

Executive intelligence on credit union exams, enforcement and risk management

Why NCUA discounts GAP analysis

A different model emerges

The CU balance sheet has evolved, but for many CUs, modeling for interest rate risk has not. Here's one example: A lot of CUs still rely on GAP analysis when looking at the interrelationship between interest rates and earnings. But, GAP just doesn't account for the dynamic relationship between rates and member behavior, experts say. Even the NCUA describes it as "simplistic."

A far better bet is the "earnings at risk" model, says Joe Ghammashi, VP of risk management for Corporate One FCU in Columbus, Ohio.

"I don't think enough of this sort of modeling is being done," he says.

"Maybe a handful of larger CUs have sophisticated [earnings at risk] models, but the reality is that the majority of CUs might not have thought about looking at risk from an earnings perspective. The board needs to know that there is risk in certain scenarios, and that this can cost an institution quite a bit of money."



Earnings at risk is a method for modeling changes in net income when interest rates rise or fall Ghammashi says. This is important because no institution can count on uniform member behavior when interest rates change. Those that make such assumptions may be subject to a large,

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The NCUA's corporates presentation, part I



Concerned that many within the industry still don't understand what happened to the corporates, the NCUA has produced a three-part presentation on the corporate system, its history and its recent troubles.

"The complexities of distressed assets and market dislocations leading up to the corporate crisis are difficult to grasp, even by those familiar with the credit union system," noted the agency. "This series of presentations is being produced to provide a broad overview, in simple terms, of various aspects of the corporate credit union crisis."

Part one , which covers corporates history and services, appeared on the agency Web site last week. 

NCUA's not kidding about interest rate risk

The agency sounds a second warning, new policy on the way

Did you miss the FFIEC's recent guidance on interest rate risk ? The NCUA wants to make sure you didn't. Even though the FFIEC released the guidance back in January, the NCUA issued a letter to credit unions  late last month essentially saying: 'Don't forget about that guidance.'

As it happens, the FFIEC guidance pointer serves as a prelude to new NCUA regulation on interest rate risk. NCUA staff just drafted a new proposed interest rate risk policy, which is now on the board docket for the June meeting. "NCUA staff reasoned that it would make sense to release the FFIEC interest rate guidance shortly before this proposal," said Steve Bo-

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potential risk to earnings, he adds. And that's why earnings at risk should have a place in any CU's risk policy.

"What if you get into a new business and it fails?" Ghammashi asks. "What will that do to your earnings?"

CUs go out of business because they lose their earning power.

You can overcome a lot of things, but if you lose your earnings capability, you could be in real trouble."

Many financial institutions don't have a good model for earnings at risk, agrees financial consultant Brad Olsen of Olsen Research Associates in Columbia, Md. Instead, many CUs rely on GAP reports, which compare assets and liabilities over a given time frame. But GAP reports give only a snapshot view and don't account for ways interest rates can trigger member behavior that can warp a balance sheet.

NCUA considers GAP to be a limited measure, particularly when it comes to portfolios stocked with mortgage products. According to the agency examiner's guide, GAP "is a simplistic determination of the relative interest rate sensitivity of a balance sheet. GAP analysis can adequately pinpoint large mismatches in assets and liabilities, but lacks as a tool for measuring the complex variables associated with mortgages. GAP does not consider changes in the shape of the yield curve, changes in the spread relationship between different market rates, or option risk (e.g., prepayments). In addition, it does not address the effect of an

adverse increase in interest rates on net worth."

"When interest rates change, that 5-year loan might not be a 5-year loan anymore," Olsen adds. "That 3-year CD might not be a 3-year CD. That snapshot you've taken is now invalid. You can't bank on those maturities holding firm."

Worrying about – and modeling for – member behavior in different interest rate environments has grown increasingly important, Olsen says.

"These days, option risk is all over the balance sheet," he says. "It used to be confined to a subset of the bond portfolio, where you'd own a callable bond or a mortgage-backed security with prepayment risk. Everyone would say, 'That's where the option risk lives.' It's not true anymore. It hasn't been true for 10 years. Now, option risk is everywhere. Loans prepay, depositors withdraw term-structured CDs early. It remains to be seen how fast people will pull their money out of checking and money market accounts when rates rise."

How to Model for Earnings at Risk

Earnings at risk modeling holds a central place in risk analysis for Corporate One FCU, Ghammashi says. The corporate frequently uses it to model scenarios for how rate changes could impact the balance sheet.

"For example, we have assets that are pegged to LIBOR [London Interbank Offered Rate] and liabilities pegged to the Federal Funds rate," Ghammashi says. "This creates basic risk, because they don't move in tandem. Recently, there's been dislocation in the LIBOR. The spread opened up. In our case, since our assets are LIBOR-based, it was good for us. But, it didn't happen by accident. We measured these things.

You don't want to be surprised."

The Federal Reserve has kept the Fed Funds target rate in a 0-0.25% band for the past 18 months. At the same time, the 1- and 3-month LIBOR ranged between 0.23% and 0.27%, but has been rising since the spring, with the 1-month now about 0.35% and the 3-month at 0.54%.

The method helps Corporate One anticipate mismatches and their potential impact on the balance sheet, Ghammashi says. "What happens if the [LIBOR/Fed Funds] spread shrinks 10 basis points? This is worth \$1.4 million for us. We can afford that. But what if it was worth \$10 million? If I measured that same movement, and it told me that I had a \$10 million potential impact, that's not a good thing. I can't lose that much, given our earnings. We can't afford it. So, information becomes a tool to manage the balance sheet."

Reasonably sophisticated earnings at risk models do not have to be complicated, says Geoff Rubin, principal with Second Pillar in Glen Allen, Va. (Editor's Note: Second Pillar and

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the *Safety & Soundness Report's* parent company have explored business arrangements to provide econometric analysis to the CU industry.)

A classic earnings at risk analysis can be complex, he allows. It may involve a continuum of different conditions, including a range of interest rates, credit loss rates and demand rates. But some of the same lessons can be drawn by looking at two to three different scenarios and working through the implications for earnings and capital.

"It can be as simple as this," Rubin says. "If interest rates go up or down by a certain amount, if credit losses increase by a certain amount, or if deposit demand drops by a certain amount, can the credit union

work through the impact of what those kind of scenarios are on the balance sheet? "Most CUs should be able to run this kind of modeling," Rubin adds.

"It's not unreasonable that credit unions of any size should be able to deduce the impact of the various scenarios on their financial institution," he says. "Credit unions that don't understand how these scenarios impact future earnings if interest rates move 200 basis points have a serious deficiency. This is standard balance sheet and income statement modeling."

Before any financial institution can model earnings at risk usefully, it must carefully analyze the underlying assumptions, says Olsen.

"You can't dream this stuff up," he says. "You can't just plug in a

few numbers. There are no magic assumptions to make. It does take some active involvement to model this. Credit unions need to model the behavior and make the adjustments."

Olsen offers these recommendations to help CUs hone their assumptions before modeling earnings at risk:

1. Study the pricing behavior of your members in rising and falling interest rate environments.

"Will your members demand higher rates on share accounts when the Federal Reserve raises rates, or will they be content with what you have?" Olsen asks. "This is an example of the kinds of assumptions that need

to be built into your model."

CUs can delve into member behavior by looking at historical data from periods of rising and falling interest rates, he adds.

2. Assess your CU's need for funding. CUs also need to anticipate future funding needs, Olsen says. Eventually, the Federal Reserve will raise rates, affecting loan demand.

"This was an issue for banks and credit unions when rates last rose," Olson says, referring to the period between 2004 and 2007, when rates rose to 5.25% from 1.25%. "At the time, the economy was good. There was lots of loan demand. Financial institutions wanted deposits and were willing to pay up for them. But now? I'm not so sure... Credit unions need

"You can't dream this stuff up . . . There are no magic assumptions to make. Credit unions need to model the behavior and make the adjustments."

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sack, chief of staff for NCUA chairman Debbie Matz.

None of this should be surprising, says Don Musso, a financial analyst and interest rate risk specialist with FinPro, a management consulting firm based in Liberty Corner, N.J. CUs, as well as other financial institutions, are going short on liabilities to decrease funding costs and going long on assets to pull in yield.

“They’re adding interest rate risk, no doubt about it,” Musso says.

At the same time, he adds, CU balance sheets have become more bank-like, which means that many CUs now face the same magnitude of

interest rate risk that banks have had for several years.

“Credit unions, historically speaking, haven’t had the same level of interest rate risk as banks because they have finite sources of customers and a finite source of products,” Musso says. “They didn’t hold a lot of longer term residential mortgages on the books. As those balance sheets become more like the banks’, interest rate risk becomes more of a risk they need to manage.”

CUs that have put more complex products on the books are the most vulnerable to interest rate risk and should pay the most attention to

the NCUA’s and FFIEC’s guidance, Musso says. Other CUs can consider the information a best practice.

“If I’m an old-line traditional credit union with retail deposits funding consumer loans, do I have interest rate risk? Yes. Do I have a lot? No,” Musso says. “But if my balance sheet is more like a bank’s, if I’m keeping a lot of wholesale funding with call optionality, if I’m going longer term in residential lending, then that interest rate risk needs to be managed.”

At first blush, the FFIEC guidance may look like a rehash of previous communiqués on interest rate risk, but the guidance includes important

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Six red flags for interest rate risk

There are warning signs of interest rate risk that the NCUA wants all examiners to catch. Here’s what examiners should be looking for at your next exam, according to the NCUA’s Examiner’s Guide:


- **High level of long-term assets to total assets.** A high concentration of assets with maturities longer than three years could reduce a CU’s ability to react to changing interest rates and expose it to increased interest rate risk.
- **High level of net long-term assets to total assets.** “Even a low net long-term asset ratio does not automatically eliminate the concern about high concentrations of long-term assets,” according to the Examiner’s Guide. “Even variable-rate loans have different terms and conditions for repricing that could potentially present” interest rate risk concerns. In this case, examiners will take a hard look

at indexes, margins, repricing intervals, caps and floors to make sure they provide sufficient protection against interest rate exposure.

- **Declining net interest margin.** Your examiner will take this as a sign that either asset yields are falling faster than the cost of funds, or the cost of funds is rising faster than asset yields. Expect examiners to address either scenario. Also, they’ll want to know if you have palatable options to improve the net margin.
- **Low level of net worth.** A low level of net worth or a level of net worth that doesn’t keep pace with share growth “weakens the credit union’s ability to absorb losses and react to changes,” the guide notes.
- **Rapid share growth or above-market dividends.** Share growth that outpaces the ability to generate sufficient net income can reduce the overall strength of a CU’s net worth, especially since above-market rates

tend to attract rate sensitive shares, according to the guide. CUs that invest these deposits in longer-term assets can end up with a mismatch of maturities for assets and liabilities.

- **Incremental mismatch of asset and liability maturities.** If a CU has gotten into more rate-sensitive deposits and then loaned those deposits in longer term, fixed-rate loans, the incremental additions to the balance sheet “may have significant interest rate risk exposure,” warns the guide.

The Examiner’s Guide concedes that many CUs will “have some degree of one or two of these elements,” and that they “may not result in safety and soundness concerns.” Nevertheless, CUs that exhibit a fair number of these warning signs, or CUs that demonstrate a particularly strong example of one or two, will attract examiner scrutiny and have to draft a plan to address the problems. 

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clarifications and new information, says Brad Olsen, an interest rate risk consultant with Olsen Research in Columbia, Md. In particular, the FFIEC “expanded on assumptions behind stress tests and on policy details that need to be in place. Policy is always an afterthought, but regulators don’t want it to be.”

Here’s what the FFIEC has to say about interest rate risk policy and practice:

Stress testing and modeling

CUs should include the following stress scenarios, FFIEC recommends:

- Instantaneous and significant changes in the level of interest rates (instantaneous rate shocks);
- Substantial changes in rates over time (prolonged rate shocks);
- Changes in the relationships between key market rates (i.e., basic risk); and
- Changes in the slope and the shape of the yield curve. (i.e., yield curve risk).

The guidance recommends that stress testing also include sensitivity analysis “to help determine which assumptions have the most influence on model output,” it says. It also wants CUs to determine “the conditions under which key business assumptions and model parameters break down or when IRR [interest rate risk] may be exacerbated by other risks or earning pressures.”

In addition, the guidance instructs CUs to get independent assessments on their interest rate risk program at least once a year. Smaller CUs that use vendors to provide their analytics will need to provide documentation that they’re using a credible third party. Larger CUs may need to per-


Interest rate risks that examiners focus on most

Stress Testing, including both scenario and sensitivity analysis, is key to proper interest rate risk management, the 2010 interagency policy statement warns. Assess a range of alternative future interest rate scenarios that will help you fully identify basis risk, yield curve risk and the risks of embedded options. Validate your IRR model with an independent review of its “logical and conceptual soundness,” the advisory states

In addition, the OCC in its handbook on interest rate risk notes four interest rate risks that examiners focus on most:

- Basis risk, when yields on assets and costs of liabilities come from different indices (prime rate vs.

LIBOR, for instance). This means they can move at different rates or in different directions;

- Yield curve risk (or “twist risk”), when the relationship between long- and short-term rates shifts quickly, sometimes to the point where investments pay less than the cost of funds;
- Re-pricing risk, when assets and liabilities re-price at different times and rates, as could happen with a variable rate loan funded with fixed rate deposits; and
- Option risk, when securities or loans allow for prepayment. The concern in a rising rate environment would be mortgage borrowers who are slow to repay low-rate loans. 

form an in-depth validation procedure for the underlying mathematics.

Large banks have been performing these types of analyses for some time, while smaller institutions, including CUs, have been taking data straight from the Call Report and trying to spin them into an adequate interest rate risk analysis, Musso says. The guidance says this isn’t good enough.

“A lot of banks and credit unions have been doing simplified interest rate analytics,” he says. “It’s nowhere near detailed enough. The guidance is basically telling banks and CUs to do a more thorough job.”

But, don’t get too carried away with stress testing, Olsen says. Regulators ask for it, but the value of running a lot of them may not be as high as you think.

“Definitely, if you have an unlimited amount of time on your hands, run 6, 7, 8 stress tests,” he says. “But unless you’re seeing a lot of growth, I don’t see how a lot of the other flavors of tests the regulators are asking for adds as much value... If you spend a lot of time [running multiple stress tests] you’ll probably get a slightly different result, but the difference won’t be a revelation.”

“The point of the [FFIEC] advisory is to be a wake-up call: ‘Do the fundamental tests,’” he adds.

Policy


The FFIEC guidance recommends a strict division of labor between management and the board, which is expected to understand interest rate risk in general as well as “their institu-


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tions' interest rate risk exposure" in particular. The guidance also recommends a yearly review of interest rate risk policy, procedures and risk limits.


Reporting

In keeping with recent NCUA guidance on concentration risk , the FFIEC guidance strongly suggests that any reports from management to the board on interest rate risk also communicate how any identified risk relates to the CU's risk limits.

"[Interest rate risk] reports distributed to senior management and the board should provide aggregate information and supporting detail," FFIEC notes. It should be "sufficient to enable them to assess the sensitivity of the institution to changes in market rates and important assumptions underlying the metrics used." 

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to look to the future."

In large part, what CUs decide to do will depend on their balance sheet projections. "If you are planning for a lot of growth on the balance sheet, rising rates will be great," Olsen says. "You'll grow the firm right along with them. If not, then rising rates aren't necessarily a bad thing. But credit unions still need to know if their current position is good enough to handle the rising rates and still have profitability. Credit unions need to worry about those things. Every time the economy changes, the model changes." 


Vendors are OK, but you need to understand the reports

It's fine to use a third party vendor to manage your interest rate risk analytics, but the board and management will need to understand the analysis and assumptions behind it, according to the FFIEC guidance.

"Existing interagency and international guidance identifies the board of directors as having the ultimate responsibility for the risks undertaken by an institution" – including interest rate risk (IRR), states the guidance. "As a result, the regulators remind boards of directors that they should understand and be regularly informed about the level and trend of their institutions' IRR exposure."

But, be careful: If you use a vendor,

make sure to hold your vendor accountable for the services and data they provide. Don't accept a report and nothing else. Your vendor should be willing to report to the board and put the report in context, says Don Musso, a financial analyst with FinPro of Liberty Corner, N.J.

"This is essential," he says. "You can't have an outsider produce a report and assume that that's good enough. You really need to have someone come in and explain what the report is telling you, what the risks are, and how the credit union is going to mitigate them." 

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