

NCUA LETTER TO CREDIT UNIONS

**NATIONAL CREDIT UNION ADMINISTRATION
1775 Duke Street, Alexandria, VA**

DATE: September 2000 **LETTER NO.:** 00-CU-05

TO: Federally Insured Credit Unions

SUBJ: Investments in Brokered Certificates of Deposits

ENCL: (1) Appendix A – Transaction Examples
(2) Appendix B – Bond Equivalent Yield Versus Simple Interest Yield

Dear Board of Directors:

Recently, credit unions have experienced increasing problems with brokered certificates of deposit (CDs). These problems have occurred with at least two brokers against whom NCUA has issued “cease and desist” orders. They are San Clemente Securities and Prime Yield. Further, the National Association of Securities Dealers, Inc., (“NASD”) issued a press release on July 21, 2000 announcing it had issued a complaint against San Clemente Securities, Inc., charging fraud and other misconduct in connection with an investment program involving the offer and sale of CDs during the period June 1999 to March 2000. It is possible the problems are not limited to these firms and we are therefore, providing this letter.

Credit unions have occasionally lost money when a financial institution that issued the CD became insolvent. In addition, broker fees paid by the credit union for the CD transaction were not covered by federal deposit insurance. Credit unions have also received low yields on CDs, often below the rates available on investments with similar terms. While no credit union has become insolvent as a result of CD purchases, there is an increasing concern because more credit unions are purchasing CDs without proper understanding or analysis of the instrument and the parties associated with the transaction.

The following are some of the potential CD activities for which you should exercise a higher level of caution and due diligence.

- Purchasing a CD quoted in terms other than bond equivalent yield. See *Appendix A for a detailed example of this transaction.*

Decisions between investment options are difficult to analyze if yields are not comparable. Bond equivalent yield is the industry convention for comparing yields and should be adopted by you when evaluating investment alternatives. When evaluating zero coupon CDs, avoid yield quotes based on simple interest yields because they will be misleading and appear artificially attractive. *See Appendix B for a discussion of bond equivalent yield versus simple interest yield.*

- Purchasing a long-term CD as an investment, often at below market rates, as a condition for obtaining brokered deposits with below market rates, often with short maturities. *See Appendix A for an example of this transaction.*

Credit unions engaging in this practice will experience the loss of the short-term deposits at maturity unless renewed, while continuing to hold the long-term CD/investment. You may also experience an increase in funding costs when new deposits are obtained at market rates that take the place of the maturing deposit. You should avoid such programs as a means for obtaining long-term liquidity.

Credit unions purchasing the shorter-term brokered deposits may be unaware a portion of the interest payment originates from the broker, and is not an obligation of the issuing institution. The below market rate on the long-term CD provides the subsidy necessary to allow the broker to pay market rates on the short-term deposit.

- Purchasing a CD from a broker where the documentation is unclear as to the invested amount and any broker fees, leading you to assume your principal balance is the same amount as the funds wired.

Confirmations will disclose amounts wired which will include the broker's fees. Misrepresentations have been experienced with CD safekeepers who are affiliated with brokers. Specifically, amounts wired have been referred to as principal amounts, implying that the total wired amount is invested and insured, when in fact the actual principal is the wired amount less broker fees. The difference between your payment and the amount remitted to the issuing institution represents the broker's income. The amount retained as income by the broker is not an insured deposit. For example, a broker may sell you a zero coupon CD for \$60,000 and remit only \$57,000 to the issuing financial institution. Only the \$57,000 used to actually purchase the certificate is insured, plus accrued interest.

- Using a safekeeper that may be unreliable.

Improper or incomplete disclosures have been experienced with CD safekeepers that are affiliated with the broker involved in the transaction. For federally-chartered credit unions Part 703 of the NCUA Rules and Regulations (§703.60) requires that all safekeepers be board-approved. State-chartered credit unions should refer to their individual state's statutes. You have an obligation to investigate the reliability and financial soundness of your safekeepers before approval. Further, sound business practices require that a written safekeeping agreement be signed and on file before using a particular safekeeper.

- Purchasing a portion of a master certificate of deposit held in the broker's name which is also held at the broker's safekeeper.

When you purchase a negotiable certificate or a portion of a master certificate, the safekeeper should record your security interest. You will not receive a physical certificate. The safekeeper must record you as the beneficial owner on its records. Failing to do so will create ambiguity as to the actual federal deposit insurance coverage and your ability to liquidate the asset. If the safekeeper is not independent from the broker, you should ensure the board of directors has approved the safekeeper and the board is aware this is the least desirable method of safekeeping.

- Purchasing long-term certificates where the broker has "guaranteed" to repurchase the certificate, if requested, prior to maturity at the credit union's option.

The guarantee is typically not in writing, nor is there any assurance the broker will exist at the time the option could be exercised. When a broker repurchases a certificate, it may be at a price set by the broker rather than a market price. Without written documentation you should not accept these guarantees. In addition, you should not expect that the CD could be readily liquidated without a loss.

Recommendations.

You should:

1. Conduct a thorough evaluation of all brokers, including background, disciplinary history, and reputation, prior to using them for investment transactions.
2. Obtain yield quotes in terms of bond equivalent yield.

3. Avoid complex broker transactions driven by long-term liquidity needs unless the risks are fully understood and manageable, especially if these transactions take the form described in Appendix A.
4. Require documentation from your broker and safekeeper in the form of confirmations, safekeeping agreements, and safekeeping records that are clear and comprehensive.
5. Ensure that you are comfortable with the integrity of the safekeeper and obtain board approval prior to placing investment transactions with them. It is preferable not to use a safekeeper affiliated with the broker involved in a transaction.
6. Request and obtain from the broker a written statement of the verbal promises and quotes prior to purchase.
7. Have a procedure in place to assure you do not place multiple CDs in a single institution if your policy limits CD investment to the insured limit.
8. Avoid investments you do not fully understand.

You should review your current CD investments, NCUA's investment regulation or your state's regulations if you are state-chartered, Part 703, and your policies and procedures related to brokered CD activity to determine that necessary safeguards are in place. If you have any questions, please contact your district examiner, regional office, state supervisory authority, or the Office of Investment Services.

Sincerely,

_____/s/_____
Norman E. D'Amours
Chairman
National Credit Union Administration

Enclosures

Appendix A - Transaction Examples

When purchasing an investment, an investor should be fairly compensated, in the form of yield or return on investment, for the risk incurred. Increasingly, we are seeing examples of two transactions brokers are using to deceive credit unions, both involving zero-coupon certificates of deposit (CDs). As more thoroughly described below, these practices result in the credit union paying more than the fair market value for the CD. Frequently, a substantial part of their payment goes to the broker as profit, rather than to the issuer of the CD.

In the first case, a broker quotes misleading yields to induce the credit union to purchase the CD. The second case is more complicated and is composed of two simultaneous transactions. Credit unions needing liquidity and low cost funds are lured into purchasing a long-term, zero-coupon bond at an inflated price, in exchange for the broker placing short-term, low cost deposits with the credit union. The following abbreviated examples illustrate how these transactions work.

Misleading Yields

1. The broker persuades a credit union to purchase a zero-coupon CD that appears attractive compared to other investment options. However, because the yield is quoted in terms of simple interest (also known as average annual yield), it is not comparable to investments that are quoted using market conventions such as bond equivalent yield (BEY) [refer to Appendix B for a comparison between simple interest and bond equivalent yield]. Had the CD been quoted in terms of BEY, the credit union would recognize the return was below current market yields.
2. By quoting a simple interest yield and misleading the credit union as to the CD's potential market rate of return, the broker charges the credit union an inflated price (e.g., \$60,000 for a zero-coupon CD with a face value of \$100,000) for a CD the broker can obtain from the issuer (e.g., bank) at a lesser amount (e.g., \$50,000 for a zero-coupon CD maturing on the same date at the same face amount).¹
3. The credit union records the CD on its books at its purchase price (e.g., \$60,000).
4. The broker purchases the CD from the issuer (e.g., \$50,000) and pockets the difference (\$10,000).
5. The broker instructs the safekeeper to record the credit union's interest in the CD.

A credit union should recognize that its safekeeping statement will typically not disclose the price the broker paid for the CD. Accordingly, the credit union may not be able to discern it overpaid for the security. To obtain a fair price, its best assurance is to understand what the market rate of return is for a particular investment. This is best obtained by obtaining yield quotes, in terms of bond equivalent yield, from several brokers.

¹ The broker may also purchase a master CD and then sell portions of it to its customers. For example, a broker could purchase a \$1 million master CD and sell ten \$100,000 CDs to credit unions. This concept is known as fractionalizing a CD.

It is also important to note that federal deposit insurance will only be paid based on the CD balance reflected on the issuer's books. In this example, the issuer would record a zero-coupon CD at \$50,000. If the issuer failed immediately, the difference between the issuer's records and the credit union's records, \$10,000 (\$60,000-\$50,000) would represent the potential uninsured amount to the credit union. While this gap will decline over time due to the accretion of interest, it will perpetuate until maturity. Purchasing investments, including zero-coupon CDs, at market rates should reduce this gap to immaterial differences.

Obtaining Short-Term Inexpensive Funds

This next example depicts a situation where a broker has promised a credit union it could fulfill its liquidity needs. The broker offers to provide low cost brokered deposits with the credit union as long as the credit union agrees to purchase an investment from the broker (usually a zero-coupon CD) with a portion of the proceeds. The broker typically refers to the transaction as an arbitrage opportunity because the brokered deposit rates are less than the interest earned on the purchased investment. While the short-term results may produce a favorable return to the credit union, the transaction quickly turns disadvantageous to the credit union and can compound current problems.

1. A CD broker informs Credit Union A it can obtain 6-month low cost funds (e.g., 2.5 percent) to meet its liquidity needs without incurring any fees. As a condition of the transaction, Credit Union A must reinvest a portion of the brokered deposits with the broker. The broker offers a long-term (e.g., 10-year maturity) \$100,000 zero-coupon CD to Credit Union A at a below market yield (e.g., 5.0 percent when the market rate is 6.0 percent). While the yield on the purchased CD is below market, it produces a 250 basis point positive spread (5.0%-2.5%) over the cost of the brokered deposits. Credit Union (A) agrees to the transaction because it returns a positive spread and provides an immediate source of funds.
2. The broker solicits a 6-month \$300,000 deposit from Credit Union B to place with Credit Union A. The broker promises to pay a market rate of 4.5 percent on the deposit.
3. The broker coordinates with Credit Union A to issue a \$300,000 deposit at 2.5 percent (the agreed upon rate), and simultaneously purchase a \$100,000 face value (maturity value) zero-coupon CD.
4. Because the yield on the purchased CD is lower than the market rate of return (5.0 percent instead of 6.0 percent), Credit Union A pays an inflated price (\$60,000) to the broker for the purchased CD. This results in a \$10,000 profit to the broker because the broker only had to pay \$50,000 for a 6.0 percent zero-coupon CD. Also, as explained in the first example, the difference between Credit Union A's price and the broker's price of the zero-coupon CD represents an uninsured amount to Credit Union A (e.g., \$10,000).
5. Credit Union B is recorded as owner of a \$300,000 6-month deposit paying 4.5 percent.

At this point, each party's position is as follows:

- Credit Union A has \$240,000 in cash (\$300,000 from the brokered deposit less \$60,000 paid to the broker for the zero-coupon CD), owns a ten year zero-coupon CD with a face value of \$100,000 (purchased for \$60,000), and is liable to pay \$300,000 in 6 months at 2.5 percent (annualized).
- Credit Union B owns a 6-month \$300,000 deposit in Credit Union A, paying 4.5 percent.
- The broker earned \$10,000 in profit from the sale of the zero-coupon CD to Credit Union A. It has also committed to pay 4.5 percent interest on the Credit Union B's deposit.

In six months, Credit Union A begins to see the true costs of the transaction.

6. Credit Union A remits \$3,750 (\$300,000 @ 2.5 percent for 6 months) to the broker (or broker's agent) to pay the dividends on the \$300,000 deposit.
7. From the initial profit earned on the sale of the zero-coupon CD to Credit Union A, the broker takes \$3,000 and adds it to the \$3,750 dividend payment from Credit Union A. The total amount, \$6,750, is remitted to Credit Union B as interest earned on the \$300,000 deposit (4.5 percent for six months). The broker is left with a net profit of \$7,000.
8. Credit Union A must now return the \$300,000 deposit to Credit Union B because it has matured, or if it does not have available funds, it must seek alternative liquidity sources. In either case, the credit union is in a bind.
 - If Credit Union A can return the funds, it still has a low yielding CD on its books that may impair earnings until its maturity. If the credit union tries to sell the CD, it will most likely incur a loss (unless rates have fallen significantly).
 - If Credit Union A cannot return the funds, it finds itself in its initial position of seeking low cost funds. The whole transaction can be incurred again, perpetuating the problem (and broker profits), or market priced funds can be sought. It is likely these funds could cost more than the earnings on the zero-coupon CD purchased from the broker, thus negating any future "arbitrage".

In addition, if Credit Union A fails, Credit Union B is only insured for \$100,000 of the total \$300,000 plus interest at 2.5 percent. Meanwhile, the obligation of the broker to pay Credit Union B the additional 2 percent interest constitutes an impermissible investment by Credit Union B in violation of Part 703.

Appendix B - Bond Equivalent Yield Versus Simple Interest Yield

Investors commonly focus on an investment's yield when making an investment decision. All other factors being equal, a higher yield is generally more desirable than a lower yield. However, because yields can be calculated using a variety of methods, a higher yield may not always result in a higher return to the investor. Therefore, the investor must understand the yield calculation method when evaluating alternatives. To ignore this information will lead to poor investment decisions.

In particular, zero coupon yields can vary significantly because interest is paid at maturity (unlike coupon bearing investments that remit periodic interest payments to the investor). To illustrate this point, the following examples show how a zero coupon investment's price and yield are largely dependent upon the yield calculation method. Specifically, the simple interest yield method will be measured against the bond equivalent yield method.

Bond equivalent yield (BEY) is the industry convention for calculating yields on Treasury and agency bonds and notes². These securities pay interest semiannually. Because Treasury bonds and agency securities are the most widely traded instruments, a common industry practice is to compute an equivalent yield and price on other investment types as if interest were paid on a semiannual basis—for zero coupon instruments, interest is assumed to *compound* on a semiannual basis. In contrast, **simple interest** assumes that interest is not compounded at all.

In the following examples, the equivalent BEYs are expressed for a 4, 6, and 8 percent simple interest yield. Tables 1 and 2 provide examples for both a 3-year and 7-year zero coupon investment.

Table 1—Yield Comparisons

3 Year Yields	
Simple Interest	BEY
4.00	3.81
6.00	5.59
8.00	7.31

Table 2—Yield Comparisons

7 Year Yields	
Simple Interest	BEY
4.00	3.56
6.00	5.07
8.00	6.46

In each case, the simple interest yield appears more attractive than yield calculated on a BEY basis. Further, for longer maturity investments and higher yields, the disparity between simple interest and BEY increases. For example, the 8.00 percent simple interest yield on a 7-year investment is significantly higher than the 6.46 percent BEY. **Nonetheless, both yields are equivalent.** That is, the 8.00 percent simple interest yield will not result in a greater return (in terms of dollars) than the 6.46 percent BEY.

² Treasury bill yields are typically quoted on a discount basis. This topic will not be discussed here.

The following two examples further illustrate the impact on the price of a zero coupon investment, given a simple interest and BEY yield of 4, 6, and 8 percent. In Table 3, the investment maturity is 3 years, while in Table 4 the maturity is 7 years (both assume a \$100,000 face value).

Table 3—Price of Investment Given the Yield

3 Year	Compounding Method		
	None (Simple Interest)	Semiannual (BEY)	Difference
4 Percent	\$89,296	\$88,797	\$499
6 Percent	\$84,746	\$83,748	\$998
8 Percent	\$80,645	\$79,031	\$1,614

Table 4—Price of Investment Given the Yield

7 Year	Compounding Method		
	None (Simple Interest)	Semiannual (BEY)	Difference
4 Percent	\$78,118	\$75,788	\$2,330
6 Percent	\$70,414	\$66,112	\$4,302
8 Percent	\$64,094	\$57,748	\$6,346

In the examples above, the simple interest method results in the highest price for each given yield. That is, a credit union would pay more for an investment with a 4 percent simple interest yield, than an investment with a 4 percent BEY. Further, the price disparities between simple interest and BEY methods will increase for longer maturity investments, as shown in Table 4.

This price disparity can lead unwitting credit unions to overpay for an investment. For example, consider a situation where a credit union evaluates two 7-year zero coupon CDs. One CD is quoted at 6 percent based on simple interest, whereas the other is quoted at 6 percent on a BEY basis. If the credit union does not differentiate between the two yields and purchases the simple interest CD, the credit union overpays for the CD by \$4,302 (\$70,414 - \$66,112 [see Table 4]). Why? --Because it could have bought a cheaper CD that would return the same face value on the same maturity date.

Conclusion

Credit unions are encouraged to obtain yield quotes on potential investments based on BEY. Most Treasury and agency debt securities are quoted in terms of BEY, which serves as a useful benchmark to compare the prices and yields of alternative investments.

For zero coupon investments with maturities greater than six months, when keeping price and maturity constant, simple interest yields will be higher than yields quoted on a BEY basis. Similarly, if the yield is kept constant, the price for an instrument quoted on a BEY basis will be less (i.e., cheaper) than the price quoted on a simple interest basis.

When comparing prices and yields on investments, the credit union must understand the basis for the yield quote. To ignore such information may leave the credit union exposed to overpaying on investments and failing to meet its expected rate of return targets.