

CU Finance for Non-Financial Managers and Volunteers

Session 2

Financial Statement Analysis

By Tim Harrington, CPA



About Tim Harrington

22 years credit union experience

30 years business/consulting
experience

Consulted on nearly 1,000 credit
union projects

A regular speaker at CUNA and
League Conferences, speaking at
over 1,000 events

Former Chairman of the Board of
successful \$150 million dollar



Basic Financial Statements

- Balance Sheet or Statement of Financial Condition
- Income Statement
- Statement of Cash Flows

Balance Sheet

ASSETS

EARNING ASSETS

Loans

Investments

NON-EARNING ASSETS

Building, Equipment, etc.
NCUSIF Deposit

Other Assets

LIABILITIES & CAPITAL

MISCELLANEOUS LIABILITIES

SHARES

CAPITAL

Regular Reserves
Undivided Earnings

Income Statement

REVENUE

Loan Interest Income

Investment Interest Income

Fees

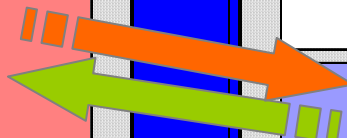
EXPENSES

Occupancy
Personnel
Provision for Loan Losses

COST OF FUNDS

Dividends Paid

NET INCOME or LOSS



Balance Sheet

ASSETS

EARNING ASSETS

Loans

Investments

NON-EARNING ASSETS

Building, Equipment, etc.
NCUSIF Deposit

Other Assets

LIABILITIES & CAPITAL

MISCELLANEOUS LIABILITIES

SHARES

CAPITAL

Regular Reserves

Undivided Earnings

Capital

Beginning Capital
Plus Revenues
Less Dividends Paid
Less P.L.L
Less Operating Costs

Ending Capital

Balance Sheet

ASSETS

EARNING ASSETS

Loans

Investments

NON-EARNING ASSETS

Building, Equipment, etc.
NCUSIF Deposit

Other Assets

LIABILITIES & CAPITAL

MISCELLANEOUS LIABILITIES

SHARES

CAPITAL

Regular Reserves

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Income Statement

REVENUE

Loan Interest Income

Investment Interest Income

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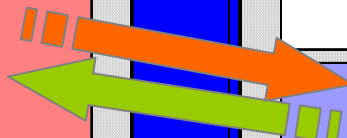
EXPENSES

Occupancy
Personnel
Provision for Loan Losses

COST OF FUNDS

Dividends Paid

NET INCOME or LOSS



Basic Building Blocks of Accounting

- Assets = What you have
- Liabilities = What you owe
 - Capital = What you own
 - Revenues = What comes in
 - Expenses = What goes out

Balance Sheet

ASSETS

EARNING ASSETS

Loans

Investments

NON-EARNING ASSETS

Building, Equipment, etc.
NCUSIF Deposit
PrePaid Expenses
Accrued Assets
Other Assets

LIABILITIES & CAPITAL

MISCELLANEOUS LIABILITIES

Accrued Liabilities

SHARES

CAPITAL

Regular Reserves
Undivided Earnings

Income Statement

REVENUE

Loan Interest Income

Investment Interest Income

Fees

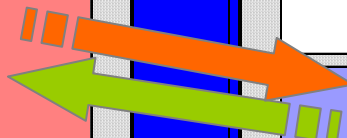
EXPENSES

Occupancy
Personnel
Provision for Loan Losses

COST OF FUNDS

Dividends Paid

NET INCOME or LOSS



Cash Basis

CASH BASIS

Record cash when it is received

Record expense when it is paid

The Cruelties of Accrual Accounting

ACCRUAL BASIS

Recognize expense **BEFORE** we pay the cash.

Why? Because we incurred the expense even if we don't pay for it yet.

Recognize income **BEFORE** we receive the cash.

Why? Because we earned it, even if we don't get the cash yet.

The Cruelties of Accrual Accounting

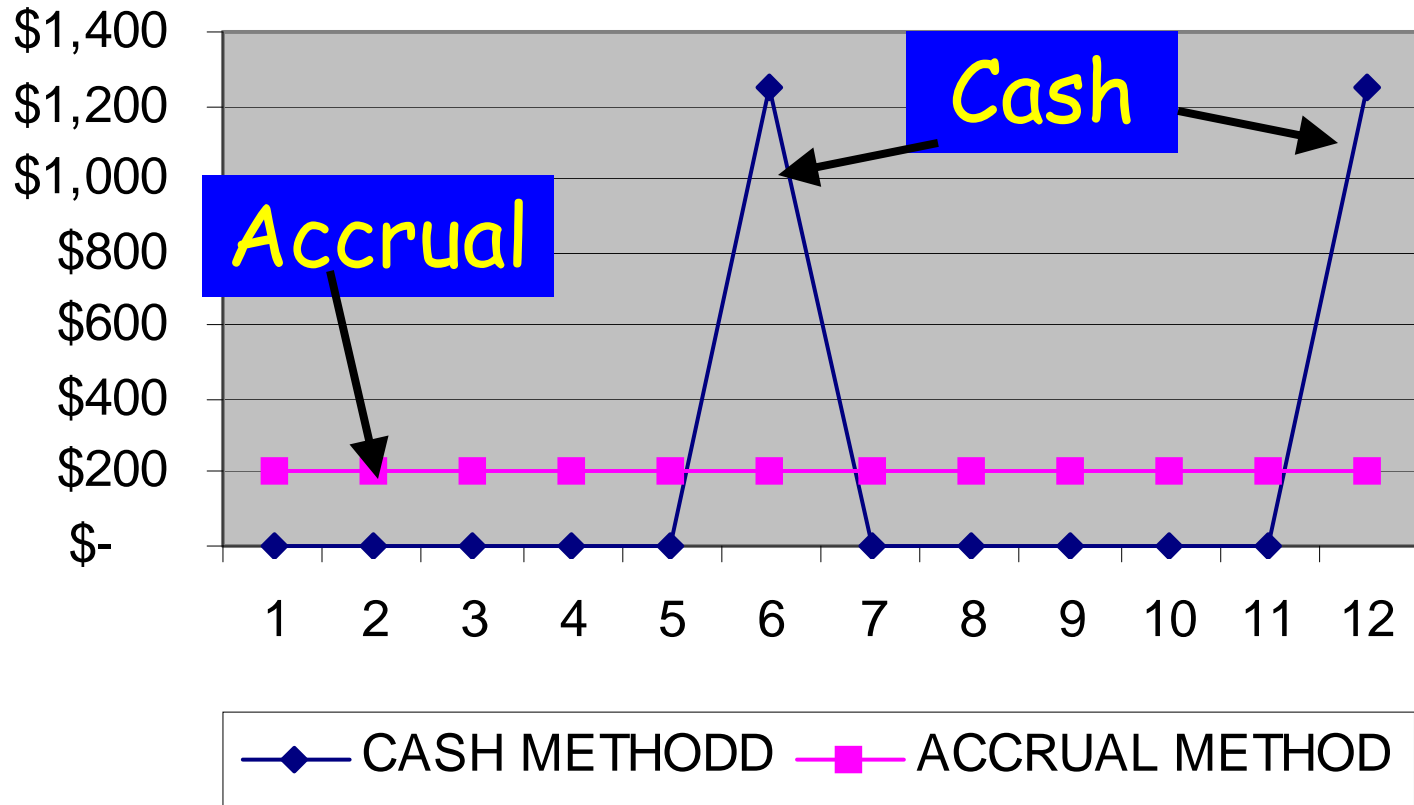
Example: CU invests in a \$100,000 CD that pays interest June and December

Cash basis: record income of \$1,250 in June and \$1,250 in December

Accrual basis: record income of \$208.33 each month

Net Profit Cash Vs Accrual

CASH VS ACCRUAL



The Cruelties of Accrual Accounting

Accrual basis shows when things were actually earned or actually owed, not when the cash changed hands

Accrual Method means we record something when we:

earn it

owe it

use it

Accrual

The Cruelties of Accrual Accounting

Accrual basis smoothes out the net income.

Our loans earn interest every day, not just when we get the payment in. We accrue a small amount of income each day.

Generally Accepted Accounting Principles

G.A.A.P.

Matching: We match an income or an expense to the period that is benefited by it.

An income when it is earned,

An expense when it is incurred.

Consistency: Use same accounting principles and techniques year to year for comparative purposes

Generally Accepted Accounting Principles G.A.A.P.

Conservatism: We will be cautious, understating rather than overstating our assets and overstating rather than understating our liabilities.

Historical Monetary Unit concept:
Values are reported in dollars that have not been affected by inflation

Prepaid Expenses

We Want to Join CUNA

We think its pretty neat to be a part of Credit Unions and get all those great benefits. We join CUNA.

Cost: \$1.20 per year
From January 1 to
December 31

CUNA

We pay the \$1.20 on January 1

Do we use up all the benefits on
January 1?

So we are going to use up the
benefits little-by-little during the
year.

Prepaid Expense

We pay for the benefit in advance of receiving the benefit

So we "Pre-pay" for the benefit

CUNA is going to benefit us little-by-little during the year, so we are going to use up our prepayment little-by-little

We call this a PREPAID EXPENSE

Prepaid Expense

The amount we "prepaid" is going to benefit future periods...kind of like a Fixed Asset

So we treat the original payment as an "asset" not an expense, not yet

Assets	LIABILITIES & CAPITAL
Cash <u>\$10.96</u>	
Fixed Assets \$12.00	
Accum. Deprec <u>(\$0.32)</u>	
Net F/A <u>\$11.68</u>	
Investment \$39.00 (in a bank)	SHARES \$198.90
Loan \$160.00	
Allowance <u>(\$5.00)</u>	
Net Loans <u>\$155.00</u>	Capital <u>\$17.74</u>
Total Assets <u>\$216.64</u>	Total Liabilities and Capital <u>\$216.64</u>

Assets	LIABILITIES & CAPITAL
Cash <u>\$9.76</u>	
Fixed Assets \$12.00	
Accum. Depre <u>(\$0.32)</u>	
Net F/A \$11.68	
Prepaid Exp \$1.20	
Investment \$39.00	SHARES \$198.90
Loan \$160.00	
Allowance <u>(\$5.00)</u>	
Net Loans <u>\$155.00</u>	Capital \$17.74
Total Assets <u>\$216.64</u>	Total Liabilities and Capital <u>\$216.64</u>

Record the Prepaid Expense

Capital Ratio
8.2%

CUNA Prepaid

We are going to use up 1/12th of the prepaid amount every month

$$\text{\$1.20} / 12 = \text{\$0.10 per month}$$

Using it up is called: Amortization

Income Statement 9th Month

Interest Income from Loans	\$3.20
Interest Income from Investment	<u>\$0.08</u>
Total Interest Income	\$3.28
Cost of Funds	<u>\$1.99</u>
Net Interest Margin	\$1.29
Operating Expenses (Deprec)	\$0.08
Provision for Loan Losses	\$0.00
"Used-up" Prepaid Expense	<u>\$0.10</u>
Net Profit	<u>\$1.11</u>



End
of 9th
month

Another
Contra-
Asset

Assets		LIABILITIES & CAPITAL	
Cash	\$11.05		
Fixed Assets	\$12.00		
Accum. Deprec	(\$0.40)		
Net F/A	\$11.60		
Prepaid Exp	\$1.20		
Amortized Ppd	(\$0.10)		
Net Ppd	\$1.10	SHARES	\$198.90
Investment	\$39.00		
Loan	\$160.00		
Allowance	(\$5.00)	Capital	\$18.85
Net Loans	\$155.00		
Total Assets	\$217.75	Total Liabilities and Capital	\$217.75

End
of 9th
month

Show
the net
amount →

Assets		LIABILITIES & CAPITAL	
Cash	\$11.05		
Fixed Assets	\$12.00		
Accum. Deprec	(\$0.40)		
Net F/A	\$11.60		
Prepaid Exp	\$1.10		
Investment	\$39.00	SHARES	\$198.90
Loan	\$160.00		
Allowance	(\$5.00)		
Net Loans	\$155.00	Capital	\$18.85
Total Assets	\$217.75	Total Liabilities and Capital	\$217.75

Who can name some other Prepaids?

Other Prepaids

Prepaid Insurance

Prepaid Bond

Prepaid Supplies

Prepaid League Dues

Prepaid Annual Meeting

Etc.

What if you incur an expense but don't have to pay it yet?

We have to have an audit every year.

The auditors come in at the end of the year, but the audit is for the whole year...from January 1 to December 31

When do we record the cost or the expense? When we incur it.
Monthly...little-by-little.

Accrued Expenses

We book it before we pay it.

So we owe it, we just haven't paid it

What do we call something we owe?

Accrued Expenses

We book it before we pay it.

So we owe it, we just haven't paid it

What do we call something we owe?

A Liability

Accrued Audit Expense

Your uncle, Arthur Anderson says he'll audit your books for \$2.40. He'll do the audit at the end of the year and won't charge you until after he is done.

But this audit is for the whole year. How do we record it?

Accrued Audit Expense

How much will we owe for the year?

$\$2.40 / 12 \text{ months} =$

Accrued Audit Expense

How much will we owe for the year?

$\$2.40 / 12 \text{ months} = \0.20 per month

We owe \$0.20 the first month, but haven't paid it yet

Assets		LIABILITIES & CAPITAL	
Cash	<u>\$11.05</u>	Accrued Exp	\$0.20
Fixed Assets	\$12.00		
Accum. Deprec	<u>(\$0.40)</u>		
Net F/A	<u>\$11.60</u>		
Prepaid Exp	\$1.10		
Investment	\$39.00	SHARES	\$198.90
Loan	\$160.00		
Allowance	<u>(\$5.00)</u>		
Net Loans	<u>\$155.00</u>	Capital	<u>\$18.85</u>
Total Assets	<u>\$217.75</u>	Total Liabilities and Capital	<u>\$217.95</u>

Book the amount you will owe here

Income Statement 10th Month

Interest Income from Loans	\$3.20
Interest Income from Investment	<u>\$0.08</u>
Total Interest Income	\$3.28
Cost of Funds	<u>\$1.99</u>
Net Interest Margin	\$1.29
Operating Expenses (Deprec)	\$0.08
Provision for Loan Losses	\$0.00
"Used-up" Prepaid Expense	\$0.10
"Owed" Accrued Expense	<u>\$0.20</u>
Net Profit	<u>\$0.91</u>



End of
10th
month

Assets		LIABILITIES & CAPITAL	
Cash	<u>\$12.34</u>	Accrued Exp	\$0.20
Fixed Assets	\$12.00		
Accum. Depre	<u>(\$0.48)</u>		
Net F/A	<u>\$11.52</u>		
Prepaid Exp	\$1.00		
Investment	\$39.00	SHARES	\$198.90
Loan	\$160.00	Beg. Cap	\$18.85
Allowance	<u>(\$5.00)</u>	Net Profit	<u>\$0.91</u>
Net Loans	<u>\$155.00</u>	End. Cap	<u>\$19.76</u>
		Total Liabilities and	
Total Assets	<u>\$218.86</u>	Capital	<u>\$218.86</u>

Other Accruals

Accrued Income (have-Asset)

Accrued Interest Income

Etc.

Accrued Expenses (owe-Liability)

Accrued Dividends Payable

Accrued Vacation Payable

Etc.

Important Valuation Account

Are your members going to pay back every loan you make to them?

What does GAAP say about overstating assets?

Principle of Conservatism

So what do you suppose we do?

ALLOWANCE FOR LOAN & LEASE LOSSES

Amount based on estimates of what part of our total loans will some day be lost.

A.L.L.L. is a Contra-Asset, that means it takes away from the assets

A.L.L.L. G.A.A.P.

Statement of Financial Accounting Standards No. 5, *Accounting for Contingencies* (FAS 5), provides the basic guidance for recognition of a loss contingency, such as the collectibility of loans (receivables), when it is probable that a loss has been incurred and the amount can be reasonably estimated.

A.L.L.L. G.A.A.P.

Statement of Financial Accounting Standards No. 114, *Accounting by Creditors for Impairment of a Loan* (FAS 114) provides more specific guidance about the measurement and disclosure of impairment for certain types of loans. Specifically, FAS 114 applies to loans that are identified for evaluation on an individual basis. Loans are considered impaired when, based on current information and events, it is probable that the creditor will be unable to collect all interest and principal payments due according to the contractual terms of the loan agreement.

CALCULATING THE ALLOWANCE FOR LOAN & LEASE LOSSES

Estimate based on:

- Segment loans by type with their historical loss ratio
- Consider all known relevant internal and external factors that may affect loan collectability
 - Market trends
 - Economy, local, regional, national
 - Policy changes and their affect on collections
- Apply ratio to current loan balance by

 segment

CUNA
Credit Union National Association

NCUA Letter to CUs 02-CU-09

ALLOWANCE FOR LOAN & LEASE LOSSES

	Current Balance	12 Month Average Loss Ratio	Allowance Required	24 Month Average Loss Ratio	Allowance Required
Vehicle	\$ 4,327,156	0.49%	\$ 21,409	0.39%	\$ 16,688
Mobile home	\$ 7,946	0.00%	\$ -	0.00%	\$ -
signature	\$ 839,783	0.89%	\$ 7,514	1.54%	\$ 12,967
Mortgage	\$ 157,835	0.00%	\$ -	0.00%	\$ -
Visa	\$ 631,442	1.29%	\$ 8,171	1.74%	\$ 10,961
Total	\$ 5,964,162	0.61%	\$ 37,095	0.64%	\$ 40,616
Current Bal			\$ 41,506		\$ 41,506
Adjustment Required			\$ (4,411)		\$ (890)
					44

Before Charge-Off

Assets	LIABILITIES & CAPITAL
Cash <u>\$22.18</u>	
Fixed Assets <u>\$12.00</u>	
Accum. Deprec <u>(\$0.16)</u>	
Net F/A <u>\$11.84</u>	
Investment \$39.00 (in a bank)	SHARES \$198.90
Loan \$120.00	Capital \$19.12
Repos \$30.00	
Allowance <u>(\$5.00)</u>	
Net Loans <u>\$145.00</u>	
Total Assets <u>\$218.02</u>	Total Liabilities and Capital <u>\$218.02</u>

After Charge-Off

Assets		LIABILITIES & CAPITAL	
Cash	\$49.18		
Fixed Assets	\$12.00		
Accum. Deprec	(\$0.16)		
Net F/A	\$11.84		
Investment	\$39.00	SHARES	\$198.90
(in a bank)			
Loan	\$120.00	Capital	\$19.12
Repos	\$0.00		
Allowance	(\$2.00)		
Net Loans	\$118.00		
Total Assets	\$218.02	Total Liabilities and Capital	\$218.02

Cash goes in here, \$27

Sold repo comes out of here, -\$30

Allowance is reduced. -\$3

Another Important Valuation Concept - INVESTMENTS

MARK TO MARKET

Credit unions must revalue the carrying amount on their books of investments under certain circumstances

Accounting for Investments

Held to Maturity (HTM) - an investment that your CU has the intent and capacity to carry until the investment matures and is paid back

Carry on your books at historical (or amortized) value unless:

OTTI - a decline in value that is Other than a Temporary Impairment

Accounting for Investments

Trading - an investment that your CU has purchased for speculative purposes.

Carry on your books at market value. Run the increase or decrease in market value through your income statement as an income or expense, even if you did not sell the investment.

Accounting for Investments

Available for Sale (AFS) - any investment that is not HTM or Trading.

Carry on your Balance Sheet at market value but run the increase or decrease in value through your Equity

New Account: Unrealized Gain or Loss on AFS Securities

Investment G.A.A.P.

FAS 115

Accounting for Certain Investments in Debt and Equity Securities (Issued May 1993)

This Statement addresses the accounting and reporting for investments in equity securities that have readily determinable fair values and for all investments in debt securities.

Investment G.A.A.P.

FAS 157

Fair Value Measurements (Nov. 2007)

This Statement defines fair value, establishes a framework for measuring fair value in generally accepted accounting principles (GAAP), and expands disclosures about fair value measurements.

This went further in identifying what Fair Value is where there is not a ready market

Marking Investments to Market

Mutual Fund	Original Cost	Current Fair Value	Gain or (Loss)
A	\$100,000	\$ 95,000	(\$5,000)
B	80,000	80,000	
C	65,000	62,000	(3,000)
	<u>\$245,000</u>	<u>\$237,000</u>	<u>(\$8,000)</u>

If AFS or Trading:

Reduce book value to Market Value

Mutual Fund	Current Balance Sheet Value	Current Market Value	Gain or (Loss)
A	\$ 95,000	\$104,000	
B	80,000	82,000	
C	62,000	62,000	
	<u>\$237,000</u>	<u>\$248,000</u>	<u>\$11,000</u>

If AFS or Trading:

Increase book value to Market Value



CUNA

Credit Union National Association

AFS Treatment

Available for Sale

Assets		LIABILITIES & CAPITAL	
Cash	\$49.18		
Fixed Assets	\$12.00		
Accum. Deprec	(\$0.16)		
Net F/A	\$11.84		
Investment	\$39.00	SHARES	\$198.90
Market loss	4.00		
Investment	\$35.00		
Loan	\$120.00	Capital	\$19.12
Repos	\$0.00	Unrealized Inv. Loss	(\$4.00)
Allowance	(\$2.00)	Capital (after)	\$15.12
Net Loans	\$118.00		
Total Assets	\$214.02	Total Liabilities and Capital	\$214.02

Investment at local bank dropped from \$39 to \$35 Market Value

Investment value reduced to Market Value on books

Capital is reduced. -\$4

Credit Union Profitability

How we earn profit

How do you calculate profit?

At a \$10,000,000 CU

	12/31/09	12/31/97
Yield: Interest income	\$ 496,000	763,000
Less: Cost of funds	minus (175,000)	364,000)
Net Interest Margin	equals <u>321,000</u>	<u>399,000</u>
Less: Operating costs	minus (329,000)	(332,000)
Less: Provision for loan losses	minus <u>(111,000)</u>	<u>(44,000)</u>
Net loss before other income	equals (120,000)	23,000
Plus: Other revenues (Fee income, Other)	plus <u>136,000</u>	<u>78,000</u>
Equals: Net Profit or Loss	equals <u>\$ 16,000</u>	<u>102,000</u>

How do you calculate profit?

As a % of Average Assets	12/31/09	12/31/97
Yield: Interest income	4.96	7.63
Less: Cost of funds	(1.75)	(3.64)
Net Interest Margin	3.21	3.99
Less: Operating costs	(3.29)	(3.32)
Less: Provision for loan losses	(1.11)	(0.44)
Net loss before other income	(1.20)	0.23
Plus: Other revenues (Fee income, Other)	1.36	0.78
Equals: Net Profit or Loss	0.16	1.02

Balance Sheet

ASSETS

EARNING ASSETS

Loans

Investments

NON-EARNING ASSETS

Building, Equipment, etc.
NCUSIF Deposit

Other Assets

Total Assets

LIABILITIES & CAPITAL

MISCELLANEOUS LIABILITIES

2

SHARES

CAPITAL

Regular Reserves

Undivided Earnings

Spread Analysis

Income Statement

REVENUE

Loan Interest Income

Investment Interest Income

Fees

EXPENSES

Occupancy
Personnel
Provision for Loan Losses

COST OF FUNDS

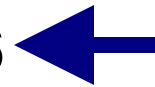
Dividends Paid

NET INCOME or LOSS

Spread Analysis

As a % of Average Assets

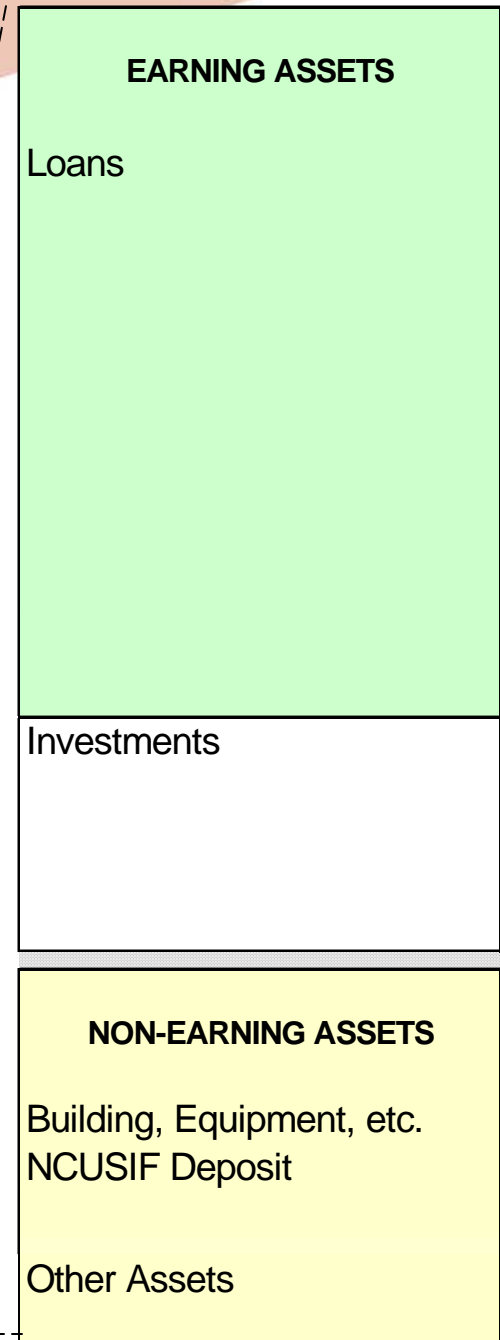
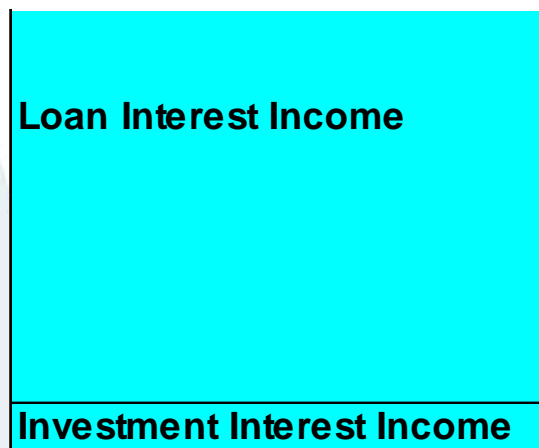
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Yield on Average Assets

Total Interest Income from Loans and Investments / Average Assets

National Average = 4.96% ←



Spread Analysis

As a % of Average Assets

	12/31/09	12/31/97
Yield: Interest income	4.96	7.63
Less: Cost of funds	(1.75)	(3.64)
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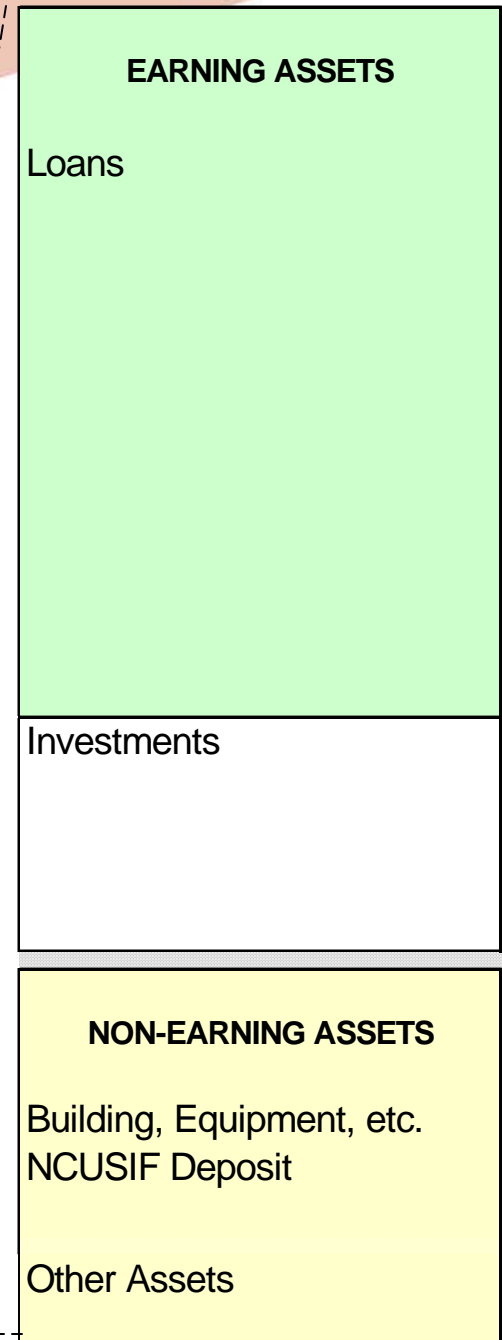
Cost of Funds

Total Dividends and Interest paid /
Average Assets

Cost of borrowing money from
members to loan out at a higher
price to other members

National Average = 1.75% ←

Dividends Paid



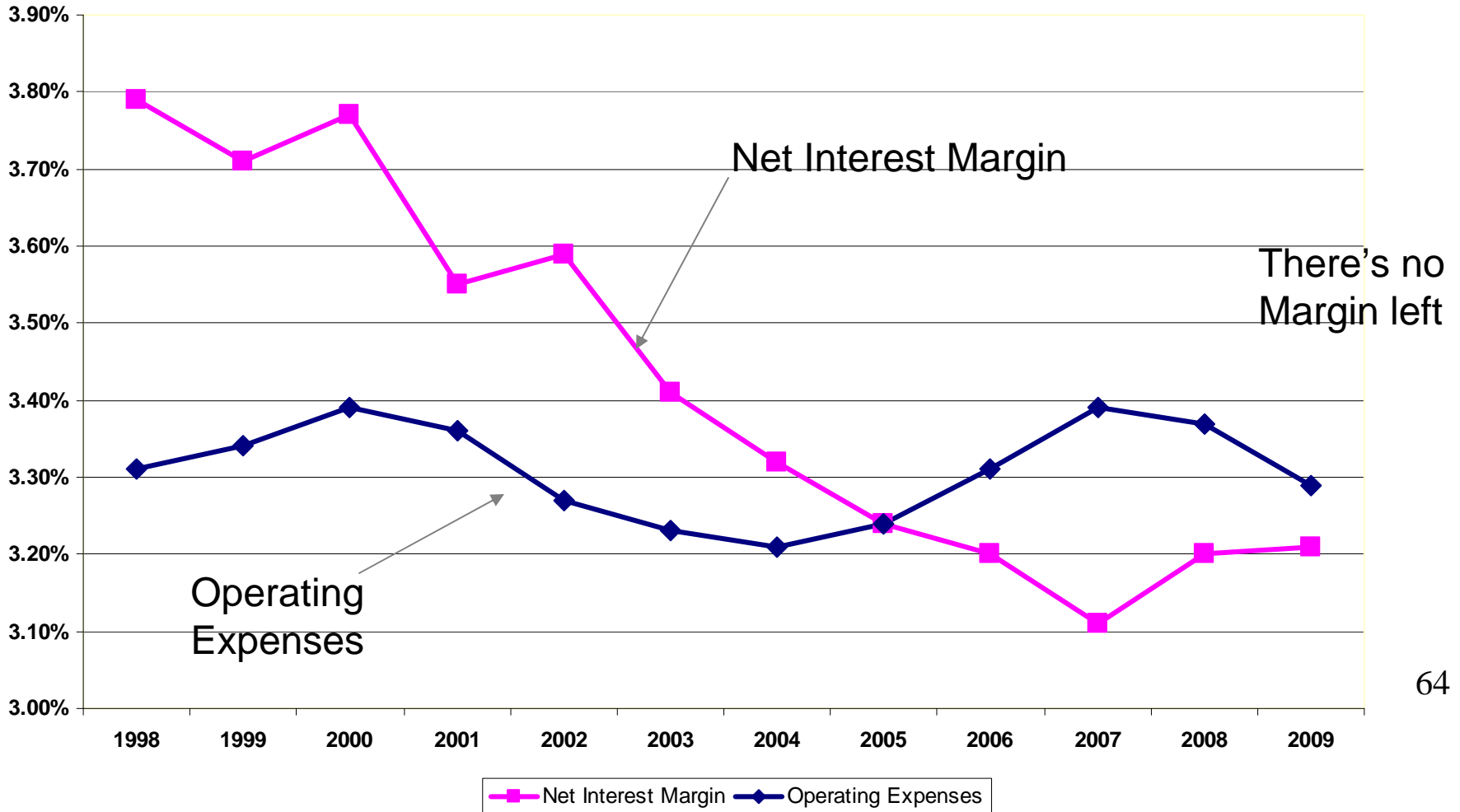
Spread Analysis

As a % of Average Assets

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Net Interest Margin & Operating Expense Ratio

All Credit Unions

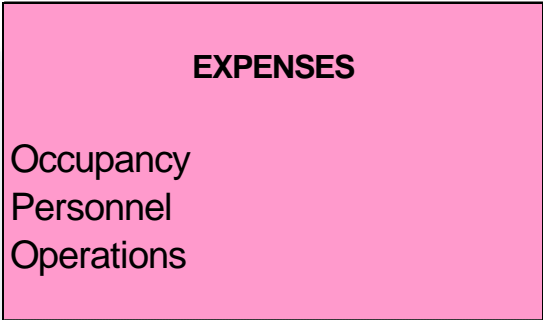
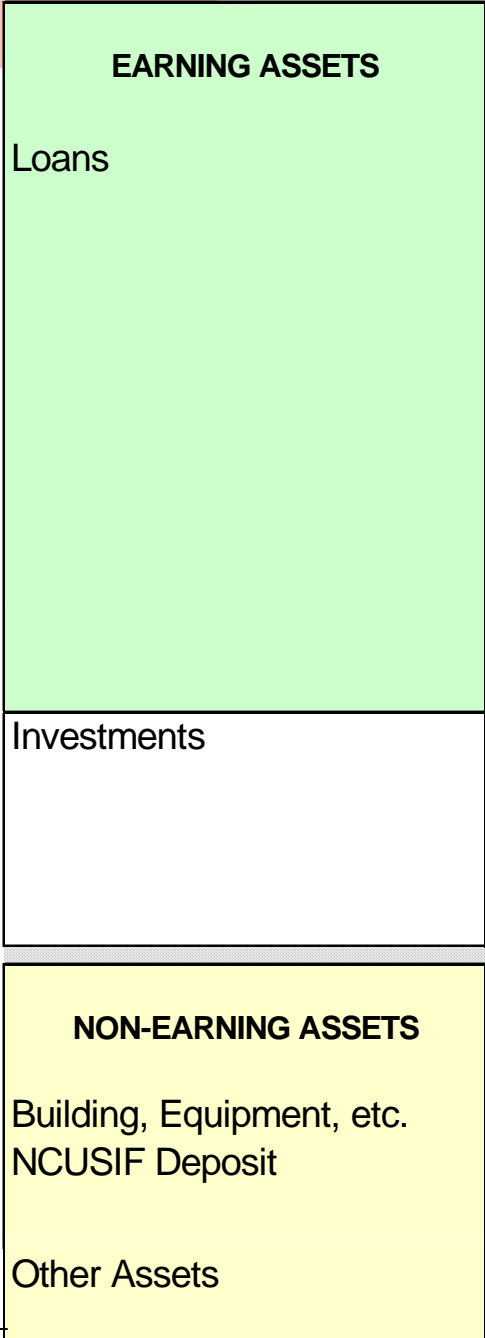


Operating Expenses to Average Assets

Total operating expenses / Average Assets

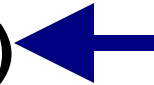
Remember to always EXCLUDE Provision for Loan Losses from this calculation!

National Average = 3.29% ←



Spread Analysis

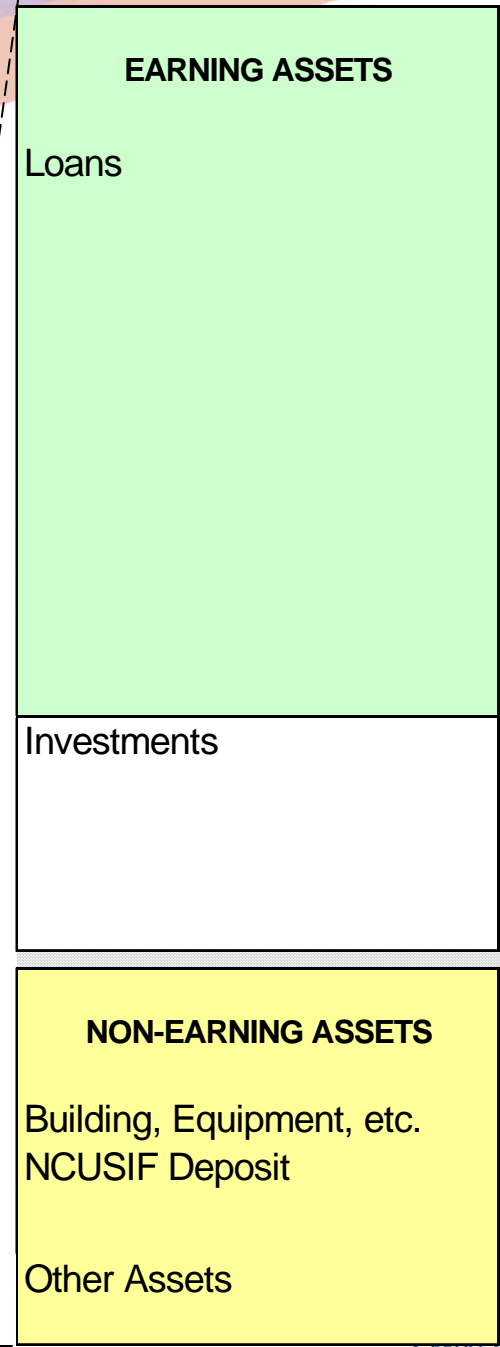
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Net loss before other income	(1.20)	0.23
Plus: Other revenues		
(Fee income, Other)	1.36	0.78
Equals: Net Profit or Loss	0.16	1.02



Provision for Loan Losses to Average Assets

Total Provision for Loan Losses Expense / Average Assets

National Average = 1.11% ←



Provision for Loan Losses

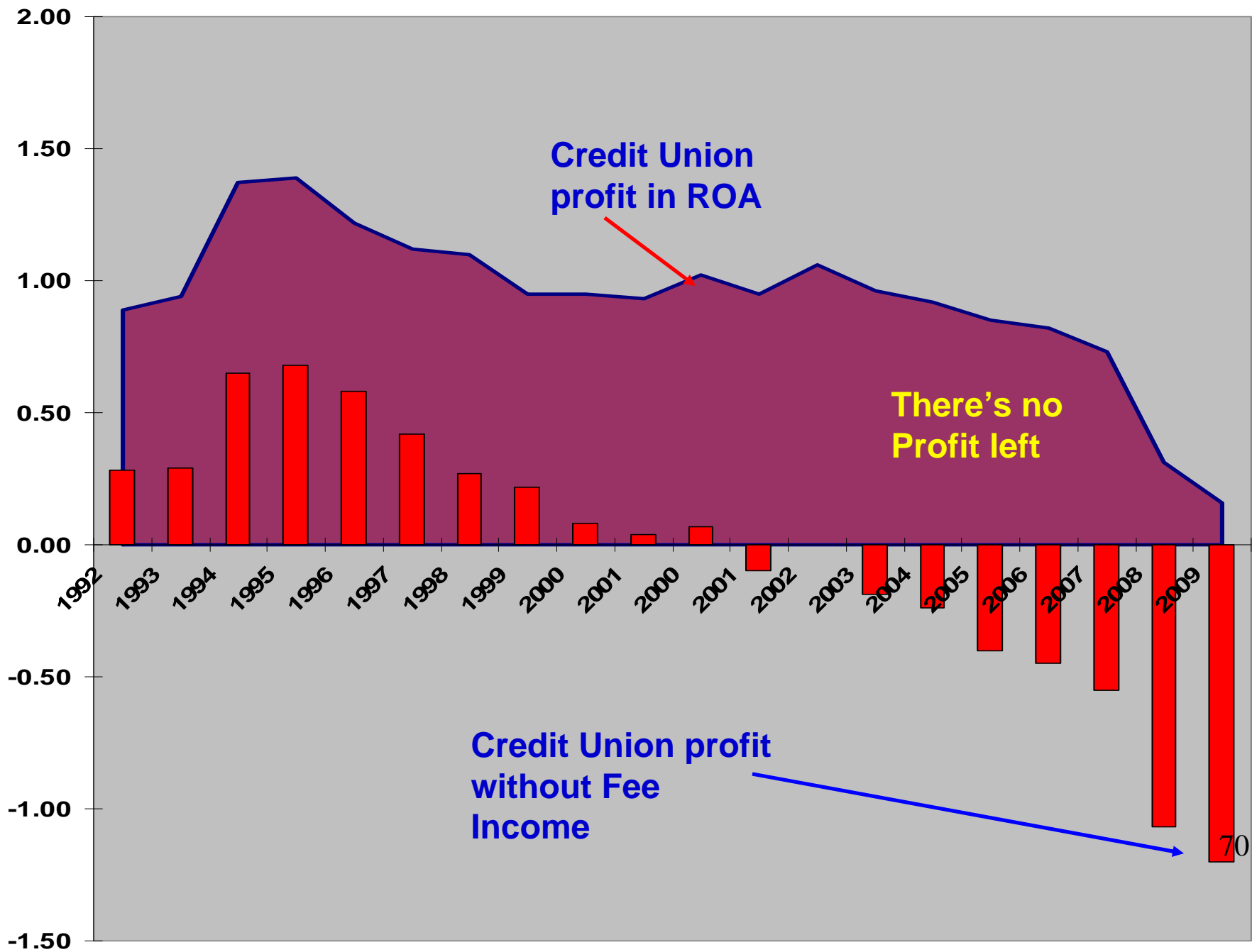
Not for Profit, Not for Charity, But for Service

Spread Analysis

As a % of Average Assets

	12/31/09	12/31/97
Yield: Interest income	4.96	7.63
Less: Cost of funds	(1.75)	(3.64)
Net Interest Margin	3.21	3.99
Less: Operating costs	(3.29)	(3.32)
Less: Provision for loan losses	(1.11)	(0.44)
Net loss before other income	(1.20)	0.23
Plus: Other revenues (Fee income, Other)	1.36	0.78
Equals: Net Profit or Loss	0.16	1.02



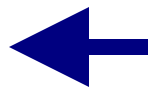


70

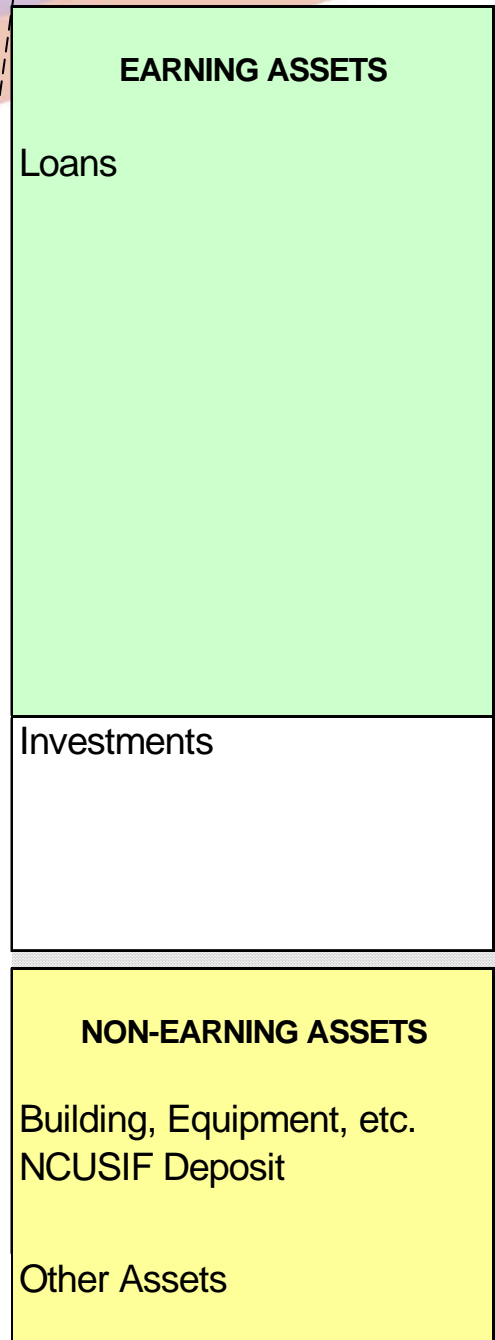
Service Revenues (Fee and Non-Interest Income) to Average Assets

Measure's the contribution of non-interest income to profitability

National Average = 1.36%



FEES



Spread Analysis

As a % of Average Assets	12/31/09	12/31/97
Yield: Interest income	4.96	7.63
Less: Cost of funds	(1.75)	(3.64)
Net Interest Margin	3.21	3.99
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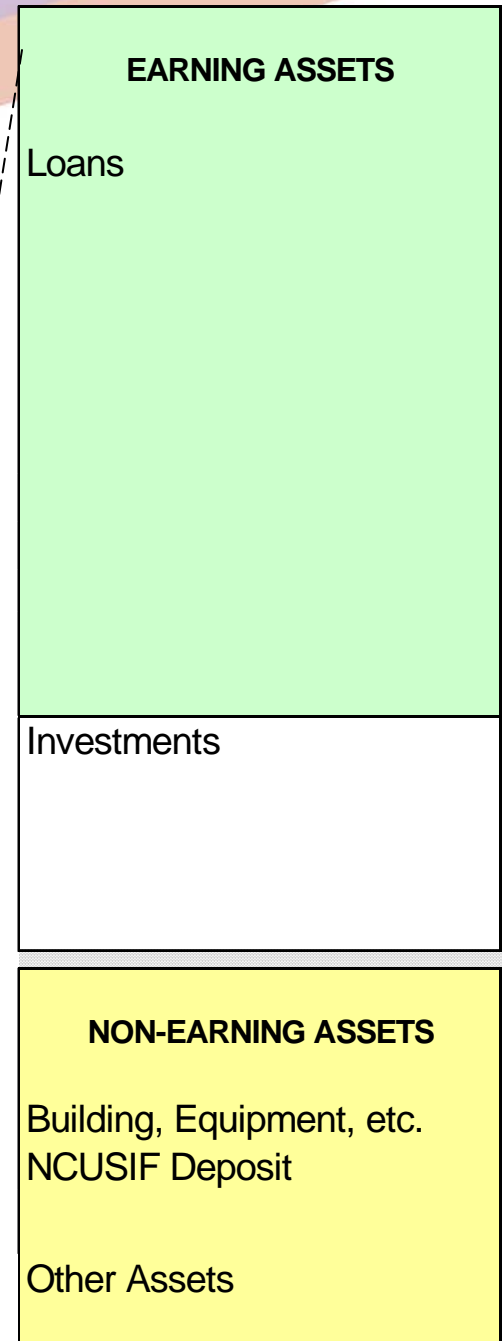
Return on Average Assets (ROAA or ROA)

Net income / Average assets*

*Average assets = Total assets last period + Total assets this period / 2

Measures a credit union's profitability

National Average = 0.16%



NET INCOME or LOSS

Balance Sheet

ASSETS

EARNING ASSETS

Loans

Investments

NON-EARNING ASSETS

Building, Equipment, etc.
NCUSIF Deposit

Other Assets

LIABILITIES & CAPITAL

MISCELLANEOUS LIABILITIES

2

SHARES

CAPITAL

Regular Reserves

Undivided Earnings

Income Statement

REVENUE

Loan Interest Income

Investment Interest Income

Fees

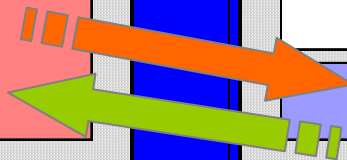
EXPENSES

Occupancy
Personnel
Provision for Loan Losses

COST OF FUNDS

Dividends Paid

NET INCOME or LOSS

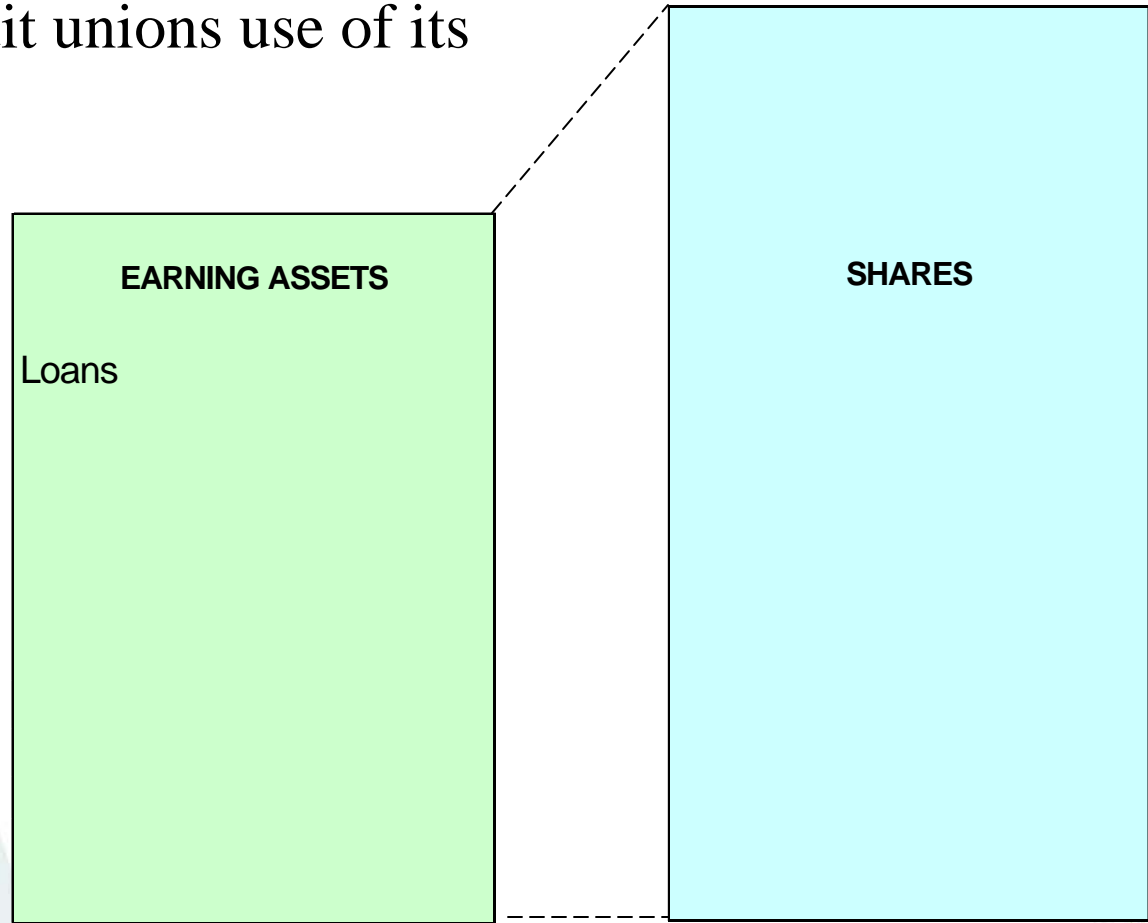


Loan to Share Ratio

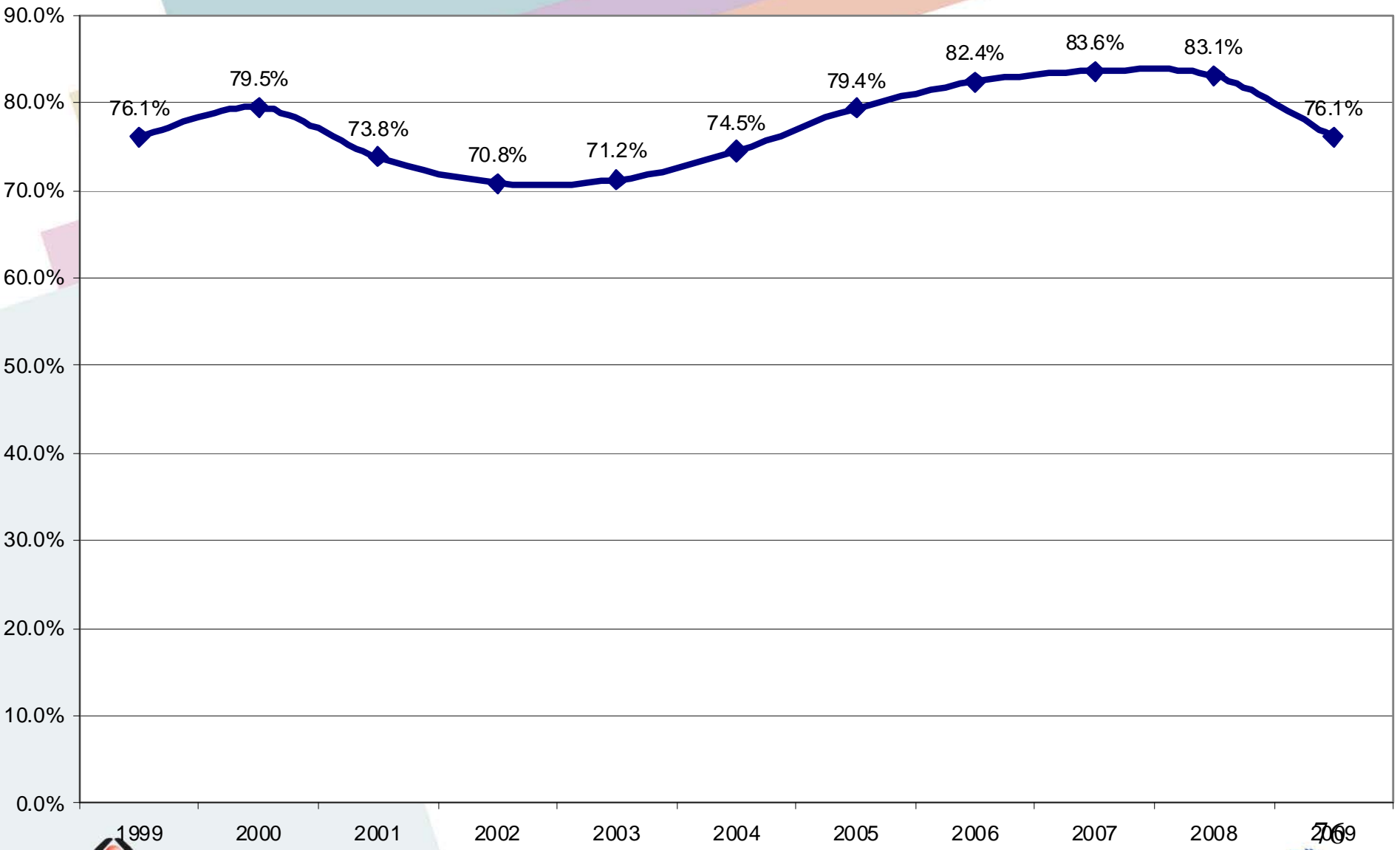
Total Loans / Total Shares and Deposits

Measures the credit unions use of its best earning asset

National Average
= 76.1%



History of Loan to Share Ratios



Which is better, low loan to share or high loan to share ratio?

Low Loan to Share ratio often results in lower income

How do we fix this problem?

- Earning Assets
- Non-earning Assets

Earning Assets

Loans

Investments

Non-earning Assets

Cash

Fixed Assets

Other Assets

Earning Assets...

...Earn you money

Non-earning Assets...

...Cost you money, or prevent you from making money

Balance Sheet

ASSETS

EARNING ASSETS

Loans

Investments

NON-EARNING ASSETS

Building, Equipment, etc.
NCUSIF Deposit

Other Assets

3

LIABILITIES & CAPITAL

MISCELLANEOUS LIABILITIES

SHARES

CAPITAL

Regular Reserves

Undivided Earnings

Income Statement

REVENUE

Loan Interest Income

Investment Interest Income

Fees

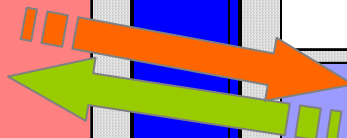
EXPENSES

Occupancy
Personnel
Provision for Loan Losses

COST OF FUNDS

Dividends Paid

NET INCOME or LOSS



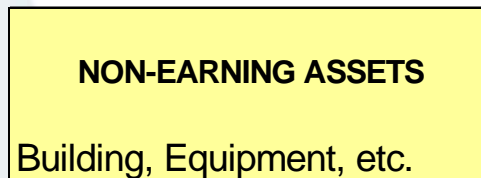
Non-Earning Assets to Total Assets

Measures the percentage of assets that do not contribute directly to the credit union's profitability

Maximum allowed by Regulation = 5%

Avg. around 2.00%

Not all non-earning assets included



Balance Sheet

ASSETS	LIABILITIES & CAPITAL
EARNING ASSETS	
Cash	\$ 16,000
LOANS	
Unsecured	13,500
Vehicle	110,000
Real estate	30,000
Total loans	153,500
Less allowance	(1,100)
Net Loans	152,400
INVESTMENTS	
Held to maturity	50,000
Avail for sale	5,000
TOTAL	55,000
NON-EARNING ASSETS	
Property and equip	1,500
NCUSIF	2,000
Other N. E. assets	
Other assets	100
TOTAL ASSETS	\$ 227,000
MISCELLANEOUS LIABS	
Miscellaneous Liabs	\$ 15,100
SHARES	
Share savings	68,000
Share drafts	35,000
Money market	45,000
IRAs	41,000
Other	4,000
Total Shares	193,000
CAPITAL	
Regular reserve	8,000
Undivided earn	10,900
Total Capital	18,900
TOTAL LIABS & CAP	\$ 227,000

Income Statement

REVENUE	
INTEREST INCOME	
Loans	\$ 14,000
Investments	3,000
Fees	1,900
TOTAL	18,900
EXPENSES	
Occupancy	} 7,800
Personnel	
Provision for	
Loan Losses	1,000
TOTAL	8,800
COST OF FUNDS	
Dividends Paid	8,700
NET INCOME	
NET INCOME	\$ 1,400

Net Interest Margin or Spread Analysis

+ Yield on Assets

Income from loans and investments / Average assets

- Cost of Funds

Dividends paid / Average assets

= Net-Interest Margin (spread)

Net Interest Margin or Spread Analysis

- Operating Expense Ratio

Total operating expenses / Average assets

- Provision for Loan Loss Ratio

P.L.L. / Average assets

Net Interest Margin or Spread Analysis

+ **Service Revenue** (Fee Income and Other Non-Interest Income) Ratio
Fees and other NII / Average assets
Return on Average Assets (Profit Percentage)

= **Return on Assets (ROA)**

Balance Sheet

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Undivided earn	10,900
Total Capital	18,900
TOTAL LIABS & CAP	\$ 227,000

Income Statement

REVENUE	
INTEREST INCOME	
Loans	\$ 14,000
Investments	3,000
\$17,000	
Fees	1,900
TOTAL	18,900
EXPENSES	
Occupancy	
Personnel	7,800
Provision for	
Loan Losses	1,000
TOTAL	8,800
COST OF FUNDS	
Dividends Paid	8,700
NET INCOME	
NET INCOME	\$ 1,400

Net Interest Margin or Spread Analysis

Yield on Assets

Income from loans and investments / Average Assets

$$\$17,000 / \$227,000 \times 100 = \underline{\quad\quad} \%$$

Net Interest Margin or Spread Analysis

Yield on Assets

Income from loans and investments / Average Assets

$$\$17,000 / \$227,000 \times 100 = 7.49\%$$

Net Interest Margin or Spread Analysis

Income must be ANNUALIZED.

This ratio works when Income Statement is for 12 months. If the Income Statement is for less than 12 months, you must annualize the income.

e.g. To Annualize income, divide by the month number (from September, divide by 9: ninth month) and multiply by 12 (months)

Balance Sheet

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Income Statement

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Occupancy	}
Personnel	
Provision for Loan Losses	1,000
TOTAL	8,800
COST OF FUNDS	
Dividends Paid	8,700
NET INCOME	
NET INCOME	\$ 1,400

Net Interest Margin or Spread Analysis

Cost of Funds

Dividends paid / Average Assets

$$\$8,700 / \$227,000 \times 100 = \underline{\hspace{2cm}}\%$$

Net Interest Margin or Spread Analysis

Cost of Funds

Dividends paid / Average Assets

$$\text{\$8,700} / \text{\$227,000} \times 100 = \mathbf{3.83\%}$$

Balance Sheet

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Income Statement

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TOTAL	18,900
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Personnel	
Provision for	
Loan Losses	1,000
TOTAL	8,800
COST OF FUNDS	
Dividends Paid	8,700
NET INCOME	
NET INCOME	\$ 1,400

Net Interest Margin or Spread Analysis

Operating Expense Ratio

Total operating expenses / Average Assets

$$\$7,800 / \$227,000 \times 100 = \underline{\quad\quad}\%$$

Net Interest Margin or Spread Analysis

Operating Expense Ratio

Total operating expenses / Average Assets

$$\$7,800 / \$227,000 \times 100 = \mathbf{3.44\%}$$

Balance Sheet

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TOTAL LIABS & CAP	\$ 227,000

Income Statement

REVENUE		
INTEREST INCOME		
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EXPENSES		
Occupancy	}	7,800
Personnel		
Provision for		
Loan Losses	1,000	
TOTAL		8,800
COST OF FUNDS		
Dividends Paid	8,700	
NET INCOME		
NET INCOME	\$ 1,400	

Net Interest Margin or Spread Analysis

Provision for Loan Losses Ratio

Provision for Loan Losses / Average Assets

$$\text{\$1,000} / \text{\$227,000} \times 100 = \underline{\hspace{2cm}}\%$$

Net Interest Margin or Spread Analysis

Provision for Loan Losses Ratio

Provision for Loan Losses / Average Assets

$$\text{\$1,000} / \text{\$227,000} \times 100 = 0.44\%$$

Balance Sheet

ASSETS	LIABILITIES & CAPITAL																																																																		
<table style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">EARNING ASSETS</td> </tr> <tr> <td>Cash</td> <td style="text-align: right;">\$ 16,000</td> </tr> <tr> <td colspan="2">LOANS</td> </tr> <tr> <td>Unsecured</td> <td style="text-align: right;">13,500</td> </tr> <tr> <td>Vehicle</td> <td style="text-align: right;">110,000</td> </tr> <tr> <td>Real estate</td> <td style="text-align: right;">30,000</td> </tr> <tr> <td>Total loans</td> <td style="text-align: right;">153,500</td> </tr> <tr> <td>Less allowance</td> <td style="text-align: right;">(1,100)</td> </tr> <tr> <td>Net Loans</td> <td style="text-align: right;">152,400</td> </tr> <tr> <td colspan="2">INVESTMENTS</td> </tr> <tr> <td>Held to maturity</td> <td style="text-align: right;">50,000</td> </tr> <tr> <td>Avail for sale</td> <td style="text-align: right;">5,000</td> </tr> <tr> <td>TOTAL</td> <td style="text-align: right;">55,000</td> </tr> <tr> <td colspan="2">NON-EARNING ASSETS</td> </tr> <tr> <td>Property and equip</td> <td style="text-align: right;">1,500</td> </tr> <tr> <td>NCUSIF</td> <td style="text-align: right;">2,000</td> </tr> <tr> <td>Other N. E. assets</td> <td></td> </tr> <tr> <td>Other assets</td> <td style="text-align: right;">100</td> </tr> <tr> <td>TOTAL ASSETS</td> <td style="text-align: right;">\$ 227,000</td> </tr> </table>	EARNING ASSETS		Cash	\$ 16,000	LOANS		Unsecured	13,500	Vehicle	110,000	Real estate	30,000	Total loans	153,500	Less allowance	(1,100)	Net Loans	152,400	INVESTMENTS		Held to maturity	50,000	Avail for sale	5,000	TOTAL	55,000	NON-EARNING ASSETS		Property and equip	1,500	NCUSIF	2,000	Other N. E. assets		Other assets	100	TOTAL ASSETS	\$ 227,000	<table style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">MISCELLANEOUS LIABS</td> </tr> <tr> <td>Miscellaneous Liabs</td> <td style="text-align: right;">\$ 15,100</td> </tr> <tr> <td colspan="2" style="text-align: center;">SHARES</td> </tr> <tr> <td>Share savings</td> <td style="text-align: right;">68,000</td> </tr> <tr> <td>Share drafts</td> <td style="text-align: right;">35,000</td> </tr> <tr> <td>Money market</td> <td style="text-align: right;">45,000</td> </tr> <tr> <td>IRAs</td> <td style="text-align: right;">41,000</td> </tr> <tr> <td>Other</td> <td style="text-align: right;">4,000</td> </tr> <tr> <td>Total Shares</td> <td style="text-align: right;">193,000</td> </tr> <tr> <td colspan="2" style="text-align: center;">CAPITAL</td> </tr> <tr> <td>Regular reserve</td> <td style="text-align: right;">8,000</td> </tr> <tr> <td>Undivided earn</td> <td style="text-align: right;">10,900</td> </tr> <tr> <td>Total Capital</td> <td style="text-align: right;">18,900</td> </tr> <tr> <td>TOTAL LIABS & CAP</td> <td style="text-align: right;">\$ 227,000</td> </tr> </table>	MISCELLANEOUS LIABS		Miscellaneous Liabs	\$ 15,100	SHARES		Share savings	68,000	Share drafts	35,000	Money market	45,000	IRAs	41,000	Other	4,000	Total Shares	193,000	CAPITAL		Regular reserve	8,000	Undivided earn	10,900	Total Capital	18,900	TOTAL LIABS & CAP	\$ 227,000
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Income Statement

REVENUE		
INTEREST INCOME		
Loans	\$ 14,000	
Investments	3,000	
Fees	1,900	
TOTAL	18,900	
EXPENSES		
Occupancy	}	7,800
Personnel		
Provision for		
Loan Losses		1,000
TOTAL		8,800
COST OF FUNDS		
Dividends Paid	8,700	
NET INCOME		
NET INCOME	\$ 1,400	

Net Interest Margin or Spread Analysis

Service Revenue (Fee Income and Other Non-Interest Income) Ratio

Fee Income and Other NII / Average Assets

$$\text{\$1,900} / \text{\$227,000} \times 100 = \underline{\hspace{2cm}}\%$$

Net Interest Margin or Spread Analysis

Service Revenue (Fee Income and Other Non-Interest Income) Ratio

Fee Income and Other NII / Average Assets

$$\text{\$1,900} / \text{\$227,000} \times 100 = \mathbf{0.84\%}$$

Balance Sheet

ASSETS	LIABILITIES & CAPITAL
EARNING ASSETS	
Cash	\$ 16,000
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NET INCOME	
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Net Interest Margin or Spread Analysis

Return on Assets

Net Income / Average Assets

$$\text{\$1,400} / \text{\$227,000} \times 100 = \underline{\hspace{2cm}}\%$$

Net Interest Margin or Spread Analysis

Return on Assets

Net Income / Average Assets

$$\text{\$1,400} / \text{\$227,000} \times 100 = \mathbf{0.62\%}$$

Spread Example

As a % of Average Assets

Example

Interest income

7.49

Less: Cost of funds

(3.83)

Net Interest Margin

3.66

Less: Operating costs

(3.44)

Less: Provision for loan losses

(0.44)

Net loss before other income

(0.22)

Plus: Other revenues

(Fee income, Other)

0.84 105

Net Profit or Loss

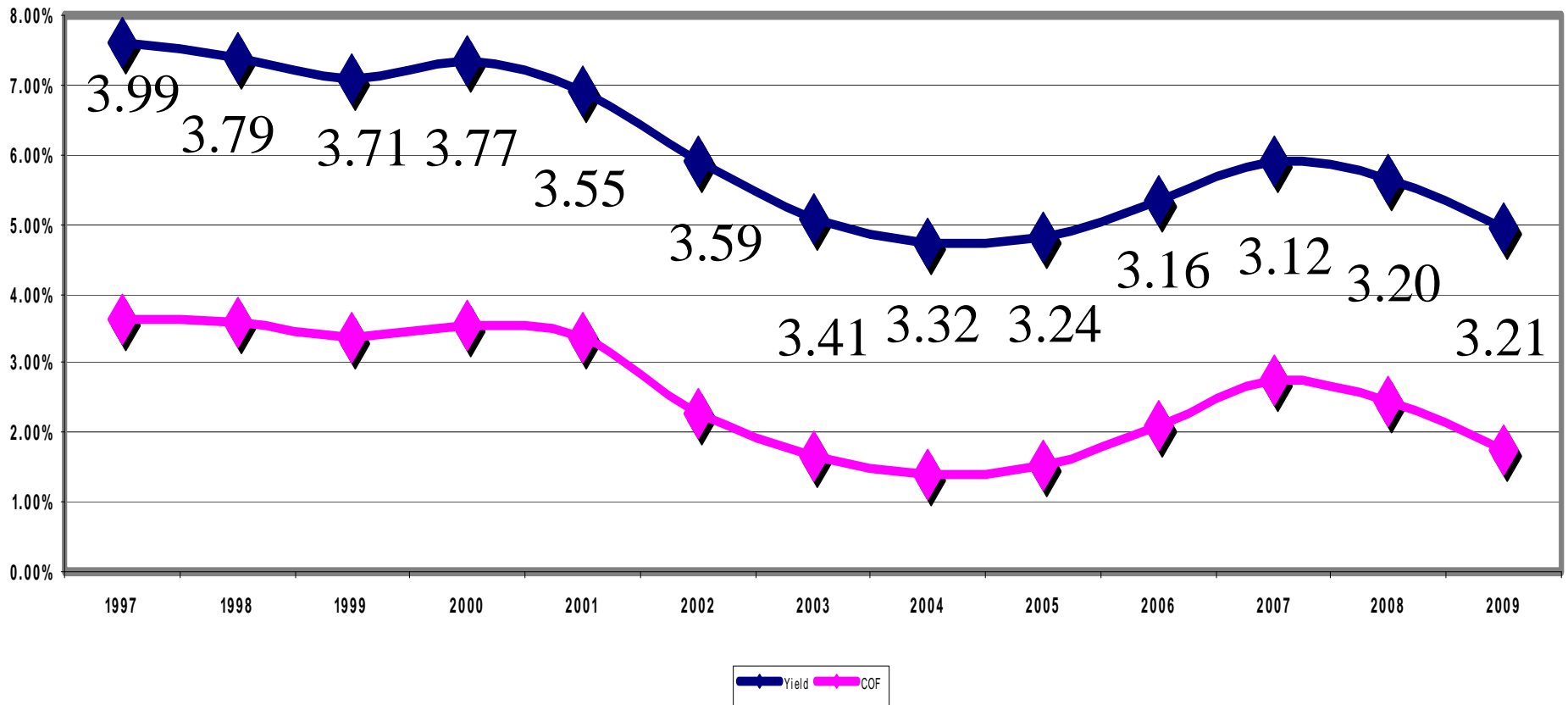
0.62 
AMERICA'S
CREDIT UNIONS

How do you calculate profit?

As a % of Average Assets	12/31/09	12/31/97
Yield: Interest income	4.96	7.63
Less: Cost of funds	(1.75)	(3.64)
Net Interest Margin	3.21	3.99
Less: Operating costs	(3.29)	(3.32)
Less: Provision for loan losses	(1.11)	(0.44)
Net loss before other income	(1.20)	0.23
Plus: Other revenues (Fee income, Other)	1.36	0.78
Equals: Net Profit or Loss	0.16	1.02

106

Spread or Net Interest Margin



78 bp decline

Balance Sheet

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EXPENSES	
Occupancy	}
Personnel	
Provision for	7,800
Loan Losses	1,000
TOTAL	8,800
COST OF FUNDS	
Dividends Paid	8,700
NET INCOME	
NET INCOME	\$ 1,400

Capital to Assets Ratio

Total Capital/Total Assets

Measures stability of the credit union

National Average = 9.91%

$$\$18,900 / \$227,000 = \underline{\underline{8.33\%}}$$

CAPITAL	
Regular Reserves	8000
Undivided Earnings	10900
Total	\$ 18,900

EARNING ASSETS	
Loans	
Investments	
NON-EARNING ASSETS	
Building, Equipment, etc.	
NCUSIF Deposit	
Other Assets	
Total Assets	\$ 227,000

Balance Sheet

ASSETS	LIABILITIES & CAPITAL
EARNING ASSETS	
Cash	\$ 16,000
LOANS	
Unsecured	13,500
Vehicle	110,000
Real estate	30,000
Total loans	153,500
Less allowance	(1,100)
Net Loans	152,400
INVESTMENTS	
Held to maturity	50,000
Avail for sale	5,000
TOTAL	55,000
NON-EARNING ASSETS	
Property and equip	1,500
NCUSIF	2,000
Other N. E. assets	
Other assets	100
TOTAL ASSETS	\$ 227,000
MISCELLANEOUS LIABS	
Miscellaneous Liabs	\$ 15,100
SHARES	
Share savings	68,000
Share drafts	35,000
Money market	45,000
IRAs	41,000
Other	4,000
Total Shares	193,000
CAPITAL	
Regular reserve	8,000
Undivided earn	10,900
Total Capital	18,900
TOTAL LIABS & CAP	\$ 227,000

Income Statement

REVENUE	
INTEREST INCOME	
Loans	\$ 14,000
Investments	3,000
Fees	1,900
TOTAL	18,900
EXPENSES	
Occupancy	} 7,800
Personnel	
Provision for	
Loan Losses	1,000
TOTAL	8,800
COST OF FUNDS	
Dividends Paid	8,700
NET INCOME	
NET INCOME	\$ 1,400

Loan to Share Ratio

Total Loans / Total Shares and Deposits

Measures the credit unions use of its best earning asset

National Average
= 76.1%

$$\frac{\$153,500}{\$193,000} = \underline{\underline{79.5\%}}$$

EARNING ASSETS	
Loans	
Unsecured	13,500
Vehicle	110,000
Real estate	30,000
Total loans	<u>153,500</u>
Less allowance	<u>-1,100</u>
Net Loans	<u><u>152,400</u></u>

SHARES	
Share savings	68,000
Share drafts	35,000
Money market	45,000
IRAs	41,000
Other	4,000
Total Shares	<u><u>193,000</u></u>

Delinquency and Charge-offs

- **Delinquency ratio**

Delinquent loans over 60 days old /
Total loans

- **Charge-off ratio**

Charge-offs (less recoveries) /
Average loans

- **Recovery ratio**

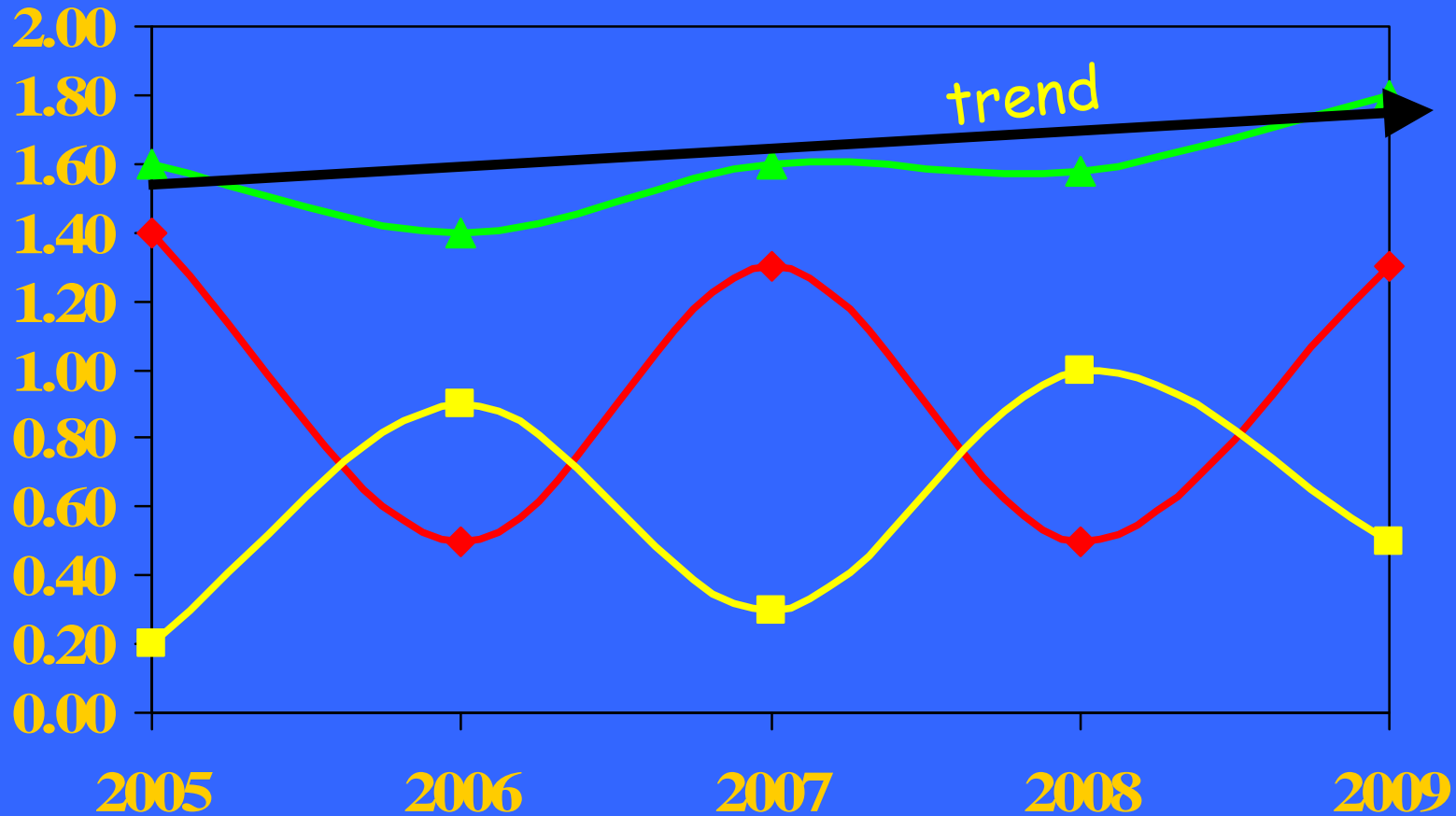
Recoveries / Charge-offs

Delinquency and Charge-offs

It is important to consider Delinquency and Charge-offs together!

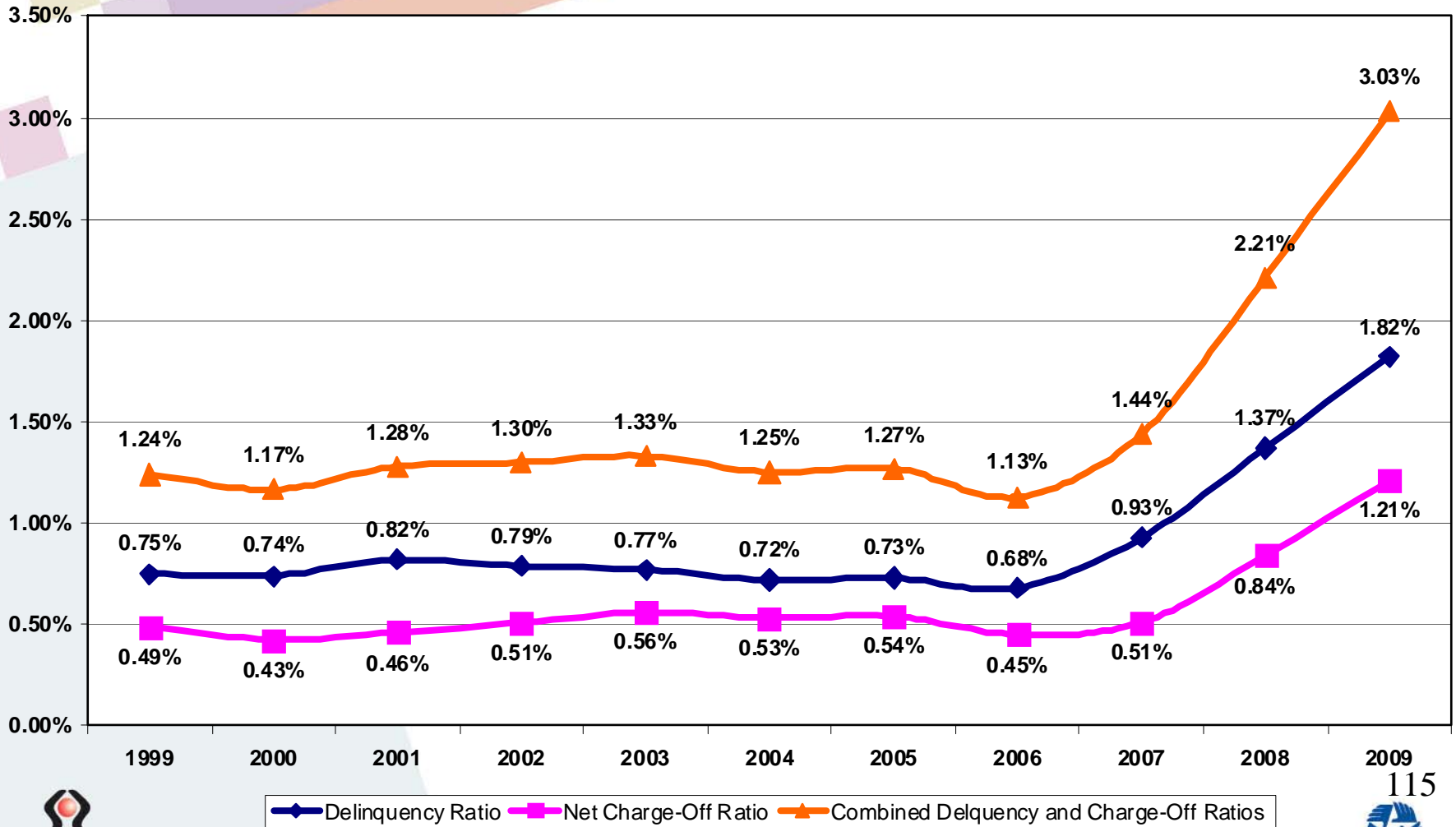
	Normal	12/31/09
Delinquency	0.75%	1.82%
Charge-offs	<u>0.40%</u>	<u>1.21%</u>
Combined	<u>1.15%</u>	<u>3.03%</u>

Delinquency and Charge-offs Combined Reliable Trend Information



◆ Delinquency ■ Charge-offs ▲ Combined

History of Delinquency and Charge-Offs National Averages



Recovery Ratio

Recovery Ratio - Percentage of previously charged off loans that are subsequently recovered

Should be within a reasonable range

10% of Charge-offs - probably not collecting well enough after loan charged-off

20% if Charge-offs - probably charging off loans

too SOON: National average:

2007 – 17.4% 2008 – 11.3% 2009 - 9.5%

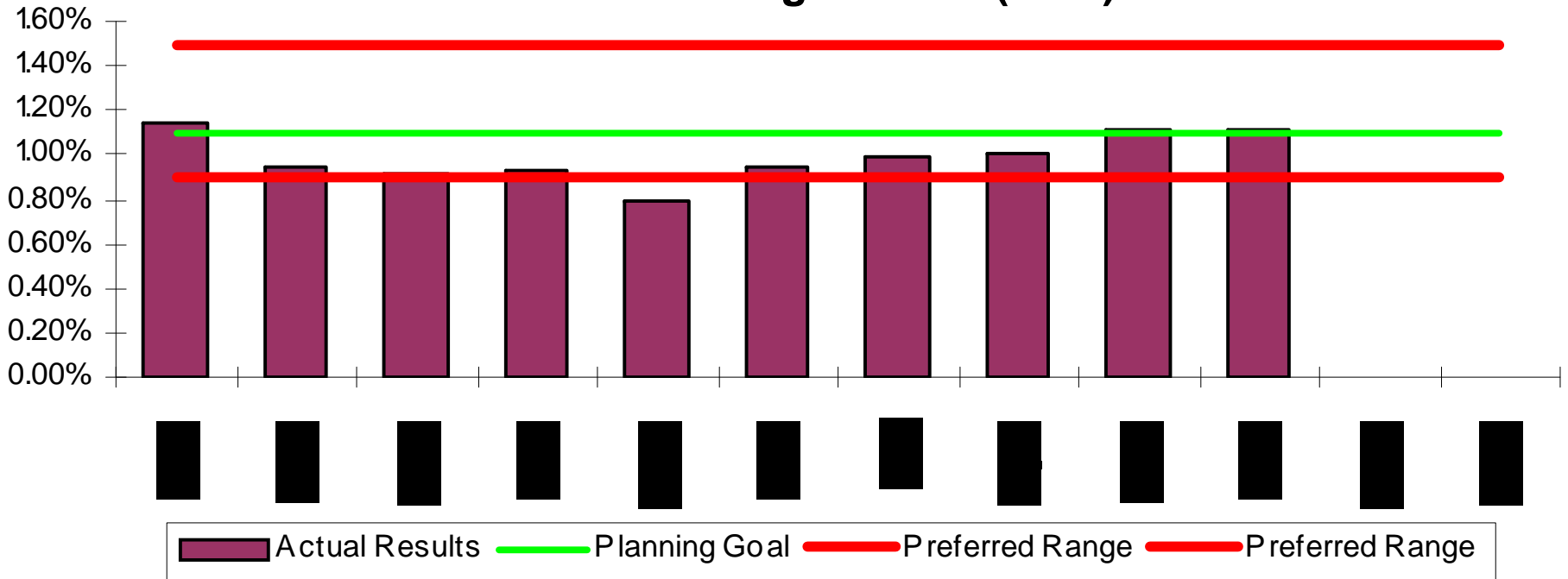
Comparative Financial Statements

Important to compare the current information you're reviewing, such as:

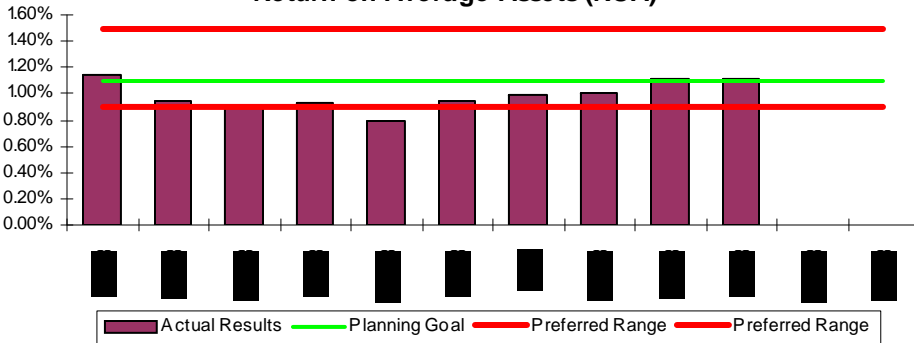
- Current month this year to same month last year
- Year-to-date this year to year-to-date last year
- Current month this year to budget for month
- Year-to-date this year to year-to-date budget

Using an Instrument Panel

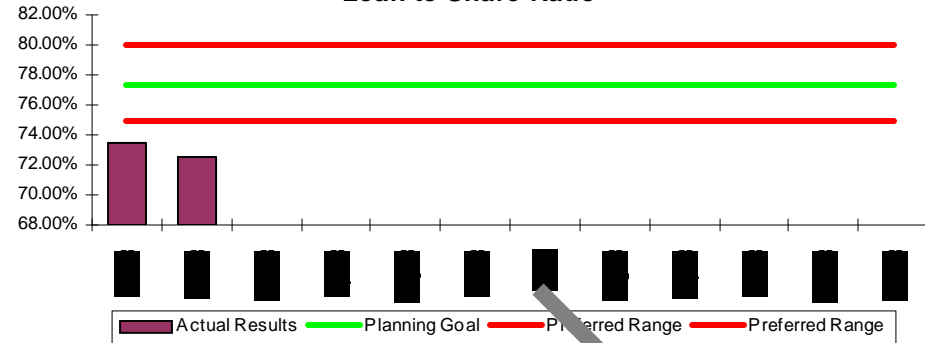
Return on Average Assets (ROA)



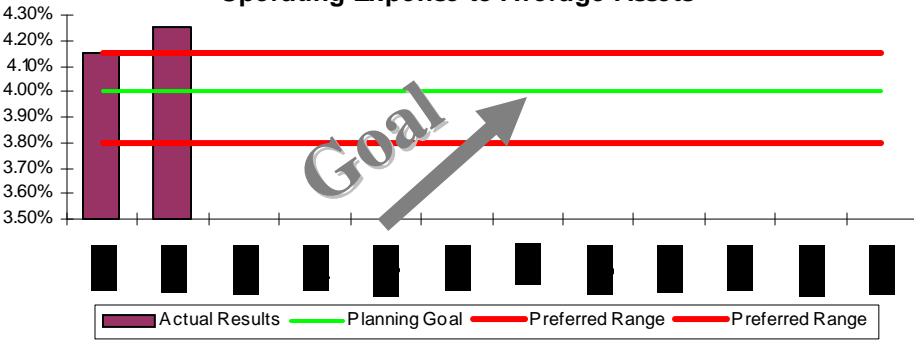
Return on Average Assets (ROA)



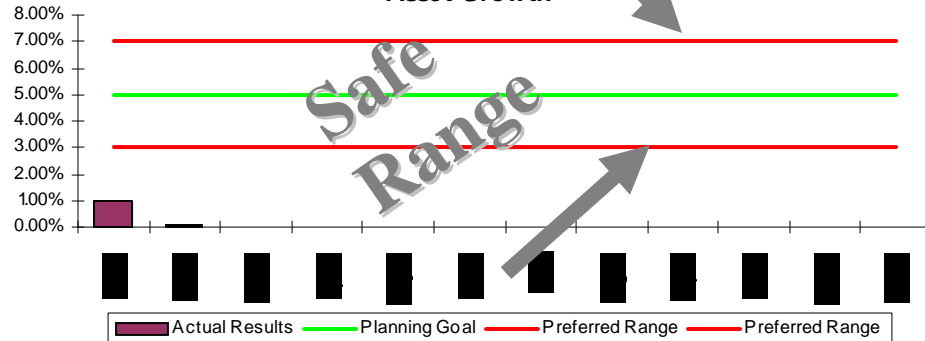
Loan to Share Ratio



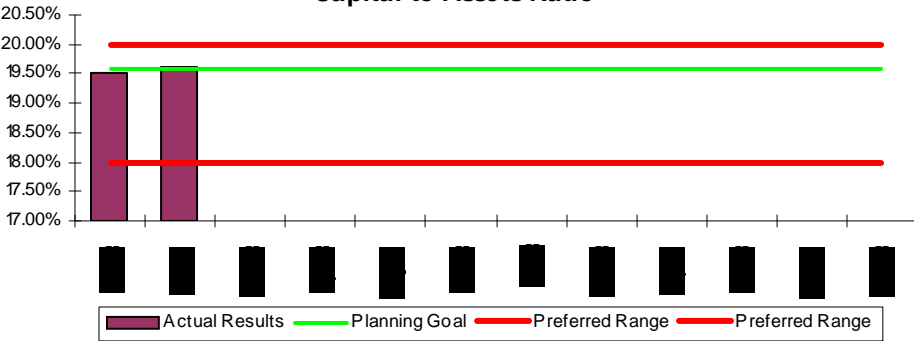
Operating Expense to Average Assets



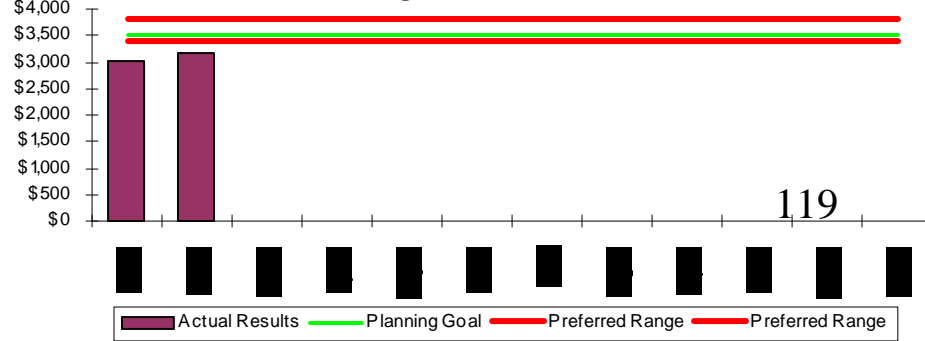
Asset Growth



Capital to Assets Ratio



Average Loan Balance





CU Finance for Non-Financial Managers and Volunteers

Financial Statement Analysis Session 2

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