediary bank, the sponsoring banking organization should ensure that its counterparty is of high credit quality, e.g., at least investment grade.



Two alternative approaches could be used to determine how the sponsoring banking organization should treat the overall transaction for risk-based capital purposes. The first approach employs an analogy to the low-level capital rule for assets sold with recourse. Under this rule, a transfer of assets with recourse that contractually is limited to an amount less than the effective risk-based capital requirements for the transferred assets is assessed a total capital charge equal to the maximum amount of loss possible under the recourse obligation. If this rule was applied to a sponsoring banking organization retaining a one percent first loss position on a synthetically securitized portfolio that would otherwise be assessed 8 percent capital, the organization would be required to hold dollar-for-dollar capital against the one percent first loss risk position. The sponsoring institution would not be assessed a capital charge against the second and senior risk positions.<sup>9</sup>

The second approach employs a literal reading of the capital guidelines to determine the sponsoring banking organization's risk-based capital charge. In this instance, the one percent first loss position retained by the sponsoring institution would be treated as a guarantee, i.e., a direct credit substitute, which would be assessed an 8 percent capital charge against its face value of one percent. The second loss position, which is collateralized by Treasury securities, would be viewed as fully collateralized and subject to a zero percent capital charge. The senior loss position guaranteed by the intermediary bank would be assigned to the 20 percent risk category appropriate to claims guaranteed by OECD banks.<sup>10</sup>

It is possible that the second approach may result in a higher risk-based capital requirement than the dollar-for-dollar capital charge imposed by the first approach. This depends upon whether the reference portfolio consists primarily of loans to private obligors, or undrawn long-term commitments, which generally have an effective risk-based capital requirement one-half of the requirement for loans since such commitments are converted to an on-balance sheet credit equivalent amount using the 50 percent conversion factor. If the reference pool consists primarily of drawn loans to commercial obligors, then the capital requirement on the senior loss position would be significantly higher than if the reference

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<sup>9</sup> A banking organization that sponsors this type of synthetic securitization would not realize any benefits with respect to the determination of its leverage ratio since the reference assets themselves remain on the sponsoring institution's balance sheet.

<sup>10</sup> If the intermediary is a banking organization, then it could place both sets of credit default swaps in its trading account and, if subject to the Agencies' market risk capital rules, use its general market risk model and, if approved, specific risk model to calculate the appropriate risk-based capital requirement. If the specific risk model has not been approved, then the sponsoring banking organization would be subject to the standardized specific risk capital charge.

portfolio contained only undrawn long-term commitments. As a result, the capital charge for the overall transaction could be greater than the dollar-for-dollar capital requirement set forth in the first approach.

Under the guidance set forth in this letter, sponsoring institutions will be required to hold capital against a retained first loss position in a synthetic securitization equal to the higher of the two capital charges resulting from application of the first and second approaches outlined above. Further, although the sponsoring banking organization retains only the credit risk associated with the first loss position, it still should continue to monitor all the underlying credit exposures of the reference portfolio to detect any changes in the credit risk profile of the counterparties. This is important to ensure that the institution has adequate capital to protect against unexpected losses. Examiners should determine whether the sponsoring bank has the capability to assess and manage the retained risk in its credit portfolio after the synthetic securitization is completed. For risk-based capital purposes, banking organizations investing in the notes must assign them to the risk weight appropriate to the underlying reference assets.<sup>11</sup>

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<sup>11</sup> Under this type of transaction, if a structure exposes investing banking organizations to the creditworthiness of a substantive issuer, e.g., the sponsoring institution, then the investing institutions should assign the notes to the higher of the risk categories appropriate to the underlying reference assets or the sponsoring institution.

## ANNEX

### **Minimum Conditions that Sponsoring Institutions Must Meet to Obtain the Synthetic Securitization Capital Treatment**

The Agencies may impose additional requirements or conditions as they deem necessary to ascertain that the sponsoring banking organization has sufficiently isolated itself from the credit risk exposure of the hedged reference portfolio.

#### ***Condition 1: Demonstration of Transfer of Virtually All of the Risk to Third Parties***

Not all transactions structured as synthetic securitizations transfer the level of credit risk needed to receive the 20 percent risk weight on the retained senior position. To demonstrate that a transfer of virtually all of the risk has been achieved, institutions must:

1. Produce credible analyses indicating a transfer of virtually all of the credit risk to substantive third parties;
2. Ensure the absence of any early amortization or other credit performance contingent clauses;<sup>12</sup>
3. Subject the transaction to market discipline through the issuance of a substantive amount of notes or securities to the capital markets;
4. Have notes or securities rated by a nationally recognized credit rating agency;
5. Structure a senior class of notes that receives the highest possible investment grade rating, e.g., AAA, from a nationally recognized credit rating agency;
6. Ensure that any first loss position retained by the sponsoring institution in the form of fees, reserves, or other credit enhancement -- which effectively must be deducted from capital -- is no greater than a reasonable estimate of expected losses on the reference portfolio; and
7. Ensure that they do not reassume any credit risk beyond the first loss position through another credit derivative or any other means.

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<sup>12</sup> Early amortization clauses may generally be defined as features that are designed to force a wind-down of a securitization program and rapid repayment of principal to asset-backed securities investors if the credit quality of the underlying asset pool deteriorates significantly.

***Condition 2: Demonstration of Ability to Evaluate Remaining Banking Book Risk Exposures and Provide Adequate Capital Support***

To ensure that the sponsoring institution has adequate capital for the credit risk of its unhedged exposures, institutions are expected to have adequate systems that fully take into account the effect of such transactions on the institutions' risk profiles and capital adequacy. In particular, those systems should be capable of fully differentiating the nature and quality of the risk exposures an institution transfers from the nature and quality of the risk exposures it retains. Specifically, to gain capital relief institutions are expected to:

1. Have a credible internal process for grading credit risk exposures, including: (1) adequate differentiation of risk among risk grades, (2) adequate controls to ensure the objectivity and consistency of the rating process, and (3) analysis or evidence supporting the accuracy or appropriateness of the risk grading system.
2. Have a credible internal economic capital assessment process that defines the institution to be adequately capitalized at an appropriate insolvency probability and that readjusts, as necessary, its internal economic capital requirements to take into account the effect of the synthetic securitization transaction. In addition, the process should employ a time horizon sufficiently long to allow necessary adjustments in the event of significant losses. The results of an exercise demonstrating that the organization is adequately capitalized after the securitization transaction must be presented for examiner review.
3. Evaluate the effect of the transaction on the nature and distribution of the non-transferred banking book exposures. This analysis should include a comparison of the banking book's risk profile and economic capital requirements before and after the transaction, including the mix of exposures by risk grade and by business or economic sector. The analysis also should include identification of any concentrations of credit risk and maturity mismatches. Additionally, the bank must adequately manage and control the forward credit exposure that arises from any maturity mismatch. The Agencies retain the flexibility to require additional regulatory capital if the maturity mismatches are substantive enough so that they raise a supervisory concern. Moreover, as stated above, the sponsoring banking organization must demonstrate that it meets its internal economic capital requirement subsequent to the completion of the synthetic securitization.
4. Perform rigorous and robust forward-looking stress testing on non-transferred exposures (remaining banking book loans and commitments), transferred exposures, and exposures retained to facilitate transfers (credit enhancements). The stress tests must demonstrate that the level of credit enhancement is sufficient to protect the sponsoring bank from losses under scenarios appropriate to the specific transaction.

***Condition 3: Provide adequate public disclosures of such transactions regarding their risk profile and capital adequacy.***

Sponsoring institutions must provide adequate disclosure to the marketplace in their 10-K and annual reports on the accounting, economic, and regulatory consequences of such transactions. In particular, institutions are expected to disclose:

1. The notional amount of loans and commitments involved in the transaction;
2. The amount of economic capital shed through the transaction;
3. The amount of reduction in risk-weighted assets and regulatory capital resulting from the transaction both in dollar terms and in terms of the effect in basis points on the risk-based capital ratios; and
4. The effect of the transaction on the distribution and concentration of risk in the retained portfolio by risk grade and sector.