

## How to Assure Examiners Your IRR is Being Managed Effectively

### Part 1

By Dennis Child

Effective Interest Rate Risk management models should serve several purposes for credit unions: (1) they should be used by management and boards to assure changes in interest rates will not dramatically harm the credit union; (2) they should be integrated into the credit union's short and long term planning; (3) they should help assure regulators that management is complying with all regulatory expectations in terms of risk management – particularly Interest Rate Risk (IRR).

To assure examiners that a credit union is in compliance with IRR regulations, credit union managers need to be able show that their credit union:

- 1- Is using an independently validated IRR measurement system
- 2- Has management and a board that is trained in how their IRR model works and is using it effectively
- 3- Consistently applies the IRR model in on-going operations and planning

Many credit union managers have difficulty understanding and explaining their respective IRR model. Interest Rate Risk concepts and models use stochastic methodology but managers should be able to answer examiners' basic questions as to how their model works and why it complies with regulations. Sadly, examiners sometimes are attached to one particular IRR model and may have difficulty understanding IRR models that are different from what they have been indoctrinated in. So, let's start with the basics: (1) IRR is the risk to earnings and capital arising from movement in interest rates; (2) IRR arises from the difference between the timing of rate changes and the timing of cash flows; (3) in credit unions, the primary issue driving IRR is their long-term loans or long term investments. Managers and examiners understand these basics of IRR. What drives much of the disagreement between managers and examiners is the proper IRR model that a credit union should use. NCUA regulations are clear – there is no one IRR model that should be used to meet regulatory IRR requirements. Friction between examiners and managers is exacerbated when managers cannot effectively explain how their IRR model works.

Indeed, there is more than one IRR measurement model that a credit union can use. Unfortunately, many examiners are still steeped in the belief that proper IRR modeling should be based on Net Economic Valuation (NEV). Dr. Randy Thompson of TCT Risk Solutions LLC, many other financial institution experts, and this author have long held that NEV is an ineffective model for credit unions to use to manage Interest Rate Risk. A far better IRR model is based on Earnings at Risk (EAR). NEV or Value at Risk calculates the "liquidation value" of the balance sheet to be applied in the event of the sale of an institution. EAR calculates the "on-going concern" value of the income statement. EAR is an

operational measure and is far superior to NEV as it applies to credit unions (more on EAR in a later article).

NEV has many weaknesses when used to measure IRR risk in credit union operations. NEV applies a present value calculation against future cash flows to: (1) discount the value of assets; (2) discount the value of liabilities; then (3) subtracts the value of liabilities from the value of assets to arrive at Net Economic Value (sometimes erroneously referred to as Net Equity Value). Conceptually, this is the liquidation value of a financial institution. NEV is an effective concept when used in some financial applications, but it is a poor measure of a credit union's IRR. NEV requires: (1) maturities of assets and liabilities; (2) market prices of assets and liabilities; and (3) applicable discount rates to use when valuing assets and liabilities. One should easily be able to see the shortcomings trying to apply NEV to a credit union: (1) there are no maturities in non-maturity deposits (so, many NEV models and regulators guess); (2) there is no market price for checking accounts or savings accounts (again, many NEV models and regulators guess); (3) there is no market where one can "purchase" a credit union's core deposit accounts; so (4) there is no way to establish a discount rate where there is no market place. Since so much of NEV is based on estimations and guesses for establishing discount rates and market prices, NEV is a questionable model at best to use when it comes to determining a credit union's IRR exposure.

Showing examiners the weaknesses in NEV is the first step in explaining why a credit union has chosen to use EAR or some other method instead as its IRR model. In our next article, we will explain the concepts behind EAR, why it is superior as a measure of a credit union's IRR, and how to effectively explain the EAR model to examiners.

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