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∞ **ALM 101** ∞

**AN INTRODUCTION TO
INTEREST RATE RISK (IRR)**



∞ ALM 101 ∞

AN INTRODUCTION TO INTEREST RATE RISK (IRR)

PRESENTED BY
MARK H. SMITH



∞ **SESSION 4** ∞

**ANALYZING THE
BALANCE SHEET**

**FOR INTEREST
RATE RISK
(IRR)**



SESSION 4

OBJECTIVE

Learn to identify and evaluate the components in the balance sheet which expose the credit union to IRR.

IDENTIFYING RATE-SENSITIVE AND NONRATE-SENSITIVE ASSETS AND LIABILITIES



- ❖ The first step in identifying IRR is to determine which assets, shares and liabilities are sensitive to changes in interest rates.
- ❖ For those that are considered rate sensitive, we will need to make estimates and allow for their behavior as we discuss interest rate shocks.
- ❖ For those that are not rate sensitive or are not impacted by changes in interest rates, we can safely ignore their behavior when interest rates change.



❧

SAMPLE

CREDIT UNION

BALANCE SHEET

12/31/XX
❧

Loans	Balance (Thousands)
Total loans	\$ 17,000
Total investments	11,000
Total other assets	2,000
TOTAL ASSETS	\$ 30,000
Liabilities	\$ 500
Shares	18,000
Member CDs	8,500
Capital/net worth	3,000
LIABILITIES AND	
NET WORTH	\$ 30,000

CLASSIFYING LOANS FOR OPTIONALITY



- ❖ **Separate fixed-rate and variable-rate loans**
- ❖ **Use collateral to identify loans with potential for optionality**
- ❖ **Group into classes based on contract maturity**



❧ **SAMPLE CREDIT UNION** ❧

**Loans Classified
for Optionality**

Loans	Balance (Thousands)
Real estate 30 yr. fixed-rate	\$ 5,000
Real estate 10 yr. fixed-rate	2,000
Heloc variable-rate	2,000
Secured loans fixed-rate	3,000
Unsecured loans fixed-rate	3,000
Credit card fixed-rate	2,000
Total Loans	\$ 17,000

CLASSIFYING VARIABLE-RATE LOANS

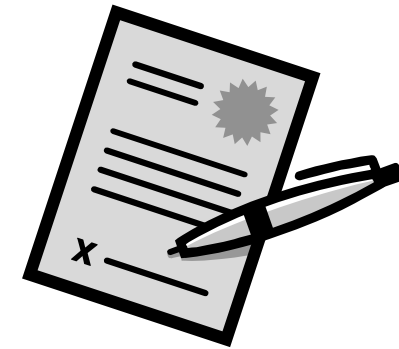
Because variable-rate loans are usually at or near market rate, optionality holds a much lower factor. Following are factors to consider:

- ❖ **Index**—should be short-term
- ❖ **Ceilings**—limit maximum rate
- ❖ **Interval Cap**—maximum change in a period
- ❖ **Repricing Interval**—month, quarter, annual, etc.
- ❖ **Floor**—difficult to enforce
- ❖ **Hybrid**—more complex; must break down to basic part

Optionality Exception: Borrowers may opt for fixed-rate loans if rates increase

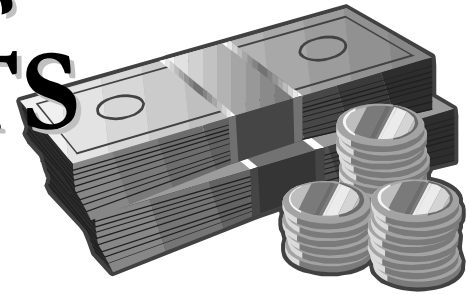
INVESTMENT OPTIONALITY

Typically, investment optionality is based on contracts



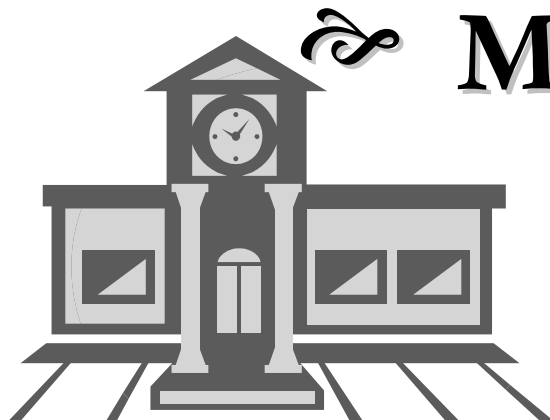
- ❖ **Calls—only if in contract**
- ❖ **Accounting for underlying securities—pool-type securities, such as mortgage backs or mutual funds, take on the characteristics of the underlying securities**
- ❖ **Miscellaneous investments—CUSO and placements such as a Premium Stabilization are not classified as investments; same for NCUSIF**

CASH AND CASH EQUIVALENTS



While there are circumstances where cash and cash equivalents may be considered rate sensitive, for purposes of this training, and because it is effectively correct, we will assume that cash and cash equivalents are being effectively managed and maintained at the lowest possible level. Given those circumstances, cash and cash equivalents will not be considered rate sensitive.

FIXED ASSETS AND MISCELLANEOUS LIABILITIES



Fixed assets, miscellaneous assets, and miscellaneous liabilities typically are not impacted by interest rate issues, and therefore will not be considered rate sensitive.



BORROWED FUNDS

- ❖ **Short-Term**—Typically borrowed from a corporate credit union and almost always will carry a market daily rate. Therefore, they are highly rate sensitive.
- ❖ **Long-Term**—Although not common, some credit unions do carry long-term debt.



SHARE CERTIFICATES OF DEPOSIT (CDs)



❖ **Maturity**—Share CDs effectively, for most credit unions, are the only savings relationships that carry a maturity date. All other savings relationships usually fall into the category of nonmaturity shares (NMS).

❖ **Early withdrawal penalties**—Early withdrawal penalties are essential in differentiating CDs from other types of shares. Without early withdrawal penalties, CDs or share CDs would effectively be no different than other shares.



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SHARE CERTIFICATES OF DEPOSIT (continued)



❖ **Early withdrawal risk**—Should rates go up rapidly, it is conceivable that members may reach a point where it is to their advantage to accept the early withdrawal penalty and reprice certificates prior to the maturity date. These are most vulnerable when rates are low.

❖ **Short-term vs. Long-term**—Typically, credit union members are short-term oriented. Most credit unions see all or almost all CDs mature within one year and see very little demand for CDs of a greater maturity.



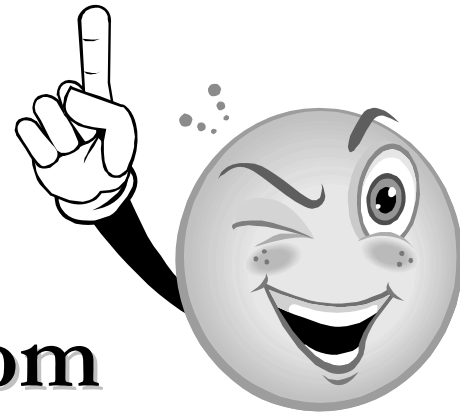
SESSION 4.15

SESSION 4 SUMMARY

- ❖ Identify rate-sensitive assets and liabilities
- ❖ Classify the rate-sensitive assets and liabilities for optionality
 - Long-term, fixed-rate loans carry the highest level of optionality
 - Variable-rate loans carry much less optionality—may be near zero, depending on terms
 - Investments are contractual agreements which don't carry a lot of optionality, except for pool-type securities
 - Cash and cash equivalents are usually not rate sensitive
 - Fixed assets are not rate sensitive
 - Short-term borrowed funds are rate sensitive
 - Longer-term borrowings are rate sensitive
 - CDs are rate sensitive

**We at Mark H. Smith Inc.
wish you success**

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