Supervisory Letter

NCUA | Office of Examination & Insurance
1775 Duke Street, Alexandria, VA 22314
www.ncua.gov

SL No. 14-02
February 28, 2014

TO: **All Field Staff**

SUBJECT: **Derivatives Examination Guidance**

ENCLOSURES: **AIRES Derivatives Examination Questionnaires - FISCU**
AIRES Derivatives Examination Questionnaire - FCU

This Supervisory Letter describes NCUA regulations and guidelines for credit unions that use derivatives to manage risk. It also establishes a consistent framework for field staff to examine and supervise derivative programs. This guidance applies to examinations of federal credit unions and federally insured, state-chartered credit unions. A new AIRES questionnaire that will assist field staff in conducting exams related to the derivatives rule has been provided as an attachment.

I. Background

A. Why is NCUA issuing this supervisory guidance?

A final rule to modernize regulations by giving approved federal credit unions limited authority to mitigate interest rate risk by allowing the purchase of specified, "plain vanilla" derivatives was approved in January 2014 and will be effective on March 3, 2014. The final rule applies only to federal credit unions (FCUs), and is not applicable to federally insured, state-chartered credit unions (FISCUs).

This letter establishes standards for the safe and sound operation of a derivatives program necessary to protect the National Credit Union Share Insurance Fund (NCUSIF) for both federal credit unions and federally insured, state-chartered credit unions (FISCUs).

NCUA has witnessed a marked increase in the overall level of interest rate risk (IRR) exposure in credit unions. Interest rates have been at historically low levels between 2008 and 2014. During this time, the agency has observed a significant change in the composition of credit union balance sheets, reflecting a "borrow short/lend long" strategy.

Balance sheet trends (see *Table 1* on the following page) have made earnings and capital significantly more sensitive to changing interest rates, particularly rising rates. Many credit unions will need to change the composition of their balance sheets (i.e., "shed the risk") to effectively mitigate their IRR exposure, while others may be able to reduce IRR using derivatives (i.e., "hedge the risk"). Some credit unions may ultimately need to use a combination of changes to the balance sheet and hedging to adequately reduce IRR exposure.

Table 1: Trends in credit union balance sheets

Assets	Deposits
During a period of unprecedented low interest rates, credit unions have: • Increased the number of mortgage loans held • Increased the size, and extended the maturity, of investment portfolios	During a period of unprecedented low interest rates, credit unions have: • Shifted to short-term, rate-sensitive shares (e.g., money market accounts)

When used properly, derivatives can help a credit union protect its earnings and capital from interest rate changes by hedging a portion of its interest rate risk (or other risks, for some FISCUs). NCUA will ensure that all federally-insured credit unions have the management, policies, procedures, and tools in place to safely use derivatives.

B. Which credit unions can use derivatives?

Prior to the new rule approved in January 2014, federal credit unions had derivative authority with a limited scope. NCUA regulation §703.14 provided federal credit unions the authority to use derivatives to hedge real estate loans produced for sale on the secondary market, or to hedge interest rate on forward sales commitments for loans that the credit union originates. Federal credit unions also had authority to use derivatives to fund dividend payments on member share certificates where the rate is tied to an equity index. In addition, federally insured, state-chartered credit unions (FISCUs) in 14 states have either explicit authority or case-by-case authority from the state regulator to use derivatives.[1]

> Field staff must ensure that **all federally-insured credit unions** meet the standards for safe and sound operation of a derivatives program outlined in this Supervisory Letter.

In January 2014, NCUA issued broader regulations that authorized federal credit unions (FCUs) to use derivatives to reduce IRR. This regulation addresses which derivatives products are permitted, establishes limits on derivatives, and describes various requirements (e.g., operational, counterparty, margining, etc.) that an FCU must follow. This rule supplemented the previous derivatives authority outlined in §701.21 and §703.14 of NCUA's rules and regulations. Federal credit unions that used derivatives under a previously approved NCUA pilot program must comply with NCUA regulation Part 703, Subpart B no later than March 3, 2015 (one year after the effective date of the rule).

[1] As of the date of issuance of this letter. This can include the use of derivatives products for risk other than interest rate risk.

With this broader derivative authority, an FCU must meet the eligibility criteria established in NCUA regulation in order to apply for derivatives authority. All FCUs must receive **final approval** (versus interim approval) from NCUA before they use these financial products to reduce exposure to interest rate risk. A description of the required FCU application content is provided in Appendix A, *Federal Credit Union Application Content*. Field staff should direct application requests and related questions from FCUs to the applicable field director as part of the application process.

The process for FISCUs to receive authority to use derivatives varies by state. A FISCU may have derivatives authority under a state parity provision[2] or by following applicable state regulation with permission from the applicable state supervisory authority. **A FISCU must notify NCUA in writing at least 30 days before it begins engaging in derivatives transactions.** (Appendix C outlines the information a FISCU must report in the notification.) Before examining a FISCU that uses derivatives, field staff should consult with the state supervisory authority to ascertain the authority under which the credit union is operating.

C. What is a derivative?

A *derivative* is a financial contract that derives its value from the performance of an underlying financial instrument or variable, such as an index or interest rate.[3] A derivatives contract derives its value from an underlying item, such as an asset or index. Unlike debt instruments, no principal amount is advanced to be repaid and no investment income accrues. Derivatives are used for a number of purposes including risk management, hedging, arbitrage between markets, and speculation.

The interest rate derivatives market started approximately 25 years ago with small, domestic transactions, and has grown rapidly – around 24 percent per year in the last decade – into a sizeable global market that has a notional value (the total value of a leveraged position's assets) of approximately $700 trillion.

D. What types of derivatives exist in the market?

There are many different categories of derivatives, which serve a variety of intended uses. While derivatives are generally used as an instrument to hedge risk, they can also be used for speculative purposes. The Office of the Comptroller of the Currency[4] and the Bank for

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[2] State parity provisions are reflected in state regulation or statute, and generally permit a FISCU to operate under the same authority as federally chartered credit unions.
[3] Definition of "derivative," per Part 703 Subpart B.
[4] The Office of the Comptroller of the Currency publishes a quarterly report on derivatives activities based on call report information provided by all insured U.S. commercial banks and trust companies, reports filed by U.S. financial holding companies, and other published data. See http://www.occ.gov/topics/capital-markets/financial-markets/trading/derivatives/derivatives-quarterly-report.html

International Settlements[5] divide derivatives products into five broad categories, as shown in *Table 2* on the following page.

Each category of derivatives includes many distinct products. Derivative products in the "interest rate" category represent the majority of all products in the market. Products from the other derivatives categories have characteristics that address different risk management objectives.

Table 2: Derivative categories

Category	Primarily Used to Mitigate…	Overall Market (%)
Interest Rate	Interest rate risk	81.5%
Foreign Exchange	Exchange risk	10.8%
Credit Default	Underlying credit risk	6.3%
Equity	Equity price risk	0.7%
Commodity / Other	Agriculture and metals price risk	0.6%

E. What types of derivatives are permissible under NCUA's regulation?

1. Permissible Derivatives for Federal Credit Unions

NCUA's regulation limits FCUs to specific products and product characteristics from the "interest rate" category; these are shown in *Table 3*. In addition, NCUA regulation requires permissible products to be denominated in U.S. dollars and have a maximum term of 15 years.

Table 3: Derivative products and product characteristics permissible for FCUs

Products	Product Characteristics
• Interest rate swap • Basis swap • Interest rate cap • Interest rate floor • U.S. Treasury note future	• Amortizing notional (swaps and options) • Forward start date (swaps)

The derivatives products and product characteristics that are permissible for FCUs are widely used in today's capital markets, are deeply liquid with transparent pricing, and provide strong liquidity and execution potential. An FCU must request authority by applying for each allowable derivatives product and product characteristic the institution plans to use to mitigate interest rate risk.

[5] The Bank for International Settlements compiles and publishes three sets of statistics on derivatives markets. See http://www.bis.org/statistics/derstats.htm

2. Permissible Derivatives for FISCUs

NCUA's derivative regulation does not apply to FISCUs, and the agency does not have authority over which derivatives products are permissible for these credit unions. FISCUs may engage in derivatives under a state parity provision, by following applicable state regulation, or through permission from the applicable state supervisory authority. The final rule requires that a FISCU which engages in derivatives – whether pursuant to authority granted under state law (including a state parity provision) or other state supervisory authority authorization – must notify the applicable NCUA field director in writing at least 30 days before it begins engaging in such transactions.[6]

When examining a FISCU that uses derivatives, consult with the state supervisory authority to determine the authority under which the credit union is operating**. The guidance in this Supervisory Letter can be used as reference in determining that a FISCU is using derivatives in a safe and sound manner, but cannot be used as a reference for regulatory violations.**

F. *How do interest rate derivatives reduce interest rate risk?*

A derivative is an independent contract, agreed upon between two parties, the terms of which include notional amounts,[7] maturity and rates. A derivative is distinct from its underlying assets and/or liabilities. This characteristic allows a purchaser to transfer a specific amount of interest rate risk to a buyer for a price (e.g., the credit union pays a one-time premium to acquire a cap or a floor) or in exchange for another risk (e.g., the credit union exchanges a fixed-rate payment obligation for a floating-rate one, and vice versa, in a swap). Because derivatives can be used to effectively alter fixed and variable interest rates, a credit union can use them to protect against substantial moves in market rates and/or lock in the net interest margin[8] for a period of time.

In a properly constructed hedge transaction, a derivative can protect a credit union against changes in interest rates by providing an economic offset for the interest rate risk in the credit union's balance sheet. Buyers typically insure against the re-pricing risk that arises from the rate mismatches between assets and liabilities. In credit unions, this mismatch usually occurs because the credit union has used short-term and/or non-maturity shares to fund longer-term

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[6] If a FISCU has already been engaging in derivatives under state authority prior to the rule going into effect, will continue to engage in derivatives, and has not already communicated this to NCUA, the credit union must notify the NCUA field director within 30 days after the effective date of the rule (March 3, 2014), or 30 days before the first derivatives transaction that occurs after March 3, 2014.

[7] "Notional amount" is a reference amount used to calculate fixed and floating cashflows over the term of the transaction.

[8] Net interest margin is a performance metric that examines how successful a credit union's investment decisions are, compared to its debt situations. A negative value denotes that interest expenses are greater than the amount of returns generated by investments. See Investopedia definition at http://www.investopedia.com/terms/n/netinterestmargin.asp

loans and investments, subjecting the net interest margin to the risk of adverse interest rate changes (e.g., funding costs rise faster than asset returns).

G. *What are the risks of derivatives?*[9]

1. Interest Rate Risk

Derivatives are complex financial instruments, and can significantly increase the leverage[10] and price sensitivity on a credit union's balance sheet. If not properly managed, leverage and price sensitivity can rapidly increase a credit union's interest rate risk exposure and threaten its earnings and capital.

Credit unions that have a derivatives program are responsible for projecting their earnings and economic value over a longer period of time than is customarily used for financial planning – a reflection of the longer maturity and increased complexity of derivatives products. It is important for a credit union to consider its earnings and economic value in the context of forward rates, and how changes in these rates would affect the institution's projected financial performance. Because interest rate derivatives are priced using the forward interest rate curve, the value of which changes when there is a shift in the market's expectation of future interest rates, credit unions need to incorporate the forward interest rate curve into their baseline assumptions.

2. Liquidity and Credit Risks

Changes in forward interest rate curve will impact the valuation of derivative transactions. Fair value losses in the derivative contracts will require margining to the counterparty in the form of eligible collateral (see §703.104 for details) requiring credit unions to have the necessary liquidity. Derivatives can be used as interest rate hedges, but can have correlation to credit situations (e.g., falling rates during an economic recession would require a credit union to post additional collateral on its pay fixed/receive floating swap at the same time the number of delinquent loans increase requiring additional provisions for losses).

3. Operational Risk

As with other complex financial instruments, derivatives call for increased management expertise, analytical sophistication, and resource support (including financial modeling, operations, legal review, and accounting). Support activities range from trade confirmation, collateral management, valuation, trade event management and finance. Most of these activities are unique to derivatives and need to be developed, tested and implemented before starting the program. A well-documented policies and procedures manual is needed to support these functions and should be in place.

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[9] While interest rate and operational risk are critical, field staff should also evaluate credit and liquidity risks.
[10] The ability to control large dollar amounts of a risk with a comparatively small amount of capital. Derivative transactions are typically executed with no initial net investment.

A derivatives program's success rests in part on the qualified individuals who will support the program. In addition to personnel, the technology and controls that support a derivatives program are a significant component of a program's safety and soundness.

Credit unions need a robust ALM capability to adequately measure, monitor and control the market risk of derivatives. Measuring interest rate sensitivity in order to understand the IRR and how to use derivatives requires modeling, market data, and certain assumptions relative to the assets and liabilities the credit union is hedging. A significant investment in the infrastructure and personnel that manage these processes can protect a credit union against operational failures and enable the best execution of a hedging strategy.

This need for increased resources generally makes derivative products unsuitable for all but the largest and most financially sound credit unions. All credit unions must demonstrate that they have the financial and managerial capacity to execute a safe and sound derivatives program.

II. Exam Procedures for a Federal Credit Union

Field staff will ensure that a federal credit union's derivatives program complies with NCUA regulation Part 703, Subpart B, and is operated safely and soundly. Field supervisors must ensure that staff with the requisite knowledge and experience evaluates a credit union's use of derivatives as part of its examination.

When examining a federal credit union engaged in derivatives activity, field staff will ensure the credit union:

1. Uses only NCUA-approved derivatives products and product characteristics (see §703.102).
    a. Confirm which products/characteristics the credit union has received NCUA approval to use. Refer to the approved application and field director memo stating with what has been approved.
    b. For each derivative transaction, confirm that the credit union:
        i. Only uses derivatives strategies, products, and transactions that mitigate interest rate risk. This will be determined by the credit union's stated goal for the transaction and how effective it is in mitigating its exposure to changing interest rates.
        ii. Only uses approved derivatives products with characteristics that comply with regulation (§703.102(b)):
            1. Not leveraged (cashflows are not dependent on underlying multipliers).
            2. Based on domestic rates, as defined in §703.14(a).
            3. Denominated in U.S. dollars.

4. Not used to create structured liability offerings for members or non-members, except as provided in §703.14(g).
5. Have contract maturity terms of equal to or less than 15 years at the trade date.
6. Meet the definition of derivative under GAAP.[11]

c. Determine what kind of hedge strategy is used (i.e., if transactions hedge specific asset or liability balances, or are part of a dynamic portfolio hedge[12]).

2. Operates within the limits authority allowed for the credit union (see §703.103(b)).

a. For a credit union that has **entry limit authority** (applicable during the first 12 months of operating a derivatives program, unless the credit union participated in the NCUA derivatives pilot program):
   i. Determine if NCUA has notified the credit union of any relevant safety and soundness concerns.
   ii. Review and confirm the calculations made by the credit union for fair value loss limit (15 percent of net worth) and notional limit (65 percent of net worth) have been done accurately and have not exceeded the rule limits.

b. For a credit union that has **standard limit authority**:
   i. Review and confirm the calculations made by the credit union for fair value loss limit (25 percent of net worth) and notional limit (100 percent of net worth) have been done accurately and have not exceeded the rule limits.

Verify the credit union's calculation and adherence with the fair value loss and WARMN limit calculations using the steps in **Appendix B**. See the regulatory violation information in §703.114 of the regulation for more information.

3. Complies with regulatory requirements for **exchange-traded and cleared derivatives** (see §703.104(a)). Verify that the credit union:

a. Complies with Commodity Futures Trading Commission (CFTC) rules for all transactions that are eligible to be cleared through a derivatives clearing organization.[13]

b. Uses only swap dealers,[14] introducing brokers, and/or futures commission merchants that are currently registered with the CFTC.

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[11] *ASC 815 Derivatives and Hedging* refers to transactions having characteristics with notional amounts, netting, and initial net investment.
[12] *Dynamic portfolio hedge* refers to a hedging strategy where derivatives are used to reduce overall portfolio risk to rates (duration hedge).
[13] See the CFTC website for a list of derivative clearing organizations.
http://sirt.cftc.gov/sirt/sirt.aspx?Topic=ClearingOrganizations
[14] See the CFTC website for a list of registered swap dealers.
http://www.cftc.gov/LawRegulation/DoddFrankAct/registerswapdealer

   c. Uses only eligible forms of collateral, which consists of U.S. dollars, U.S. Treasuries, government-sponsored enterprise debt, and government-sponsored enterprise residential mortgage-backed security pass-through securities. (The futures commission merchant may further limit eligible collateral.)

   d. Complies with any margining requirements stipulated by the futures commission merchant, if applicable.

4. Complies with regulatory requirements for **non-cleared derivatives** (see §703.104(a)) if the credit union has elected not to utilize a derivatives clearing organization. Verify that the credit union:

   a. Maintains a master service agreement and credit support annex with a registered swap dealer, and that these are in accordance with ISDA protocol for standard bilateral agreements.

   b. Uses margining requirements that are contracted through a credit support annex and has a minimum transfer amount of $250,000 for daily margining requirements.

   c. Uses only eligible forms of collateral, which consists of U.S. dollars, U.S. Treasuries, government-sponsored enterprise debt, and government-sponsored enterprise residential mortgage-backed security pass-through securities. (This list may be limited further by the counterparty.)

5. Has systems in place to effectively manage collateral and margining requirements (see §703.104(b)).

   a. Review the fair values and collateral used for **margin requirements** with the futures commission merchant or counterparty. The credit union should provide a counterparty report showing the outstanding derivative transactions, the respective valuation and margin requirements along with the collateral paid or received to date.

   b. Ensure the credit union:
      i. Has a collateral management process that monitors the institution's collateral and margining requirements daily and ensures that its derivatives positions are collateralized at all times.
      ii. Posts, tracks, values, and reports collateral using fair value.
      iii. Analyzes and measures potential liquidity needs related to its derivatives program, and that stem from additional collateral requirements due to changes in interest rates.
      iv. Calculates and tracks its contingent liquidity needs to inform management whether a hedge transaction that significantly diminishes overall liquidity positions needs to be terminated.
      v. Has established effective controls for liquidity exposures that arise from both market or product liquidity and instrument cash flows.

> **Verify that liquidity policies and procedures are updated** to support derivatives cash flow and collateral margin requirements for the life of a transaction.

6. Analyzes and measures potential **liquidity** needs related to the derivatives program and stemming from additional margining requirements due to changes in fair values (see §703.104(b)). Confirm that the credit union:

    a. Calculates and tracks contingent liquidity needs.

    b. Has established effective controls for liquidity exposures that arise from market and/or product liquidity and instrument cash flows.

7. Delivers comprehensive **derivatives reports** that comply with NCUA regulation (see §703.105) to its board of directors, senior executive officers, and asset liability committee.

    a. Reports must include the following:
        i. Identification of any areas of noncompliance with provisions of the rule or the credit union's policies.
        ii. Utilization of the limits in §703.103, as well as any additional limits defined in the credit union's policies.
        iii. An itemization of the credit union's individual positions and aggregate current fair values, and a comparison with the credit union's fair value loss and notional limit authority, as described in the derivatives regulation.
        iv. A comprehensive view of the credit union's statement of financial condition, including, but not limited to, net economic value calculations for the credit union's statement of financial condition done with derivatives included and excluded.
        v. An evaluation of the effectiveness of the derivatives transactions in mitigating interest rate risk.
        vi. An evaluation of effectiveness of the hedge relationship and reporting for derivatives that complies with GAAP.

    b. Confirm that the credit union's senior executive officers deliver a comprehensive summary report to the credit union's **board of directors** at least **quarterly**.

    c. Confirm that the credit union staff deliver a comprehensive report detailing risk and compliance information to the **senior executive officer** and, if applicable, the **asset liability committee** at least **monthly**.

Review all reports to determine they are consistent with the hedging strategies approved by NCUA and provide sufficient detail about risk and compliance of activities.

8. Has delivered annual training to **board members** that provides a general understanding of derivatives and the knowledge required to provide strategic oversight of the credit union's derivatives program (see §703.106(a)). Confirm that the credit union:

    a. Provided training before it entered into any derivatives transactions.

    b. Maintains evidence of training in accordance with its document retention policy (until next NCUA exam).

   c. Includes an explanation of how the use of derivatives supports the credit union's business model and how derivatives are adequately controlled through the credit union's risk management process in the training.

9. Has **senior executive officers** who can effectively explain how derivatives fit into the credit union's business model and risk management process, and who can provide sound oversight over derivatives activities (see §703.106(a)).

   a. Assess the level of expertise in a credit union's management team with respect to the control environment, financial reporting, and overall oversight of derivatives.

10. Employs staff with sufficient experience in **asset/liability risk management** (ALM) and maintains appropriate separation of duties between risk-taking and other support processes (see §703.106(a)). Ensure staff are qualified to:

    a. Understand and oversee ALM, including the appropriate role of derivatives.

    b. Projects earnings and economic value over an appropriate length of time.

    c. Incorporates the forward interest rate curve into baseline assumptions.

    d. Analyses effects of changing interest rates using both parallel and non-parallel rate changes over the maturity spectrum, and using both a flattening and steepening of the yield curve.

    e. Understand and undertake the appropriate modeling and analytics related to scope of risk to earnings and economic value over the expected maturity of derivatives positions.

    f. Perform key functions, which include:
       i. Identifying and assessing risk in transactions
       ii. Developing ALM strategies
       iii. Testing ALM effectiveness
       iv. Determining the effectiveness of managing interest rate risk under a range of stressed rates and statement of financial condition scenarios
       v. Evaluating the relative effectiveness of alternative strategies

11. Employs staff with experience in **accounting and financial reporting** who are qualified to understand and oversee appropriate accounting and financial reporting for derivatives transactions in accordance with GAAP (see §703.106(a)) and who are separate from staff responsible for assuming risk and transacting derivative contracts.

12. Employs staff with relevant experience in **derivatives execution and oversight** who are qualified to undertake or oversee trade executions (see §703.106(a)) and who are separate from staff responsible for the operational processing, risk measurement, and accounting of derivative contracts.[15]

    a. In addition to reviewing employees' prior experience operating a derivatives program, review the support credit union employees provide for current transactions to determine whether they demonstrate the appropriate level of knowledge.[16]

13. Employs staff with experience **managing counterparty, collateral, and margining** who are qualified to evaluate counterparty, collateral, and margining risk (see §703.106(a)) and who are separate from staff responsible for assuming risk and transacting derivative contracts.

14. Has obtained an annual **financial statement audit** and is compliant with GAAP for all derivatives-related accounting and reporting (see §703.106(b)).

15. Maintains written and schematic descriptions (e.g., a pictorial representation using a flow diagram or organizational chart) of the derivatives management processes in its derivatives policies and procedures (see §703.106(b)).

    a. Ensure the descriptions include the roles/functions of staff, qualified personnel, external service providers, senior executive officers, the board of directors, and any others involved in the derivatives program.

    b. Staff discussions with credit union representatives should assess the quality and strength of the internal control environment.

16. Conducts a legal review by hiring or engaging legal counsel to reasonably ensure that all derivatives contracts adequately protect the legal and business interests of the credit union (see §703.106(c)).

    a. Ensure the credit union's counsel has legal expertise with derivatives contracts and related matters.

    b. Although derivative contracts have been standardized under ISDA[17] and exchange clearing agreements,[18] the credit union should have legal counsel review the terms and conditions of the contracts to ensure it will comply with the NCUA rules and regulations for acceptable counterparty, margining, and eligible collateral.

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[15] The ***risk*** and ***trade execution*** functions are critical decision making roles in an organization and would be supported effectively with staff who have previous experience using derivatives. Their development and training could be supported by an ESP, but expect that the subject matter expertise to be resident at the credit union at the inception of the program.

[16] Credit union staff need to identify and document the circumstances that led to each decision to hedge, specify the derivatives strategy employed, and demonstrate the economic effectiveness of each hedge (see §703.106(b)).

[17] International Swaps and Derivatives Association (see www.isda.org)

[18] Exchange contracts may differ depending on the exchange and products transacted.

17. Operates according to comprehensive and sound written policies and procedures for control, measurement, and management of derivatives transactions (see §703.106(d)).

    a. Ensure the credit union's board of directors reviews the policies and procedures annually and updates them when necessary.

    b. Specific aspects of a sound policy include addressing accountability and authority for all relevant aspects of the derivatives programs, providing for institution specific operational risk controls, and setting overall program limits that make sense for the credit union's capacity and exposure (and within regulatory limits).

18. Adheres to regulatory requirements related to external service providers (see §703.107). Confirm that the credit union:

    a. Has the internal capacity, experience, and skills to independently oversee and manage any external service providers used. External service providers who support non-trading related support functions must not be a counterparty or agent to any trade execution.

    b. Conducts ALM and liquidity functions internally and independently (external service provider may provide assistance). The credit union can use a vendor in producing the simulations, but confirm that data assumptions, model setup, and framework are all reviewed and validated by the credit union. The credit union must also have the capacity to support the results using its own model.

19. Periodically evaluates the credit union's internal controls.

    a. **For the first two years after commencing an active derivatives program**, management must have an independent review[19] of the derivatives program to assess how the internal controls have been integrated into existing procedures and reports, or how new procedures and reports have been developed (see §703.106(b)).

If field staff identify regulatory violations, or the unsafe operation of the credit union's derivatives program, NCUA can revoke a federal credit union's derivatives authority (see §703.114).[20] Revocation will prohibit a federal credit union from executing any new derivatives transactions under this subpart, and may require the credit union to terminate existing derivatives transactions if, in the discretion of the applicable field director, doing so would not pose a safety and soundness concern. Field staff will follow the procedures specified in the National Supervision Policy Manual when recommending revocation of a federal credit union's derivatives authority.

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[19] This review must be performed by a licensed, independent (i.e., external) accounting firm or by the credit union's internal auditor.

[20] The eligibility requirements in §703.108 are required only with respect to a federal credit union's ability to apply for derivatives authority. These criteria are not ongoing requirements, and cannot be the sole justification for revoking a federal credit union's derivatives authority.

III. Exam Procedures for a Federally Insured, State-Chartered Credit Union

Federally insured, state-chartered credit unions (FISCUs) in some states may engage in derivatives under a state parity provision, by following applicable state regulation, or through permission from the applicable state supervisory authority. Before examining a FISCU's derivatives program, consult with the state supervisory authority to ascertain the authority under which the credit union is operating. Field supervisors will ensure the exam team has a specialist with the expertise and experience to evaluate the credit union's use of derivatives.

> Field staff are responsible for examining a FISCU's derivatives program to identify potential risk to the share insurance fund. **Do not cite a FISCU for violating an NCUA regulation that only applies to FCUs.**

When conducting an insurance review or joint examination of a FISCU that uses derivatives, field staff will ensure the credit union:

1. Uses only derivatives products that are authorized by the SSA (if applicable).
    a. Confirm which products/characteristics the credit union has authority to use.
    b. Determine the credit union's stated purpose and strategy for using the authorized products and/or product characteristics. Confirm what risk the transactions are hedging (i.e. related to hedging interest rate changes or other underlying risks) through interviews and supporting documents.

2. If applicable, determine if the overall program limits make sense for the credit union's capacity and exposure. Assess whether the derivative risk limits are appropriate and consistent with the hedging strategy and the credit union's capacity to handle the approved volume of activity financially and operationally.

3. Operates according to comprehensive written policies and procedures for control, measurement, and management of derivatives transactions.
    a. Ensure the credit union reviews policies and procedures annually and updates them when necessary.
    b. Specific aspects of a sound policy include addressing accountability and authority for all relevant aspects of the derivatives programs, and providing for institution specific operational risk controls.

4. Complies with regulatory requirements for **exchange-traded and cleared derivatives**.
    a. Identify and confirm which counterparties the credit union uses to execute transactions, and verify that the credit union:

   i. Operates in compliance with Commodity Futures Trading Commission (CFTC) rules for derivatives transactions that are cleared on a derivatives clearing organization.[21]
   ii. Complies with margining requirements set by the futures commission merchant.

5. Complies with applicable regulatory and contractual requirements for **non-cleared derivatives** if the credit union has elected not to clear transactions using a derivatives clearing organization.

   a. Identify and confirm which counterparties the credit union uses to execute transactions, and verify that the credit union maintains a master service agreement and credit support annex in accordance with ISDA protocol for standard bilateral agreements.

   b. Confirm the terms of the margining agreement the credit union has agreed to, and verify the credit union's compliance.

6. Has identified and documented the circumstances that led to each decision to hedge, specified the derivatives strategy it will use, and demonstrated the economic effectiveness of the hedge.

7. Has systems in place to effectively manage collateral and margining requirements.

   a. The collateral management process needs to monitor the credit union's collateral and margining requirements on a daily basis, or as contractually agreed with the counterparty or counterparties. Confirm that the credit union margins derivatives positions accordingly.

8. Analyzes and measures potential liquidity needs related to the derivatives program and stemming from additional margining requirements due to changes in fair value over the life of transactions. Ensure that the credit union:

   a. Measures potential liquidity needs related to its derivatives program, and stemming from any additional collateral requirements due to changes in interest rates.

   b. Establishes effective controls for liquidity exposures that arise from market and/or product liquidity and instrument cash flows.

   c. Provides liquidity for margining and interest payments. Management needs to identify whether a hedge transaction that significantly diminishes overall liquidity positions should be terminated.

[21] See the CFTC website for a list of derivatives clearing organizations. http://sirt.cftc.gov/sirt/sirt.aspx?Topic=ClearingOrganizations

9. Delivers regular, periodic derivatives reports to its board of directors, senior executive officers, and asset liability committee that comprehensively detail the effectiveness of engaging in derivatives.

    a. Reports should include the following:
        i. Identification of any areas of noncompliance with any applicable regulation(s) or the credit union's policies.
        ii. An itemization of the credit union's individual positions and current fair values.
        iii. A comprehensive view of the credit union's statement of financial condition, including, but not limited to, net economic value calculations for the credit union's statement of financial condition done with derivatives included and excluded.
        iv. An evaluation of the effectiveness of the derivatives transactions in managing interest rate risk.
        v. An evaluation of effectiveness of the hedge relationship and reporting for derivatives in compliance with GAAP.

    b. Verify the fair value, collateral, and margining activity that the credit union reports using the counterparty account statement.

    c. Confirm that the credit union's senior executive officers deliver a summary report to the credit union's board of directors.

    d. Confirm that the credit union staff regularly deliver a comprehensive report that details risk and compliance information to the senior executive officer and, if applicable, the asset liability committee.

> **Review all reports** to confirm that they provide sufficient detail about risk and compliance of activities and to determine if they are consistent with approved hedging strategies.

10. Has senior executive officers who can effectively explain how derivatives fit into the credit union's business model and risk management process, and who provide sound oversight over derivatives activities.

11. Employs staff with sufficient experience in **asset/liability risk management** (ALM) and maintains appropriate separation of duties between risk-taking and ALM processes. Staff should be qualified to:

    a. Understand and oversee ALM, including the appropriate role of derivatives.

    b. Understand and undertake or oversee the appropriate modeling and analytics related to scope of risk to earnings and economic value over the expected maturity of derivatives positions.

    c. Perform key functions, which include:
        i. Identifying and assessing risk in transactions
        ii. Developing ALM strategies

iii. Testing ALM effectiveness
iv. Determining the effectiveness of managing interest rate risk under a range of stressed rates and statement of financial condition scenarios
v. Evaluating the relative effectiveness of alternative strategies

12. Employs staff with experience in **accounting and financial reporting** who are qualified to understand and oversee appropriate accounting and financial reporting for derivatives transactions in accordance with GAAP and who are separate from staff responsible for assuming risk and transacting derivative contracts.

13. Employs staff with experience in **derivatives execution and oversight** who are qualified to undertake or oversee trade executions and who are separate from staff responsible for the operational processing, risk measurement and accounting of derivative contracts.

14. Employs staff with experience **managing counterparty, collateral, and margining** who are qualified to evaluate counterparty, collateral, and margining risk and who are separate from staff responsible for assuming risk and transacting derivative contracts.

15. Has the internal capacity, experience, and skills to independently oversee and manage any external service providers used. The credit union needs to demonstrate that it can support core functions such as ALM and liquidity internally and independently; if the credit union relies solely on a vendor for these functions, it would be considered unsafe.

16. Protects its legal and business interests by conducting an adequate legal review of the derivatives program. The credit union's counsel should have legal expertise with derivatives contracts and related matters.

    a. Ensure the credit union's counsel has legal expertise with derivatives contracts and related matters.

    b. Although derivative contracts have been standardized under ISDA[22] and exchange clearing agreements,[23] the credit union should have legal counsel review the terms and conditions of the contracts to ensure they are fully understood.

IV. Additional Guidance and Resources Relevant to Derivatives

This document outlines the unique attributes of derivatives, and builds on existing legislation and guidance, including:

- NCUA Letter to Credit Unions, *Interest Rate Risk Policy and Program Requirements* (12-CU-05)
- NCUA Letter to Credit Unions, *Concentration Risk* (10-CU-03)

[22] International Swaps and Derivatives Association (see www.isda.org)
[23] Exchange contracts may differ depending on the exchange and products transacted.

- NCUA National Supervision Policy Manual, Chapter 6, Section 11, *Derivatives Authority*
- Title VII of the Dodd-Frank Act, *Wall Street Transparency and Accountability Act of 2010*[24]
- 17 CFR Parts 39, 140, and 190, *Derivatives Clearing Organizations and International Standards, Final Rule* (U.S. Commodity Futures Trading Commission)
- 12 CFR Part 741.3, *Requirements for Insurance, Regulations That Apply to Both Federal Credit Unions and Federally Insured State Chartered Credit Unions and That Are Not Codified Elsewhere in NCUA's Regulations*

In addition, field staff may find the following resources useful.

- The Office of the Comptroller of the Currency (U.S. Department of the Treasury) publishes a quarterly report on trading revenue and bank derivatives activities, based on call report information provided by all insured U.S. commercial banks and trust companies, reports filed by U.S. financial holding companies, and other published data. These reports are available online at http://www.occ.gov/topics/capital-markets/financial-markets/trading/derivatives/derivatives-quarterly-report.html.

- The Bank for International Settlements (BIS), which serves central banks in their pursuit of monetary and financial stability, compiles and publishes three sets of statistics on derivatives markets which are available online at http://www.bis.org/statistics/derstats.htm.

If you have any questions on the material in this letter, please direct them to your immediate supervisor or regional management.

Sincerely,

/s/

Larry Fazio
Director
Office of Examination & Insurance

[24] This legislation amended the Commodity Exchange Act to establish a comprehensive regulatory framework for over-the-counter derivatives.

Appendix A: Federal Credit Union Application Content

A federal credit union must apply for and receive **final approval** from NCUA before it uses derivatives to reduce exposure to interest rate risk. A complete application must include all of the following:

<table>
<tr><th colspan="4">Federal Credit Union Information</th></tr>
<tr><td>Credit union name</td><td colspan="3"></td></tr>
<tr><td>Charter number</td><td colspan="3"></td></tr>
<tr><td>Assets[1] (enter whole dollar number from the most recent quarterly call report)</td><td colspan="3">$ _ _ _ , 2 5 0 , 0 0 0 , 0 0 0</td></tr>
<tr><td>CAMEL code (composite) (check the number from most recent exam)</td><td>☐ 1</td><td>☐ 2</td><td>☐ 3</td></tr>
<tr><td>CAMEL code (management) (check the number from most recent exam)</td><td>☐ 1</td><td>☐ 2</td><td>-N/A-</td></tr>
<tr><th colspan="4">Contact Information</th></tr>
<tr><td>Contact name</td><td colspan="3"></td></tr>
<tr><td>Title</td><td colspan="3"></td></tr>
<tr><td>Email / Phone</td><td colspan="3"></td></tr>
<tr><th>Requested Approval</th><th>Interim Approval ☐</th><th colspan="2">Final Approval ☐</th></tr>
<tr><td colspan="4">Indicate each product / characteristic the credit union has requested approval to use with a checkmark</td></tr>
<tr><td>Interest rate swaps</td><td colspan="3">☐</td></tr>
<tr><td>Basis swaps</td><td colspan="3">☐</td></tr>
<tr><td>Interest rate caps</td><td colspan="3">☐</td></tr>
<tr><td>Interest rate floors</td><td colspan="3">☐</td></tr>
<tr><td>U.S. Treasury note futures</td><td colspan="3">☐</td></tr>
<tr><td>Amortizing notional</td><td colspan="3">☐</td></tr>
<tr><td>Forward start swaps</td><td colspan="3">☐</td></tr>
<tr><th colspan="4">NCUA USE ONLY</th></tr>
<tr><td>Date application received</td><td></td><td>REGION</td><td></td></tr>
<tr><td>Review completed by (name)</td><td colspan="3"></td></tr>
<tr><td>Credit union eligibility (check one)</td><td>☐ Eligible (standard)</td><td>☐ Eligible (FD approved)[25]</td><td>☐ Ineligible</td></tr>
<tr><td>Limits (check one)</td><td>☐ Entry limits</td><td colspan="2">☐ Standard limits</td></tr>
</table>

[1] If credit union has less than $250 million in assets, it must submit documentation supporting the Field Director's approval as part of its application for derivatives authority.

DOCUMENTATION: Derivative Transaction and Limit Compliance				
Overview: Understanding what products and hedging strategies to be implemented by the credit union are a critical part of a credit union's application. The application must identify what products and characteristics will be, or are being, used. Product descriptions should be clear, and referenced to the permissible derivatives subsection of the rule. The application should articulate what the credit union's hedging strategy will be in mitigating interest rate risks and how the credit union will measure and monitor positions against the prescribed limits. **The credit union must provide policies and procedures for the final review.**				
TOPIC	**Interim Review** *(check or indicate N/A)*		**Final Review** *(check or indicate N/A)*	
Products §703.102	a. Application indicates what products the credit union plans on using and what the hedging objectives are. This should include what balance sheet characteristics are contributing to the interest rate risk, and how derivatives will reduce this risk.	☐	a. If following up on an interim approval, the product strategy is consistent with the interim application and the strategy is very clear on how the credit union will use the products.	☐
			b. Application must identify the benefit and goal of using each product, and demonstrate what interest rate hedging objectives are being met.	☐
Transaction Characteristics §703.102	a. If applicable, application indicates if credit union will use notational amortization or forward start date features, and what the credit union's hedging objectives are.	☐	a. If applicable, the requests for product characteristics are consistent with application for interim approval.	☐
			b. Application must identify the benefit and goal of using each characteristic, and demonstrate what interest rate hedging objectives are being met.	☐

DOCUMENTATION: Derivative Transaction and Limit Compliance (cont.)				
TOPIC	**Interim Review** *(check or indicate N/A)*		**Final Review** (check or indicate N/A)	
Limits Authority §703.103	a. Credit union recognizes the risk limits associated with the program and indicates how it will comply with them. *(Required whether credit union applies with or without prior derivatives experience.)*	☐	a. Credit union acknowledges the rule limits and calculations, and indicates what processes and reporting it has developed to monitor the limits.	☐
			b. Credit union has provided report prototypes that demonstrate how will monitor limits.	☐
			c. Credit union has provided procedures which will ensure that valuations and positions are reconciled with the counterpart, and that the fair value limit is consistent with counterparty reports.	☐
			d. Determine whether program qualifies for "entry" or "standard" limits using the rule requirements.	☐

<table>
<tr><th colspan="5">DOCUMENTATION: External Service Providers</th></tr>
<tr><td colspan="5">Overview: External service providers (ESPs), including transaction counterparties, are a critical component of operating a derivatives program. ESPs may execute transactions, service margin calls, perform the custodial duties of managing collateral, and provide current valuations of transactions. For operational support functions, ESPs are a source of generic ALM functions used at many credit unions. The type of agreement needed for transactions depends on the products that a credit union has applied for and whether the credit union will use exchanges or bilateral agreements. For each product, the application should indicate what the credit union's approach is and how it plans on supporting the agreement. The application should clearly indicate which support functions will be supported by an ESP, how the function will integrate back into the credit union's operations, and how the credit union will control the process. The credit union must provide policies and procedures for the final review.</td></tr>
<tr><td>TOPIC</td><td colspan="2">Interim Review (check or indicate N/A)</td><td colspan="2">Final Review (check or indicate N/A)</td></tr>
<tr><td rowspan="2">Trade Counterparties
§703.104</td><td rowspan="2">a. Application includes a list of counterparties the credit union plans on using and indicates whether transactions will be cleared, non-cleared or exchange.</td><td rowspan="2">☐</td><td>a. Application details what counterparties are being used to execute transactions.</td><td>☐</td></tr>
<tr><td>b. Application details what swap dealer, FCM or introducing brokers have been contracted and whether they are clearing or using a bilateral agreement. The contract discloses that only certain contracts can be done, consistent with the application of products.</td><td>☐</td></tr>
<tr><td rowspan="3">Collateral and Margining
§703.104</td><td rowspan="3">a. Application indicates how the credit union will support the collateral and margining requirements detailed in the rule.</td><td rowspan="3">☐</td><td>a. Guidelines in the counterparty agreement(s) that detail the eligible collateral and margining requirements are compliant with the rule.</td><td>☐</td></tr>
<tr><td>b. Evidence that the credit union has systems, procedures, and trigger notifications to support margin calls.</td><td>☐</td></tr>
<tr><td>c. Reporting shows the counterparty risk and how they are compliant with the minimum transfer or FCM margin requirements.</td><td>☐</td></tr>
</table>

DOCUMENTATION: External Service Providers (cont.)				
TOPIC	**Interim Review** *(check or indicate N/A)*		**Final Review** *(check or indicate N/A)*	
Support Functions §703.107	a. Application indicates which ESP(s) the credit union will use to support derivatives, what functions the ESP(s) will perform, and how supported functions will be integrated into the credit union's operations.	☐	a. Review documents on what ESP(s) the credit union is using to support or integrate derivatives, and in what capacity they are being used.	☐
			b. Application contains reports that will be used for risk, position, and fair value gain (loss).	☐
			c. Confirm that service providers for support functions are not derivative counterparties, which is not allowed by the rule.	☐
			d. Credit union demonstrates that it is capable and has the resources to manage the ESP relationship to support the interest rate risk measurement and liquidity management functions.	☐
			e. Credit union documents how it is controlling the data and process flow integration points using a service provider.	☐
Legal Documents §703.106	a. Depending on the approach to ESPs, credit union has indicated what contractual agreements it plans on executing.	☐	a. Credit union has provided signed agreements with all service providers to execute transactions, support margining, and all other operational support.	☐

DOCUMENTATION: Management Reporting				
Overview: A credit union's business plan to support its interest rate risk mitigation plans is a critical part of ALM. The credit union must document its understanding of the hedging strategy as part of its overall balance sheet management. For internal management reporting, the credit union should have relevant reporting to indicate the current risks, positions, and hedge effectiveness. A safe and sound derivatives program requires an enhanced capacity to estimate the credit union's earnings and economic value based on the market's expectation of future interest rates and any potential changes from these expectations. While a projection of income over a short period of time is customarily used by credit unions for financial planning, the longer maturity and increased complexity of permissible derivatives contracts require credit unions to project earnings over a longer period of time. In addition, because interest rate derivatives are priced using the forward interest rate curve, and the value of these contracts changes when there is a shift in the market's expectation of future interest rates, credit unions need to incorporate the forward interest rate curve into their baseline assumptions. It is important for the credit union to consider its earnings and economic value in the context of these forward rates, and how changes from these forward rates would affect the institution's projected financial performance. Moreover, analyses of the effects of changing interest rates should include both parallel and non-parallel changes in rates over the maturity spectrum (both a flattening and steepening of the yield curve)." **The credit union must provide policies and procedures for the final review.**				
TOPIC	**Interim Review** *(check or indicate N/A)*		**Final Review** *(check or indicate N/A)*	
Risk Mitigation Plan §703.110	a. Application includes plan on how credit union will monitor interest rate risk using derivatives, and how the new instruments will be incorporated into existing risk reporting.	☐	a. Credit union provided detailed plan on its hedging objectives using derivatives, what the economic benefits will be, and how the program is reducing or has the potential to reduce interest rate risk.	☐
			b. Risk mitigation plan demonstrates that the credit union has considered how derivatives can be an alternative to other interest rate mitigation strategies and that the credit union has completed a cost/benefit analysis.	☐
			c. Credit union outlines what analytical modeling was done to understand the risk sensitivity of the derivative positions and how effective the hedge will be. Check for improvements or changes to the material provided for interim review.	☐

DOCUMENTATION: Management Reporting (cont.)				
TOPIC	**Interim Review** *(check or indicate N/A)*		**Final Review** *(check or indicate N/A)*	
Risk Mitigation Plan (cont.) §703.110	b. Credit union indicates what analytical modeling it has done to understand the risk sensitivity of the proposed derivative positions and how effective the hedge will be.	☐	a. Credit union uses the forward interest rate curve to estimate its cost of funds over the next five years.	☐
			b. Credit union report NEV and Income Simulations with and without derivatives.	☐
			c. Credit union includes both parallel and non-parallel changes in rates over the maturity spectrum (both flattening and steepening of the yield curve).	☐
Internal Reporting §703.105	a. Application describes how credit union will modify or develop internal reporting to include derivatives, and report to the Board and senior executive officers as required by the rule.	☐	a. Ensure the proposed reporting complies with the requirements for a comprehensive derivatives report outlined in the rule.	☐
			b. Confirm the distribution and frequency of internal reporting.	☐

DOCUMENTATION: Operational Requirements

Overview: How a credit union supports and monitors the oversight of a hedging program is critical to its success. The governance and management of ALM activities, including derivatives, will require a greater level of sophistication. This section of the assessment should address how management is conducting activities to support a hedging program and how the internal control framework is supporting those activities. Proper separation of duties, a robust internal control framework, and compliance with GAAP for accounting results are core attributes for this section. **The credit union must provide policies and procedures for the final review.**

TOPIC	**Interim Review** *(check or indicate N/A)*		**Final Review** *(check or indicate N/A)*	
Board Resolution §703.106	a. Application includes a resolution from the credit union board of directors, or an indication that the credit union will get board approval on the use of derivatives.	☐	a. Review and confirm the board's approval of using derivatives to hedge interest rate risk.	☐
			b. Resolution provided by the credit union indicates which hedging strategies will be conducted.	☐
Senior Executive Officer Oversight §703.106	a. Application describes how the executive officers will oversee the safety and soundness of the program.	☐	a. Credit union has provided documentation that the senior executive officers will oversee with roles and functional responsibilities in supporting all derivative activities.	☐
ALM Oversight §703.106	a. Application details what procedures or plans the credit union will develop or amend on how it will conduct risk oversight of derivatives and integrate derivatives into the overall ALM framework.	☐	a. Credit union demonstrates how transactions will be monitored and how the effectiveness of derivative activities is mitigating interest rate risk.	☐
			b. Credit union indicates what reporting and functions are being performed, and what systems are being used.	☐
			c. Credit union indicates what sensitivity analysis is being performed, not only for derivatives, but in the context of the overall ALM. Assess the quality of the reporting and personnel who support ALM activities.	☐

DOCUMENTATION: Operational Requirements (cont.)				
TOPIC	**Interim Review** *(check or indicate N/A)*		**Final Review** *(check or indicate N/A)*	
Accounting §703.106	a. Credit union indicates what accounting designation it plans on using and how it will comply with GAAP, as part of the execution strategy.	☐	a. Credit union demonstrates what accounting approach it will use and how it will monitor results over the life of the transactions.	☐
			b. Credit union demonstrates that it will continually test hedge accounting results for effectiveness, have the required documentation, and record the appropriate accounting.	☐
			a. Review the policies and procedures provided by the credit union to confirm that the suggested accounting approach is consistent with the hedging strategy.	☐
Financial Statement Audit §703.106	a. Application acknowledges that credit union is planning to contract with an independent auditor for a yearend financial statement audit.	☐	b. Credit union demonstrates that a yearend financial statement audit will be performed inclusive of all derivatives activities.	☐
Internal Controls §703.106	a. Application acknowledges that an independent review (external or internal) of derivative internal controls for the first two years of the program.	☐	a. Credit union confirms that an independent assessment of internal controls will be conducted for the first two years of the program.	☐
			b. Credit union provides confirmation from internal audit group or auditors.	☐
Process Framework §703.106	a. Application indicates that a documented plan on the process flow will be produced for the final review; the plan should include roles and responsibilities for each of the major functions in supporting derivatives.	☐	a. Credit union's internal control framework documents the roles and responsibilities for all the activities needed to support derivative program, including the separation of duties.	☐
			b. Analyze the depth and robustness of the roles, personnel, and controls established for process framework.	☐
Separation of Duties §703.106	a. Process framework indicates how credit union will comply with the required separation of duties.	☐	a. See *Process Framework*, item (a.)	--

Appendix B: Calculating Derivative Limits (FCUs only)

A federal credit union that is approved for derivatives authority under §703.111 is subject to the following position and risk limits:[1]

Table 1 – Authority Limits

Limit Authority	Entry Limits (first 12 months of transactions)	Standard Limits
Fair Value Loss (See *A.*, below)	15% of net worth	25% of net worth
Weighted Average Remaining Maturity Notional (WARMN) (See *B.*, below)	65% of net worth	100% of net worth

A. Fair Value Loss Limit Calculation

The fair value loss limit is exclusive to the derivatives positions. Do not net offsetting gains and losses in the hedged item. To calculate a credit union's fair value loss to determine if the institution is compliant with the regulation, perform the following steps:

1. Combine the total fair value (defined by product group, below) of all derivatives transactions.
    (1) *Options* – the gain or loss is the difference between the fair value and the unamortized premium at the reporting date;
    (2) *Swaps* – the gain or loss is the fair value at the reporting date; and
    (3) *Futures* – the gain or loss is the difference between the exchange closing price at the reporting date and the purchase or sales price.

2. Compare resulting total to the credit union's fair value loss limit to determine compliance.
    (1) The resulting figure, if a loss, must not exceed the credit union's authorized fair value loss limit:

[1] A more detailed example of the limit calculation can be found in the NCUA regulation §703, Subpart B, Appendix A.

B. Weighted Average Remaining Maturity Notional (WARMN) Calculation

1. Identify the gross notional of all outstanding derivatives transactions.
    a. *Options and swaps* - all gross notional amounts must be absolute, with no netting (i.e., offsetting a pay-fixed transaction with a receive-fixed transaction). The gross notional for derivatives transactions with amortizing notional amounts is the current contracted notional amount, in accordance with the amortization schedule
    b. *Futures* - gross notional is the underlying contract size as designated by the Chicago Mercantile Exchange (CME) product specifications (e.g., a five-year Treasury note futures contract will use $100,000 for each contract purchased or sold and reported here on a gross basis for limit purposes.)

2. Convert the gross notional of each product type by its derivative adjustment factor to produce an **adjusted gross notional**; this approximates the price sensitivity for each product type:
    a. *Cap and floor options* - derivative adjustment factor is **33 percent**. For example, an interest rate cap with a $1 million notional amount has an adjusted gross notional of $330,000 ($1,000,000 x 0.33 + $330,000).
    Interest rate swaps and Treasury futures - derivative adjustment factor is **100 percent**. For example, an interest rate swap with a $1 million notional amount has an adjusted gross notional of $1,000,000 ($1,000,000 x 1.00 = $1,000,000).

3. Sum up the converted gross notional amounts for all outstanding derivatives transactions to determine the **total adjusted gross notional**.

4. Calculate the **weighted average remaining time to maturity** (WARM) for all derivative positions using the adjusted gross notional amounts:
    a. *Caps, floors, and swaps* - remaining maturity is the time left between the reporting date and the contracted maturity date, expressed in years (round up to two decimals.
    b. *Treasury futures* - remaining maturity is the underlying deliverable Treasury note's maximum maturity (e.g., a five-year Treasury note future has a five-year remaining maturity).

5. Sum up all the WARM calculations to determine the **total WARM**.

6. Convert the **total WARM** from the previous step into a percentage by dividing it by ten.

7. Multiply the WARM percentage from the previous step by the **total adjusted gross notional** from step three to get the weighted average remaining maturity notional (WARMN).

8. Compare the WARMN to the credit union's WARMN limit to determine compliance.

Table: WARMN Calculation Summary

Product	Gross Notional	Adjustment Factor	Adjusted Notional	WARM
Options (Caps)	Current notional	33%	33% of current notional	Time remaining to maturity
Options (Floors)		33%	33% of current notional	Time remaining to maturity
Swaps		100%	100% of current notional	Time remaining to maturity
Futures	Contract size	100%	100% of contract size	Underlying contract
			Sum = Total Adjusted Notional	Sum = Overall WARM

WARMN = Adjusted Notional x (WARM/10)

Appendix C: NCUA Notification of FISCU Derivatives Activity (FISCUs only)

FISCUs must notify NCUA in writing at least 30 days before the credit union uses derivatives.

Federally Insured, State-Chartered Credit Union (FISCU) Information			
Credit union name			
Charter number			
Contact Information			
Contact name			
Title			
Email / Phone			
Derivative Products FISCU intends to use / already uses (optional)			
Interest rate swaps	☐		
Basis swaps	☐		
Interest rate caps	☐		
Interest rate floors	☐		
U.S. Treasury note futures	☐		
Amortizing notional	☐		
Forward start swaps	☐		
Other (List)____________________	☐		
NCUA USE ONLY			
Date notification received		REGION	
Notification received by *(name)*			
Derivative program use	☐ New activity	☐ Existing activity	