

A Few Things to Consider Before Purchasing a Derivative

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While many credit unions work on what seems to be a more immediate issue – increasing loan volume – it is important not to forget the looming issue of interest rate risk. Rates have been at historically low levels since the end of 2008 and the Federal Reserve has indicated it expects rates to remain low into 2015. We have said it a thousand times: The longer rates stay at these historically low levels, the more interest rate risk will be added to credit union financial structures (all else equal).

Concern over IRR was recently put front and center with the implementation of NCUA's new [Interest Rate Risk Policy and Program](#), and it has been a consistent message at conferences that this is one of NCUA's top priorities. One tool available to credit unions for managing IRR is a derivative. NCUA has made derivatives available to credit unions through a

pilot program since 1998. However, few credit unions have participated. Over the last couple of years NCUA has asked for public comment on the issue of expanding credit union access to derivatives. Additionally, NCUA said in a joint town hall meeting (2/5/13) with the Consumer Financial Protection Bureau that a proposed rule on derivatives could be released in the first half of 2013. While no specific changes were described, the intent of the pending proposed rule will be to make it easier for credit unions to purchase derivatives.

While derivatives can be an effective risk-mitigating tool, we encourage credit unions to thoroughly understand the accounting and financial implications *before* purchasing a derivative. The main objective of this article is to raise questions about financial impacts credit union boards and managements should

consider before purchasing derivatives, not to lay out the accounting treatment.

To help manage IRR, credit unions could purchase interest rate swaps or interest rate caps. In an interest rate swap, the credit union pays a fixed rate of interest and receives a floating rate in return, in essence "swapping" the interest payments. The swap is "in the money" when the received rate exceeds the paid rate. In an interest rate cap, the credit union pays a one-time, up-front fee. In exchange, the counterparty pays the credit union only when a specified variable index is above an agreed upon cap.

The following examples will use a swap with a \$10 million notional amount as an example; however, the questions could also be used when considering an interest rate cap.

Today's rate environment provides a relatively cheap opportunity in which to purchase a swap. Recent Federal Reserve data indicates a credit union could expect to pay about 100 basis points on a 5-year swap, while receiving a 3-month LIBOR at about 30 bps. This means that short-term rates would have to increase 70 bps before the swap is "in the money."

Before taking any action to reduce interest rate risk, the credit union's decision-makers must be on the same page with respect to the rate environments for which protection is desired. The options and the cost of buying protection for a 200 or 300 bp increase can be very different from those to protect for a 400 or 500 bp increase.

The length of time for which protection is desired is also important. Based on the table above, there is a 13 bp difference between the cost of a 2-year swap vs. a 3-year swap. Currently, a credit union could lock in an additional year of protection for an additional 13 bp.

NCUA's February 2012 [Advance Notice of Proposed Rulemaking](#) states: "The Board is considering eligibility

Instruments	2013 Feb 4
Interest rate swaps 14	
1-year	0.33
2-year	0.42
3-year	0.55
4-year	0.75
5-year	1.00
7-year	1.49
10-year	2.06
30-year	3.00

<http://www.federalreserve.gov/releases/h15/update/default.htm>

requirements based on at least three factors, including need, financial condition, and ability to manage derivatives. First, an FCU would need to demonstrate relevant IRR exposure. One of the motivations behind the Board's consideration of expanded derivatives authority is to reduce potentially excessive IRR. The Board, therefore, believes that demonstrating a material exposure to IRR, and how an FCU can mitigate it through derivatives activity, is an appropriate requirement" (12 CFR Part 703, Page 5417, Section II).

A credit union could approach a swap purchase from one of two perspectives: hedging existing material IRR exposure or to reduce exposure in order to have

room to portfolio more mortgages going forward.

If interest rates increase, swaps can be an effective tool for credit unions looking to hedge IRR already embedded in their financial structures. However, if rates do not change over the next five years, the swap would negatively impact earnings by about \$350,000 over its life (using a \$10 million notional amount as an example). This may sound like "cheap" insurance to some, but to others struggling with earnings, the cost in the current environment may be too great a price to pay and the focus may need to be on other financial levers, such as reducing operating expense, to ease earnings pressures and help offset IRR.

On the other hand, for credit unions with material IRR exposure, but wishing to continue making mortgages to their members and hedge additional exposure, money can be made if rates don't change. In the example above, the credit union is swapping out its variable cost of funds on \$10 million of deposits for a fixed cost of 100 bps for the next 5 years. However, since the credit union now has the protection of the swap, it can hold an additional \$10 million of mortgages at approximately 3.5 percent, netting just over 2.50 percent, or about \$250,000 per year, without adding as much risk as only holding the mortgages without a hedge.

One advantage of derivatives over other hedging tools, such as term borrowings, is that they are an off-balance sheet transaction. When a credit union uses term borrowings to offset IRR, the asset size becomes inflated, which results in an immediate decrease in the net worth ratio. This does not happen with a derivative.

The methodology used to evaluate swaps is important. While a net economic value analysis could be run prior to

purchasing a swap, it is important to understand how that methodology may not fully inform the business impact to the credit union. NEV will:

- 1) Assume the swap is valued at par the day it is purchased, thus having no impact to current NEV, even though there could be a negative impact to earnings in the current environment, as described above.
- 2) Show that, if short-term rates increase only 5 bps, this same swap will be at a gain and, thus, show an improvement in NEV, while the swap could still be negatively impacting credit union earnings, albeit to a lesser extent.

It is also very important to understand that, while the starting NEV doesn't change, **if rates are identical a year from now, the value of the swap will drop, hurting NEV.** The reason is that one year from now, the swap would have four years remaining at 1.00 percent, when a new four-year swap could be purchased at 0.75 percent (refer to table on page 2).

An income simulation provides a heads-up of this pressure over time, but NEV will not.

If NEV is the credit union's evaluation tool, keep in mind that the swap is not being purchased for trading or speculation. The derivatives program for credit unions is designed to avoid the purchase of derivatives for these purposes. **Since the intent of the program is to hold the swap to reduce IRR, then it is important to understand the impact to earnings and net worth.**

The use of derivatives only to hedge IRR has other implications as well. To prove the derivative is being used as a hedge, a correlation to a balance sheet item, such as deposits, must be established. According to NCUA's [*Standards for Participating Credit Unions and Third-Party Derivative Pilot Program Applicants*](#), "Shock analysis will not demonstrate correlation. Hedge effectiveness requires correlation through time, must be set prospectively, and effectiveness must be assessed retrospectively."

To continually prove a liability hedge, discretionary pricing power over a segment of deposits may be taken away, potentially creating a risk of the credit union paying higher dividends

than it otherwise would. The swap helps to offset the rising cost of funds, but what effect might this have on deposit growth at the credit union, especially if competition is able to move their rates more slowly? One of the challenges many credit unions are facing today is the continued growth in deposits with lackluster loan growth. This combination compresses margins and erodes net worth ratios.

As mentioned earlier, the main objective of this article is to raise questions about the financial impacts of derivatives. However, derivatives also entail other risks credit union decision-makers should understand, such as market risk and counterparty risk. Market risk arises due to the fluctuation of the mark-to-market valuation of the derivatives position. Counterparty risk, or

credit risk, results when the party on the other side of the derivative transaction does not fulfill its obligations. Another risk of derivatives is their complexity. Credit unions, in general, have limited experience with derivatives so before a derivative is purchased **it is extremely important that management and board understand the complex nature and associated risks.** Experience and the ability to manage a derivative transaction are among the factors NCUA is considering for allowing credit unions to access them.

In summary, derivatives can be a good tool for some credit unions to use to mitigate IRR exposure. However, there are some important financial and business questions credit unions should address before purchasing one. As with any business decision,

it is important to identify and evaluate various options before taking action.

About c. myers
Since 1991, we have partnered exclusively with credit unions. Our philosophy is based on helping our clients ask the right, and often tough, questions in order to create a solid foundation that links strategy and desired financial performance. We've worked with about 25% of the credit unions over \$100 million in assets and 50% over \$1 billion providing strategic planning, process improvement, A/LM, interest rate risk and budgeting services. If you would like to discuss this article, please feel free to contact us at 800.238.7475 or www.cmyers.com/contact/.

