



Board of Directors Training – Investment Management

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Agenda

- General Duties of Directors
- What a Director Should Know
- Risks Found in Credit Unions
- Basic Financial Skills Required
- Timetable for Acquiring Financial Skills
- Management of a Credit Union
- Duties of Credit Union Directors
- Investment Management
- Interest Rate Risk

General Duties of Directors

1. The board of directors is responsible for the general direction and control of a federal credit union. The board may delegate operational functions to management, but not the responsibility for the credit union's direction.

2. A director must carry out his or her duties in good faith, in a manner reasonably believed to be in the best interests of the membership, and with such care, including reasonable inquiry, as an ordinarily prudent person in a like position would use under similar circumstances.

General Duties of Directors

3. A director must administer the affairs of the credit union fairly and impartially and without discrimination in favor of or against any particular member.

4. A director must have at least a working familiarity with basic finance and accounting practices, including the ability to read and understand the credit union's balance sheet and income statement and the ability to ask, as appropriate, substantive questions of management and auditors.

General Duties of Directors

5. A director must direct the operations of the federal credit union in conformity with the Federal Credit Union Act, NCUA's Rules and Regulations, other applicable laws, and sound business practices.

6. A director may rely on information prepared or presented by employees or consultants the director reasonably believes to be reliable and competent and who merit confidence in the particular functions performed.

What a Director Should Know

A director must understand the specific activities in which his or her credit union engages. In particular, a director must understand not only how these activities generate revenue for the credit union but also, and perhaps most importantly, the various risks associated with these activities that could lead to financial loss.

Directors must understand the internal control structures at the credit union that limit and control these risks.

What a Director Should Know

At a minimum, a director should be able to examine the credit union's balance sheet, income statement and be able to answer the following questions:

1. What does this line item mean?
2. Why is it important to the credit union?
3. Is the value of the line item changing over time? If so, what does that change (either positive or negative) mean?
4. Is the change important to the credit union?

Risks Found in Credit Unions

It is essential that directors understand the risks found in credit unions.

- credit
- liquidity
- interest rate
- compliance
- strategic
- transaction
- reputation risk

Basic Financial Skills Required

- The key measure of the credit union's success or failure is its financial statements. As such, a director must understand these financial statements to participate in a meaningful manner in the direction and control of the institution.
- To be an effective director, an individual must have a certain base level of financial skills, consistent with the size and complexity of the credit union operation they serve.
- At a minimum, directors must have the ability to read and understand the credit union's balance sheet and income statement. If directors do not have the requisite skills when elected or appointed, they must obtain these skills in a timely manner.

Timetable for Acquiring Financial Skills

NCUA understands that directors are, generally, uncompensated volunteers who have other important demands that compete for their time.

The decision to serve as a director, however, is a commitment which includes understanding the financial statements, risks and controls of the credit union so as to properly exercise authority over the credit union's direction.

Directors without the requisite financial skills will have six months from the date of election or appointment to acquire the enumerated skills.

Management of a Credit Union

“While the board may delegate execution of operational functions (to management), the ultimate responsibility for direction and control is not delegable.”

- The board may delegate management functions to senior management. The board, however, must directly exercise its authority to hire, fire, determine duties, set compensation, and discipline senior management.
- The board must also ensure that appropriate policies are in place to guide senior management in the execution of their duties.

Directors must ensure they are properly informed about what is happening in the credit union. Directors should not rely solely on the reports of senior management, but also consider the reports of the supervisory committee and internal and external auditors, other employees, and consultants reporting directly to the BOD.

Duties of Credit Union Directors

“ Director must carry out his or her duties in good faith, in a manner reasonably believed to be in the best interests of the membership of the credit union, and with such care, including reasonable inquiry, as an ordinarily prudent person in a like position would use under similar circumstances.”

- Directors must always focus on the best interests of the membership as a whole
- A credit union’s primary purpose is not to seek the biggest possible profit or return on assets (ROA); nor is it appropriate to seek asset growth just for the sake of growth.
- The primary purpose of a credit union is to provide quality, low cost financial services that the members need.

Investment Management

The investment portfolio serves as an important source of liquidity and can represent a substantial portion of a credit union's assets. Likewise, investment income can serve as an important source for meeting a credit union's operating expenses, dividend payments, and reserve requirements. Thus, the examiner's assessment of management's ability to invest prudently is an important part of the examination.

The investment area affects all seven risks found in credit union operations – credit, interest rate, liquidity, transaction, compliance, strategic, and reputation.

The key investment references for this chapter are *NCUA Rules and Regulations* §703, IRPS 98-02, and related Guidance Papers.

Assessments the Board Must Make

- Do we have sufficient expertise & understanding?
 - Do we have the expertise we need? Is education needed?
- What will our process be?
 - Policies and Procedures
 - Management
 - Measurement systems
 - Reporting
- How restrictive will we be in our policies?
 - Risk tolerance
- How will we stay on top of things?
 - Board report content and frequency of review

Investment Management

Examination Objectives

- Determine adequacy of the credit union's investment policy, procedures, and internal controls
- Assess legality of investments and compliance with related regulations, accounting procedures, and other guidelines
- Evaluate suitability of the investment portfolio in relation to the credit union's business plan, asset-liability management (ALM) strategies, liquidity, and net worth position
- Determine fair value of the investment portfolio and the effect of realized or potential losses from investment transactions on the credit union's earnings and capital position
- Review correction of investment-related problems by management

Sample Policies

Examination Objectives

- Determine adequacy of the credit union's investment policy, procedures, and internal controls
- Assess legality of investments and compliance with related regulations, accounting procedures, and other guidelines

The screenshot shows the myVining Sparks website interface. At the top, there is a navigation bar with links for Company, Join a Meeting, Help, and Log Out. Below the navigation bar, there is a main menu with categories: MARKET PLACE, ECONOMIC & MARKET DATA, EDUCATION & RESOURCES, MY REPORTS, and MY PORTFOLIO. On the right side of the page, there is a profile section for C. Lee Chandler, Senior Vice President, with contact information: 800-786-1245 | Email | Info. Below the main menu, there are three sections: Policies/Regulatory, Education & Resources, and Liquidity Policy. Each section contains links to various documents and tables.

Policies/Regulatory

- Asset/Liability Policy
 - Policy
 - Table 1
- Investment Policy
 - Policy
 - Investment Policy Table
 - Investment Policy Changes for Other-than-temporary Impairment
- Liquidity Policy

Education & Resources

- ▶ Webinar Archive
- ▶ Publication Archive
- ▶ Policies/Regulatory
- ▶ 2013 Credit Union Forum
- ▶ 2014 Credit Union Forum
- ▶ 2015 Credit Union Forum

Performance Profile Report

Evaluate suitability of the investment portfolio in relation to the credit union's business plan, asset-liability management (ALM) strategies, liquidity, and net worth position

| | Your Portfolio | VS Bond Accounting Statistics by Quartile Wtd. Avg. ¹ | | | | | Median |
|---|----------------|--|---------|--------|--------|---------|--------|
| | | 1 | 2 | 3 | 4 | | |
| Yield On Investments | | | | | | | |
| Yield On Investments ² | 2.26% | 2.28% | 1.88% | 1.63% | 1.34% | 1.72% | |
| Portfolio Allocation | | | | | | | |
| Treasuries | 0.00% | 0.00% | 0.49% | 2.38% | 1.96% | 0.00% | |
| CDs | 0.61% | 2.43% | 2.11% | 7.30% | 13.08% | 0.40% | |
| Agencies | 4.84% | 10.20% | 13.37% | 16.50% | 46.63% | 9.36% | |
| MBS Fixed | 14.06% | 21.86% | 21.09% | 25.52% | 17.68% | 15.68% | |
| SBA Fixed | 34.54% | 10.28% | 3.01% | 2.83% | 1.00% | 0.00% | |
| ARM | 9.83% | 15.68% | 15.37% | 16.57% | 8.23% | 10.08% | |
| SBA Floating Rate | 36.13% | 13.11% | 12.35% | 7.77% | 4.28% | 0.00% | |
| Agency CMO | 0.00% | 18.96% | 24.47% | 14.39% | 6.02% | 0.80% | |
| Private CMO | 0.00% | 0.32% | 2.18% | 0.07% | 0.05% | 0.00% | |
| Asset-Backed, Other Amortizing | 0.00% | 0.42% | 1.86% | 4.34% | 0.90% | 0.00% | |
| Municipals | 0.00% | 6.70% | 3.13% | 1.86% | 0.13% | 0.00% | |
| Corporates, Other Non-Amortizing | 0.00% | 0.03% | 0.59% | 0.47% | 0.03% | 0.00% | |
| Price Volatility | | | | | | | |
| Down 300 | 1.42% | 2.45% | 1.62% | 1.63% | 1.32% | 1.45% | |
| Down 200 | 1.76% | 2.61% | 1.71% | 1.71% | 1.36% | 1.55% | |
| Down 100 | 1.73% | 2.27% | 1.60% | 1.62% | 1.34% | 1.57% | |
| Base | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | |
| Up 100 | -2.75% | -3.28% | -2.46% | -2.18% | -2.00% | -2.34% | |
| Up 200 | -5.73% | -6.93% | -5.30% | -4.60% | -4.21% | -4.98% | |
| Up 300 | -8.71% | -10.66% | -8.27% | -7.11% | -6.47% | -7.76% | |
| Up 400 | -11.58% | -14.33% | -11.27% | -9.66% | -8.72% | -10.48% | |
| 2-Year Cashflow Principal (As % Total Portfolio) | | | | | | | |
| Down 300 | 49.26% | 50.13% | 54.30% | 54.99% | 68.34% | 58.79% | |
| Down 200 | 46.40% | 49.13% | 53.83% | 54.67% | 68.22% | 58.06% | |
| Down 100 | 41.42% | 43.82% | 49.23% | 50.45% | 65.72% | 52.96% | |
| Base | 32.23% | 34.33% | 40.73% | 43.24% | 60.40% | 42.75% | |
| Up 100 | 23.94% | 22.61% | 29.39% | 36.33% | 45.34% | 32.85% | |
| Up 200 | 22.05% | 20.37% | 26.77% | 34.30% | 43.48% | 29.80% | |
| Up 300 | 20.97% | 19.13% | 25.31% | 33.05% | 42.44% | 27.97% | |

Performance Profile Report

Evaluate suitability of the investment portfolio in relation to the credit union's business plan, asset-liability management (ALM) strategies, liquidity, and net worth position

BALANCE SHEET COMPONENT GROWTH

| | YE2012 | YE2013 | YE2014 | YE2015 | 1Q2016 |
|------------------------|---------|---------|---------|---------|---------|
| Assets | 228,847 | 252,460 | 298,628 | 334,845 | 341,359 |
| Change in Volume | 16,764 | 23,613 | 46,168 | 36,217 | 6,514 |
| Percentage Change | 7.90% | 10.32% | 18.29% | 12.13% | 1.95% |
| Loans | 110,241 | 145,237 | 200,512 | 241,744 | 253,793 |
| Change in Volume | 2,269 | 34,996 | 55,275 | 41,232 | 12,049 |
| Percentage Change | 2.10% | 31.74% | 38.06% | 20.56% | 4.98% |
| Cash on Dep. and Invs. | 102,968 | 91,135 | 79,048 | 74,388 | 63,120 |
| Change in Volume | 9,298 | -11,833 | -12,087 | -4,660 | -11,268 |
| Percentage Change | 9.93% | -11.49% | -13.26% | -5.90% | -15.15% |

EARINGS TRENDS

| | YE2012 | YE2013 | YE2014 | YE2015 | 1Q2016 |
|-----------------------|--------|--------|--------|--------|--------|
| Net Interest Margin | 3.20% | 3.17% | 3.93% | 4.27% | 4.52% |
| Return on Avg. Assets | 0.45% | 0.63% | 0.39% | 0.52% | 0.46% |
| Return on Avg. Equity | 3.47% | 4.70% | 3.24% | 4.87% | 4.59% |

CAPITAL RATIOS

| | YE2012 | YE2013 | YE2014 | YE2015 | 1Q2016 |
|------------------|--------|--------|--------|--------|--------|
| Capital/Assets | 14.95% | 13.18% | 12.19% | 11.50% | 11.54% |
| Net Worth/Assets | 13.66% | 12.98% | 11.33% | 10.59% | 10.50% |

12 MONTH ASSET CASHFLOW

| | Y1 Port. CF | Est. Loan CF ¹ | Liquid Funds ² | Total Liquidity | Liquidity/Assets |
|----------|-------------|---------------------------|---------------------------|-----------------|------------------|
| Down 300 | 16,652 | 128,501 | 29,386 | 174,539 | 52.13% |
| Down 200 | 15,736 | 113,121 | 29,386 | 158,243 | 47.26% |
| Down 100 | 13,786 | 103,864 | 29,386 | 147,036 | 43.91% |
| Base | 8,810 | 94,747 | 29,386 | 132,943 | 39.70% |
| Up 100 | 7,956 | 89,335 | 29,386 | 126,677 | 37.83% |
| Up 200 | 7,641 | 86,034 | 29,386 | 123,061 | 36.75% |
| Up 300 | 7,486 | 85,123 | 29,386 | 121,995 | 36.43% |
| Up 400 | 7,394 | 85,123 | 29,386 | 121,903 | 36.41% |

Performance Profile Report

Evaluate suitability of the investment portfolio in relation to the credit union's business plan, asset-liability management (ALM) strategies, liquidity, and net worth position

| INTEREST RATE RISK SUMMARY | | | | | | | |
|---|----------|----------|---------|---------|---------|---------|---------|
| | -300 | -200 | -100 | Base | +100 | +200 | +300 |
| Period-End Balance Sheet | | | | | | | |
| Total Assets | 334,845 | 334,845 | 334,845 | 334,845 | 334,845 | 334,845 | 334,845 |
| Total Liabilities | 301,195 | 301,195 | 301,195 | 301,195 | 301,195 | 301,195 | 301,195 |
| Members' Equity | 33,650 | 33,650 | 33,650 | 33,650 | 33,650 | 33,650 | 33,650 |
| Liabilities and Members' Equity | 334,845 | 334,845 | 334,845 | 334,845 | 334,845 | 334,845 | 334,845 |
| Economic Value | | | | | | | |
| Economic Value of Assets | 344,045 | 342,612 | 339,264 | 334,413 | 328,686 | 322,837 | 317,347 |
| Economic Value of Liabilities | 316,274 | 314,736 | 304,722 | 294,090 | 286,746 | 279,959 | 273,491 |
| Net Economic Value (NEV) | 27,771 | 27,876 | 34,542 | 40,323 | 41,940 | 42,877 | 43,856 |
| \$ Change in NEV | (12,552) | (12,447) | (5,781) | 0 | 1,617 | 2,554 | 3,533 |
| % Change in NEV | -31.13% | -30.87% | -14.34% | 0.00% | 4.01% | 6.33% | 8.76% |
| Income Statement | | | | | | | |
| Interest Income | 16,047 | 17,004 | 17,797 | 18,522 | 19,283 | 20,013 | 20,747 |
| Interest Expense | 1,619 | 1,619 | 1,634 | 1,986 | 2,841 | 3,762 | 4,682 |
| Net Interest Income (NII) | 14,428 | 15,384 | 16,162 | 16,536 | 16,442 | 16,251 | 16,065 |
| \$ Change in NII | (2,108) | (1,152) | (374) | 0 | (95) | (286) | (471) |
| % Change in NII | -12.75% | -6.97% | -2.26% | 0.00% | -0.57% | -1.73% | -2.85% |
| Provision | 3,677 | 3,677 | 3,677 | 3,677 | 3,677 | 3,677 | 3,677 |
| Non-Interest Income | 10,206 | 10,206 | 10,206 | 10,206 | 10,206 | 10,206 | 10,206 |
| Non-Interest Expense | 19,886 | 19,886 | 19,886 | 19,886 | 19,886 | 19,886 | 19,886 |
| Net Income | 1,071 | 2,028 | 2,806 | 3,180 | 3,085 | 2,894 | 2,708 |
| ROA | 0.32% | 0.61% | 0.84% | 0.95% | 0.92% | 0.86% | 0.81% |
| ROE | 3.18% | 6.03% | 8.34% | 9.45% | 9.17% | 8.60% | 8.05% |
| Yields | 5.08% | 5.39% | 5.64% | 5.87% | 6.11% | 6.34% | 6.57% |
| Rates | 0.55% | 0.55% | 0.55% | 0.67% | 0.96% | 1.27% | 1.58% |
| Spread | 4.54% | 4.84% | 5.09% | 5.20% | 5.15% | 5.08% | 5.00% |
| Margin | 4.57% | 4.87% | 5.12% | 5.24% | 5.21% | 5.15% | 5.09% |
| Liquidity | | | | | | | |
| Asset Cashflows Plus Borrowing Capacity | 207,397 | 161,715 | 150,508 | 136,415 | 130,149 | 126,533 | 125,467 |
| Liabilities Cashflow | 105,105 | 105,105 | 105,105 | 105,105 | 105,339 | 105,375 | 105,553 |
| 1-Year Static Coverage Excess/(Deficit) | 102,292 | 56,611 | 45,403 | 31,310 | 24,810 | 21,158 | 19,914 |
| Coverage Ratio | 1.97 | 1.54 | 1.43 | 1.30 | 1.24 | 1.20 | 1.19 |
| Total Borrowing Capacity | 32,858 | 32,858 | 32,858 | 32,858 | 32,858 | 32,858 | 32,858 |

Performance Profile Report

Determine fair value of the investment portfolio and the effect of realized or potential losses from investment transactions on the credit union's earnings and capital position

| Yields Down 300 Basis Points | | | | Yields Up 300 Basis Points | | | |
|---|--------------------------------|------------------|-----------------------------------|--------------------------------|------------------|-----------------------------------|-----|
| Rate Sensitive Assets | Balance Sheet Gap ¹ | ECR ² | Income Statement Gap ³ | Balance Sheet Gap ¹ | ECR ² | Income Statement Gap ³ | |
| | A | B | AXB | | A | B | AXB |
| Loans | | | | | | | |
| Fixed Rate | 6,370 | 100% | 6,370 | 5,977 | 100% | 5,977 | |
| Floating Rate | 110 | 100% | 110 | 110 | 100% | 110 | |
| Fixed-Rate Securities (Principal Cashflows) | | | | | | | |
| CDs | 3,694 | 100% | 3,694 | 3,694 | 100% | 3,694 | |
| Securities (Floating Rate) | | | | | | | |
| Total Cash on Deposit | 2,423 | 100% | 2,423 | 2,423 | 100% | 2,423 | |
| Total Rate Sensitive Assets | 12,597 | | 12,597 | 12,204 | | 12,204 | |
| Rate Sensitive Liabilities | A | B | AXB | A | B | AXB | |
| Share Drafts (48%) | 3,309 | 10% | 331 | 3,309 | 10% | 331 | |
| Regular Drafts (42%) | 8,530 | 28% | 2,388 | 8,530 | 28% | 2,388 | |
| Money Market Shares (81%) | 8,750 | 52% | 4,550 | 8,750 | 52% | 4,550 | |
| Svgs<1yr: Share Certificates (95%) | 463 | 90% | 417 | 463 | 90% | 417 | |
| IRA/KEOGH Accounts <1yr (95%) | 2,056 | 80% | 1,645 | 2,056 | 80% | 1,645 | |
| Total Rate Sensitive Liabilities | 23,108 | | 9,331 | 23,108 | | 9,331 | |
| Rate Sensitive Gap (Assets - Liabilities) | -10,511 | | 3,266 | -10,904 | | 2,874 | |
| Total Assets | 33,338 | | 33,338 | 33,338 | | 33,338 | |
| Gap as a % of Total Assets | -31.53% | | 9.8% | -32.71% | | 8.62% | |
| Change in Net Interest Margin (\$) | | | -98 | | | 86 | |
| Change in Net Interest Margin (%) | | | -29% | | | .26% | |
| Net Interest Margin (%) | | | 2.84% | | | 2.84% | |
| % Change in Net Interest Margin | | | -10.35% | | | 9.11% | |

¹One Year Balance Sheet gap includes all balances that may change in rate in the next 12 months.

²The Earnings Change Ratio estimates the change in rate of a rate sensitive instrument per 100bp move in rates.

³In the Liability section, the default ECRs are in parentheses. If changed in column B, custom ECRs were applied.

Performance Profile Report

Determine fair value of the investment portfolio and the effect of realized or potential losses from investment transactions on the credit union's earnings and capital position

| | |
|-----------------------------|---------------|
| Portfolio Market Value | \$41,218,725 |
| Tax Rate | 0.00% |
| Assets ¹ | \$341,359,000 |
| Equity Capital ¹ | \$34,548,000 |

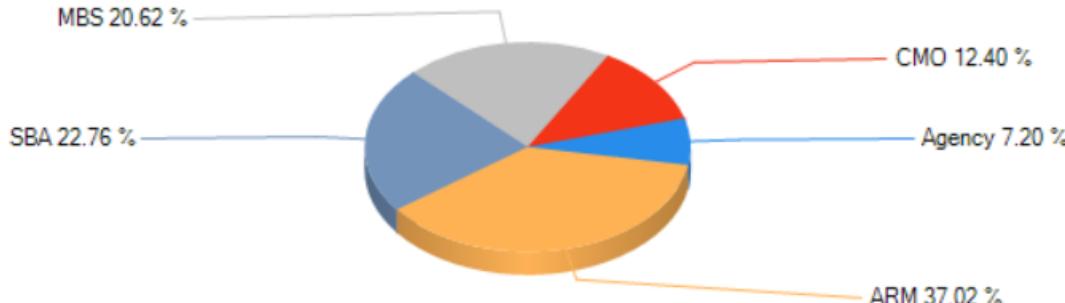
PORTFOLIO IMPACT - CAPITAL VALUE AT RISK - ALL BONDS

| | Price Volatility Pct | Gain Loss | Capital Tax Eff | Assets Tax Eff | Capital Ratio | Capital Pct Chg |
|----------|----------------------|---------------|-----------------|----------------|---------------|-----------------|
| Down 300 | 1.42% | \$903,392 | \$35,451,392 | \$342,262,392 | 10.36% | 1.67% |
| Down 200 | 1.76% | \$1,046,904 | \$35,594,904 | \$342,405,904 | 10.40% | 2.08% |
| Down 100 | 1.73% | \$1,034,872 | \$35,582,872 | \$342,393,872 | 10.39% | 2.05% |
| Base | 0.00% | \$320,039 | \$34,868,039 | \$341,679,039 | 10.20% | 0.00% |
| Up 100 | -2.75% | (\$813,684) | \$33,734,316 | \$340,545,316 | 9.91% | -3.25% |
| Up 200 | -5.73% | (\$2,042,653) | \$32,505,347 | \$339,316,347 | 9.58% | -6.78% |
| Up 300 | -8.71% | (\$3,268,465) | \$31,279,535 | \$338,090,535 | 9.25% | -10.29% |
| Up 400 | -11.59% | (\$4,455,160) | \$30,092,840 | \$336,903,840 | 8.93% | -13.70% |

Board Reporting for Investments

Review Investment Sector Allocations

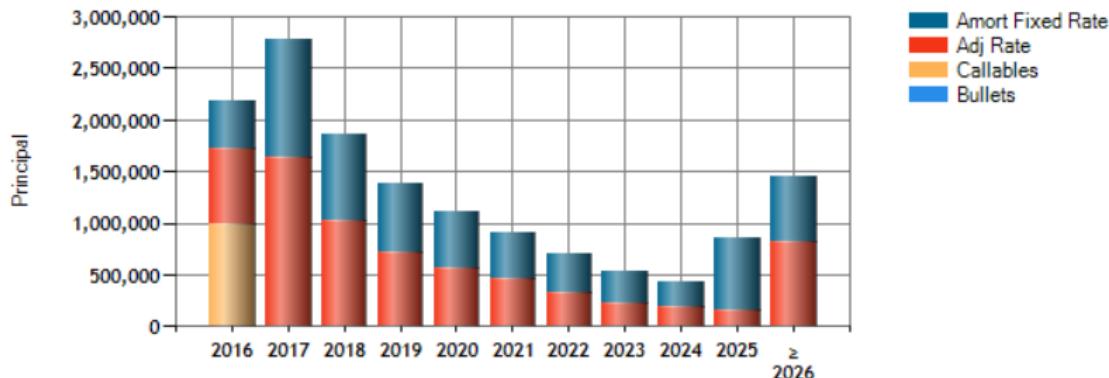
| Type | Book Yld | Count | Current | Gain / Loss |
|--------|--------------|-----------|-------------------|---------------|
| Agency | 1.71% | 4 | 1,000,000 | 8,999 |
| ARM | 1.40% | 14 | 5,144,077 | -11,239 |
| CMO | 1.42% | 4 | 1,722,894 | -16,811 |
| MBS | 1.97% | 6 | 2,865,659 | 36,609 |
| SBA | 2.28% | 5 | 3,163,056 | 36,306 |
| | 1.74% | 33 | 13,895,687 | 53,864 |



Board Reporting for Investments

Review Investment Cash Flows (in the base case and shocked rate scenarios)

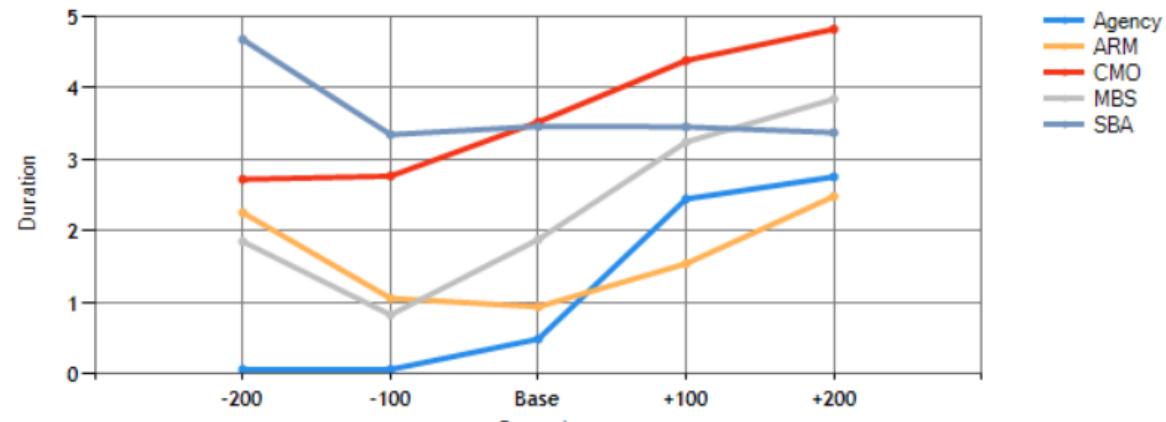
| Year | Bullets | Callables | Amortizing Adj. Rate | Amortizing Fixed Rate | Total |
|--------|-----------|-----------|----------------------|-----------------------|------------|
| 2016 | | 1,000,000 | 714,663 | 470,488 | 2,185,151 |
| 2017 | | | 1,639,264 | 1,129,740 | 2,769,004 |
| 2018 | | | 1,023,661 | 830,688 | 1,854,350 |
| 2019 | | | 728,913 | 648,161 | 1,377,074 |
| 2020 | | | 571,236 | 533,047 | 1,104,283 |
| 2021 | | | 462,133 | 444,318 | 906,451 |
| 2022 | | | 334,260 | 374,121 | 708,381 |
| 2023 | | | 235,735 | 292,357 | 528,092 |
| 2024 | | | 195,589 | 242,408 | 437,997 |
| 2025 | | | 164,025 | 684,769 | 848,794 |
| ≥ 2026 | | | 816,269 | 634,090 | 1,450,359 |
| | 1,000,000 | | 6,885,749 | 6,284,187 | 14,169,936 |



Board Reporting for Investments

Review Investment Duration

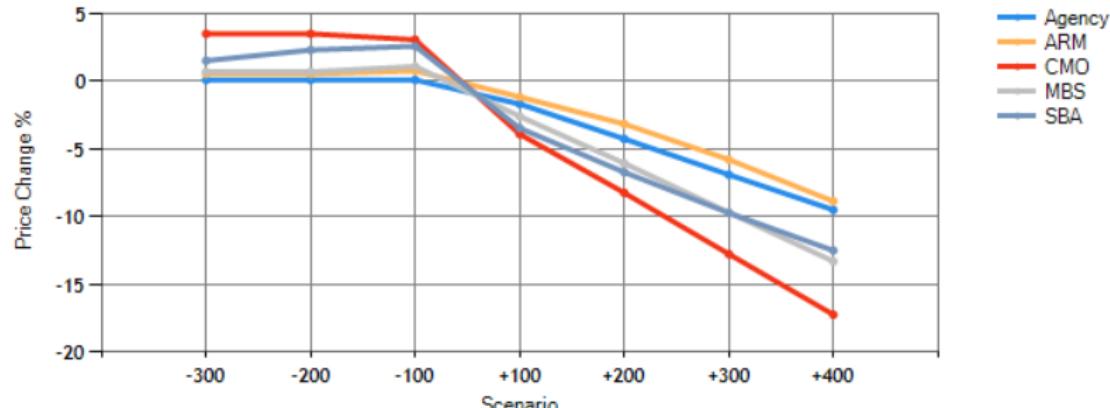
| Type | Book Yld | Count | Current | Gain / Loss | EFFECTIVE DURATION | | | | |
|--------|--------------|-----------|-------------------|---------------|--------------------|------------|------------|------------|------------|
| | | | | | -200 | -100 | Base | +100 | +200 |
| Agency | 1.71% | 4 | 1,000,000 | 8,999 | 0.1 | 0.1 | 0.5 | 2.4 | 2.8 |
| ARM | 1.40% | 14 | 5,144,077 | -11,239 | 2.3 | 1.1 | 0.9 | 1.5 | 2.5 |
| CMO | 1.42% | 4 | 1,722,894 | -16,811 | 2.7 | 2.8 | 3.5 | 4.4 | 4.8 |
| MBS | 1.97% | 6 | 2,865,659 | 36,609 | 1.8 | 0.8 | 1.9 | 3.2 | 3.8 |
| SBA | 2.28% | 5 | 3,163,056 | 36,306 | 4.7 | 3.3 | 3.5 | 3.5 | 3.4 |
| | 1.74% | 33 | 13,895,687 | 53,864 | 2.6 | 1.7 | 2.0 | 2.7 | 3.3 |



Board Reporting for Investments

Review Investment Price Volatility

| Type | Book Yld | Count | Current | Gain / Loss | PRICE CHANGE % | | | | | | |
|--------|--------------|-----------|-------------------|---------------|----------------|------------|------------|-------------|-------------|-------------|--------------|
| | | | | | -300 | -200 | -100 | +100 | +200 | +300 | +400 |
| Agency | 1.71% | 4 | 1,000,000 | 8,999 | 0.1 | 0.1 | 0.1 | -1.7 | -4.3 | -6.9 | -9.5 |
| ARM | 1.40% | 14 | 5,144,077 | -11,239 | 0.5 | 0.5 | 0.7 | -1.2 | -3.2 | -5.8 | -8.9 |
| CMO | 1.42% | 4 | 1,722,894 | -16,811 | 3.5 | 3.5 | 3.0 | -3.9 | -8.3 | -12.8 | -17.2 |
| MBS | 1.97% | 6 | 2,865,659 | 36,609 | 0.7 | 0.7 | 1.1 | -2.6 | -6.1 | -9.7 | -13.3 |
| SBA | 2.28% | 5 | 3,163,056 | 36,306 | 1.5 | 2.3 | 2.6 | -3.5 | -6.7 | -9.7 | -12.5 |
| | 1.74% | 33 | 13,895,685 | 53,864 | 1.1 | 1.3 | 1.5 | -2.4 | -5.3 | -8.4 | -11.7 |



Board Responsibilities for Investments

**Review
Portfolio
Activity**

**Review
Risk
Levels**

**Require
Policy / Risk
Limit
Compliance**

Specific Responsibilities

- Approve suitable securities list
- Approve pre-and post- purchase analysis procedures
- Approve risk limits

Board Responsibilities for Investments

- Annual review of policies and any updates or changes to policies
- Establishment of risk limits
- Setting policy limits and annual review of policy limits or changes to policy limits including limits for EAR, NEV, CAR, PVOL, duration, liquidity, and investment limits as a percentage of investments, assets, and /or capital
- Developing a list of approved investments and activities and prohibited investments and activities
- Purchase requirements including required documentation, segregation of duties and approval of transactions
- Review investment transactions – purchase and sale activity
- Internal control structure and audit review
- Approved broker list and annual review

NCUA Supervisory Priorities for 2016 - IRR



Interest rate risk (IRR) remains a key supervisory focus as interest rates have begun to rise. Rising rates may prove challenging for those credit unions that hold high concentrations of long-term assets funded with short-term liabilities.

ncua.gov/regulation-supervision/Pages/policy-compliance/resource-centers/interest-rate-risk.aspx

- NCUA is in the process of updating interest rate risk management supervisory guidance, which will be published in 2016.
- As part of this effort, NCUA field staff will transition to the updated IRR examination procedures over the course of 2016.
- The new procedures will improve the efficiency of reviews by focusing field staff resources on those credit unions with elevated levels of IRR and streamlining related exam procedures.

NCUA Supervisory Priorities for 2016 - IRR

IRR Working Group
E&I/ DCCM



Interest Rate Risk Supervision and Adding 'S' to CAMEL

NCUA Board Briefing
June 16, 2016

- The NCUA is replacing the 17/4 test, net long term asset ratio, and the SIRRT test with the NEV Supervisory Test.
- The NCUA is also setting standardized values for deposit premiums at 1% base and 4% up 300bps.
- Phased in over the next 6 months.

NEV Supervisory Test

Why a NEV Supervisory Test

1. Captures longer-term risk of embedded options
2. Capital-at-risk measure
3. Total-balance-sheet metric
4. Widely utilized in risk management
5. Superior to Call Report metrics (NLTA, SIRRT, 17/4)
6. Data exists in majority of larger institutions
7. NCUA can readily capture, archive and study
8. Better IRR review utility for small credit unions

NEV Supervisory Test

| Risk Level | Post-shock NEV | NEV Sensitivity (%) |
|------------|----------------|---------------------|
| Low | Above 7% | Below 40% |
| Moderate | 4% up to 7% | 40% to 65% |
| High | 2% up to 4% | 65% to 85% |
| Extreme | Below 2% | Above 85% |

Note: NCUA has made use of a NEV metric in the current Examiner's Guide since 2000 in Chapter 13

IRR Regulatory Focus Areas

- Setting policy limits for EAR, NEV, and Capital At Risk
- Rate shocks include +400bps
- Non parallel ramp and parallel shock scenarios
- Developing specific assumptions for your credit union
- Sensitivity analysis (stress testing of assumptions)
- Non-maturity share study
- Identification and modeling of surge in shares
- Back-testing model results
- Independent model validation (in house or third party)

Interest Rate Risk: EAR and NEV

| Standard Scenarios | | | Asset Growth: 0.00% | | Shift: Parallel | | Interval: Shock | | |
|---|---------|---------|---------------------|-----------|-----------------|--------|-----------------|---------|--|
| | | | | | | | | | |
| <i>Total Earning Assets EOM</i> 244,879 | | | | | | | | | |
| Year One | Dn 300 | Dn 200 | Dn 100 | Base Case | Up 100 | Up 200 | Up 300 | Up 400 | |
| Earnings At Risk | -15.01% | -9.08% | -2.76% | 8,667 | 1.87% | 0.53% | -3.66% | -10.32% | |
| Net Interest Margin | 3.00% | 3.21% | 3.43% | 3.53% | 3.60% | 3.55% | 3.40% | 3.17% | |
| Year Two | | | | | | | | | |
| Earnings At Risk | -31.54% | -20.38% | -7.48% | 8,883 | 5.06% | 6.85% | 4.98% | 0.82% | |
| Net Interest Margin | 2.49% | 2.75% | 3.28% | 3.60% | 3.83% | 3.94% | 3.90% | 3.79% | |

| Standard Scenarios | | | Asset Growth: 0.00% | | Shift: Parallel | | Interval: Shock | | |
|--|--------|------------------|---------------------|------------------|-----------------|-----------------|-----------------|---------------|------------------|
| | | | | | | | | | |
| <i>Economic Value of Equity</i> 32,873 | | | | | | | | | |
| Economic Value of Equity | 32,873 | 28,057 -6,028 | 26,339 -7,746 | 30,452 -3,634 | 34,085 | 35,911 1,825 | 36,147 2,062 | 34,695 610 | 31,458 -2,627 |
| NEV at Risk | | -17.68% | -22.73% | -10.66% | | 5.36% | 6.05% | 1.79% | -7.71% |

Interest Rate Risk: NCUA Guidance

| Chapter 13 NCUA Examiners Guide Sample Credit Union Policy Limits for IRR | | IRR Exposure | <u>Low</u> | <u>Moderate</u> | <u>High</u> |
|--|---|--|------------|-----------------|-------------|
| <u>Basis of Measurement</u> | <u>IRR Limit</u> | <u>Basis of Measurement</u> | | | |
| Gap: | beyond +/- 20 percent change in any given period, or cumulatively over 12 months | Gap: % change in any given period or cumulatively over 12 months | +/- 10% | +/- 10%-20% | >+/-20% |
| Earnings Simulation: NII | after shock change > 30 percent over any 12 month period | Earnings Simulation NII: after shock change over any 12-month period | < 20% | 20-30% | > 30% |
| NI | after shock change > 75 percent over any 12 month period | NI: after shock change over any 12-month period | < 40% | 40-75% | >75% |
| Asset Valuation: | after shock change in book value net worth > 50 percent <u>or</u> after shock value of net worth < 4 percent | Asset Valuation: after shock change in book value net worth <u>or</u> after shock value of net worth | < 25% | 25-50% | > 50% |
| NEV | after shock change in market value net worth > 50 percent <u>or</u> after shock value of net worth of < 4 percent | NEV: after shock change in market value net worth <u>or</u> after shock value of net worth | < 25% | 25-50% | > 50% |

Table 1

Table 2



Thank You

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