

## The squeeze is on...

(...and banks are responding)

Net Interest Margins for the banking industry turned down for 1998. The average net interest margins for 1998 was lower than 1997 for banks of all sizes. For Peer Group A, banks under \$100 million of Total Assets, the decline occurs for the second year in a row. The Net Interest Margin for small banks averaged 4.95% for 1996; dropped to 4.91% for 1997; and dropped again to 4.69% for 1998.

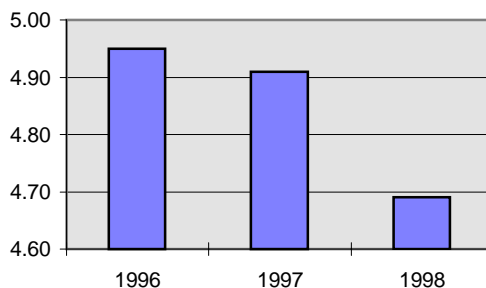
With encouragement from the Fed, market interest rates have floated lower over the past several years with U. S. Treasury rates now approaching the lowest levels since the 1950s. The lower market rates generally mean lower earnings rates on bank assets (securities and loans).

On the other hand, many banks enjoy significant amounts of funding from core deposits, which carry low or no interest rates, and such already low rates cannot be pushed down much further. In fact, while the yield on Earning Assets dropped for 1998 for banks in every Peer Group, the Cost of Funds Rate actually rose due to mix and growth considerations.

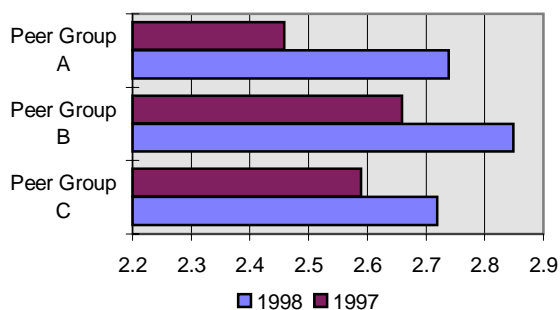
How does a banker respond to the squeeze of margin? Several ways: First, bankers are taking on longer duration assets. In every Peer Group, the IRE  
(continued, See LEAD pg. 11)

**To protect shrinking profit margins, bankers are...**

**Interest Margin**  
December 31



**Duration (years) Total Securities**  
December 31



**... taking on more risk by extending the duration of earning assets.**

## About the Peer Information

This peer sample includes data from 534 commercial banks representing 48 states. Each bank's data has been modeled using Olson Research's A/L BENCHMARKS model.

The primary source of data is the FDIC Call Report or the Federal Reserve FRY-9 Report. A/L BENCHMARKS also uses investment security downloads, supplemental information supplied by bank management, and modeling assumptions. Assumptions are based upon historical bank data, industry norms, and bank supplied supplemental information.

The entire peer database of risk measures is available on the internet at <http://www.olsonresearch.com>. With the database you may examine individual bank data; however, bank names and certificate numbers are anonymous. □

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## What you need to know about duration

Duration was originally developed in 1938 by Frederick Macaulay as a means for comparing the maturities of financial instruments with differing payment structures (amortizing vs. nonamortizing). It is essentially a measure of the sensitivity of market values to small changes in interest rates.

Macaulay's version of duration is stated as a measure of time. For example, a given instrument has a duration of 2.5 years. This measure is derived by incorporating the instrument's remaining time to maturity, the level of interest rates, and intermediate cash flows. Duration is calculated by weighting the present value of an instrument's cash flows by the time to receipt of those cash flows.

Macaulay's measure was later modified to express the price sensitivity of a bond to a given percentage change in interest rates. This came to be known as "modified duration" or "interest rate elasticity". These measures are stated as expected percentage changes to an instrument's present value for a 100 basis point change in interest rates.

As an example, if a given instrument has an interest rate elasticity of -1.50, there is an expectation that if interest rates

*(continued, See Duration pg. 3)*

**Current regulatory practice requires every commercial bank's board of directors to establish and approve risk limits related to each of these measurement perspectives.**

**Bank management is required to produce these measurements and present it to the board on at least a quarterly basis.**

## Earnings and Equity Value at Risk

4th Qtr 1998	Peer Group A (under \$100 Million)					Peer Group B (\$100 - \$300 Million)					Peer Group C (over \$300 Million)				
	Mean	Std. Dev.	High	Med.	Low	Mean	Std. Dev.	High	Med.	Low	Mean	Std. Dev.	High	Med.	Low
Net Earnings at Risk	-14.0	12.5	-74.7	-9.8	-0.6	-10.7	9.7	-51.5	-7.7	0.0	-9.2	7.1	-39.4	-7.8	-0.5
Net Interest Earnings at Risk	-4.9	3.5	-15.4	-3.9	-0.4	-4.4	3.4	-16.7	-3.7	0.0	-4.6	3.7	-14.0	-3.5	-0.2
Equity at Risk (EVE)	-8.3	4.9	-27.2	-7.2	-1.3	-10.0	6.5	-37.3	-9.1	-0.5	-10.3	7.0	-43.6	-9.9	-0.8
Equity at Risk (as a % of Assets)	-1.0	0.6	-3.9	-0.8	-0.2	-1.2	0.8	-4.3	-1.1	-0.1	-1.2	0.7	-3.8	-1.2	-0.1

**The average Bank in Peer Group B, given a 200bp parallel shift in interest rates, will:**

- lose 10.7% of its Net Income and 4.4% of its Net Interest Income;**
- lose 10.0% of its Economic Value of Equity (EVE).**

As currently defined, interest rate risk is the risk to earnings or capital arising from movements in interest rates. Practically, interest rate risk can be viewed in both a short-term and long-term perspective. To examine short-term interest rate risk (IRR) we look at Earnings-at-Risk. Conversely, we use Equity-at-Risk to measure long-term IRR.

### Earnings-at-Risk - Short-Term view of IRR

By most definitions, accounting or otherwise, when we communicate something as short-term, we usually refer to a time frame of one year or less. When measuring interest rate risk on an earnings perspective, this same concept applies. Short-term interest rate risk is measured by initially establishing a one year earnings forecast. This base forecast assumes that both the level and structure of market rates of interest are held constant from the last historical period. The balance sheet, in terms of overall size and mix, is constructed using a managerial forecast or a projection.

IRR is a measure of possible loss caused by interest rate changes. Therefore the model introduces two instantaneous, parallel "shocks" to the base set of rates (common practice is to use +/-200bp movements) and then re-computes the expected earnings. The Earnings-at-Risk is the largest negative change between the base forecast and one of the "shock" scenarios. The measure is usually stated as a percentage change of either net interest income or net income.

### Equity-at-Risk (EVE) - Long-Term view of IRR

As a means for evaluating long-term interest rate risk, an economic perspective is necessary. This approach focuses on the value of the bank in today's interest rate environment and that value's sensitivity to changes in interest rates. This concept is known as Equity-at-Risk. It requires a complete present value balance sheet to be constructed. This is done by scheduling the cash flows of all assets, liabilities, and off-balance sheet items and applying a set of discount rates to in turn develop the present values. The present value of equity is derived by calculating the difference between the present value of assets, liabilities and off-balance sheet items. (Equity = Assets-Liabilities +/- OBS)

Similar to Earnings-at-Risk, two instantaneous, parallel interest rate "shocks" are applied to the base set of rates and all present values are re-computed. Equity-at-Risk is the largest negative change in the present value between the base and one of the "shock" scenarios. This is usually stated as a percentage change or may be presented in dollars as a comparison to a percentage benchmark of the bank's book assets (1% was suggested by regulators a few years ago). □

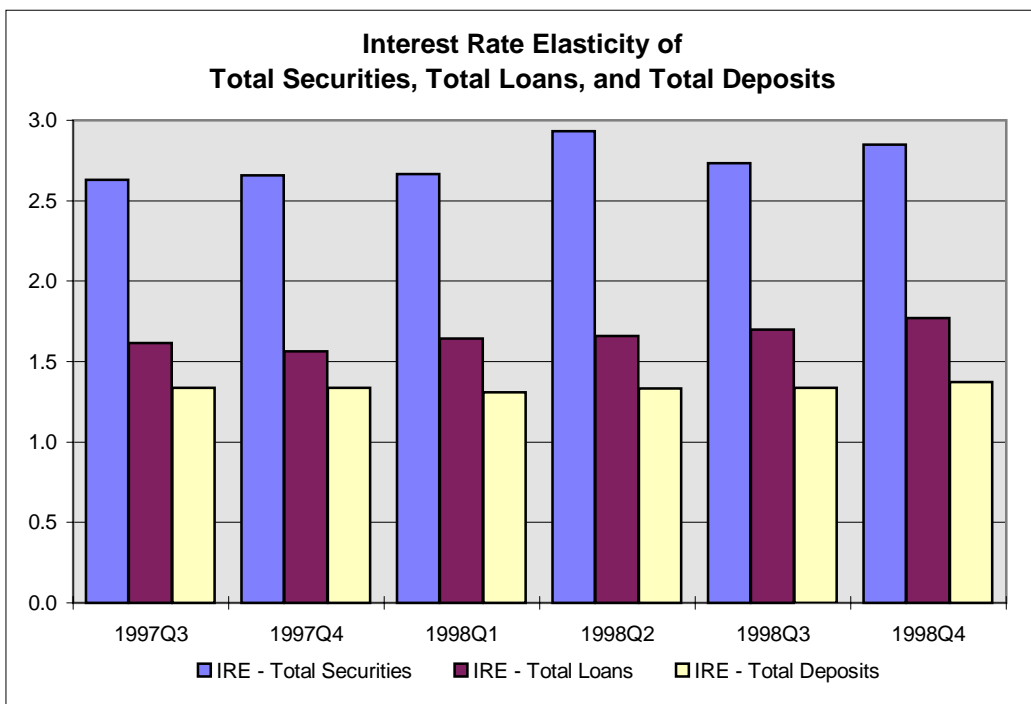
# Interest Rate Elasticity (Modified Duration)

4th Qtr 1998

	Peer Group A (under \$100 Million)					Peer Group B (\$100 - \$300 Million)					Peer Group C (over \$300 Million)				
	Mean	Std. Dev.	High	Med.	Low	Mean	Std. Dev.	High	Med.	Low	Mean	Std. Dev.	High	Med.	Low
Total Assets	-1.7	0.4	-3.2	-1.6	-0.6	-1.9	0.6	-3.8	-1.8	-0.3	-1.8	0.5	-3.5	-1.7	-0.6
Total Liabilities	-1.3	0.3	-2.7	-1.3	-0.2	-1.4	0.4	-3.1	-1.4	-0.6	-1.3	0.4	-3.6	-1.3	-0.5
Held to Maturity Securities	-1.7	1.7	-5.3	-1.9	0.0	-1.8	1.7	-5.5	-2.0	0.0	-2.0	1.6	-5.5	-2.3	0.0
Available for Sale Securities	-2.6	0.9	-5.1	-2.6	0.0	-2.7	1.1	-5.5	-2.8	0.0	-2.6	1.1	-5.7	-2.5	0.0
Total Investment Securities	-2.7	0.8	-5.2	-2.8	-0.1	-2.8	1.0	-5.5	-2.9	-0.2	-2.7	1.0	-5.1	-2.6	-0.6
Total Loans	-1.6	0.5	-3.5	-1.6	-0.4	-1.8	0.6	-4.5	-1.7	-0.2	-1.6	0.6	-2.9	-1.6	-0.6
Non-Maturing Deposits	-1.8	0.4	-4.9	-1.8	-0.1	-1.9	0.6	-5.4	-1.8	-0.1	-1.7	0.3	-3.2	-1.6	-0.5
CDs less than \$100M	-1.0	0.3	-1.8	-0.9	-0.3	-1.0	0.3	-2.4	-1.0	-0.2	-0.9	0.3	-1.8	-0.9	-0.3
Large Deposits	-0.8	0.4	-1.8	-0.8	-0.2	-0.9	0.4	-2.6	-0.8	-0.2	-0.7	0.3	-1.8	-0.7	-0.2
Total Deposits	-1.3	0.3	-2.7	-1.3	-0.2	-1.4	0.4	-3.1	-1.3	-0.6	-1.2	0.3	-2.6	-1.2	-0.6

## For the average Bank in Peer Group B:

- the market value of its **Total Securities** will decrease by **2.8%** given a **+100bp** change in interest rates;
- the market value of its **Total Loans** will decrease by **1.8%** given a **+100bp** change in interest rates;
- the duration of **Total Deposits** is **1.4 years**, significantly less than the duration of **Total Securities**, and less than the duration of **Total Loans**.



## (Duration, from pg. 2)

rise by 100 basis points, the instrument's present value will decline by approximately 1.5%. The use of the negative sign when stating interest rate elasticity reflects the inverse relationship between rate change and a change in an instrument's present value. Rates up, present value down. Rates down, present value up. Interest rate elasticity basically communicates by how much.

Duration (either version) can be used to measure the interest rate exposure of the economic value of a single instrument, a portfolio of instruments, or the bank's overall economic value of equity. For a given instrument, as indicated above, the duration is derived by weighting the present value of an instrument's cash flows by the time to receipt of those cash flows. The duration of a portfolio can be determined by simply adding the individual instrument durations and weighting them by their percentage of the total. The duration of the overall economic value of equity, is derived from the duration of all assets, liabilities, and off-balance sheet contracts.

Similar to the concept of GAP analysis, the inherent mismatch between the duration of assets, liabilities and off-balance sheet items determines the exposure of the bank's economic value of equity to changes in interest rates.

A bank with long-term assets funded by short-term liabilities (very typical for many community banks today), will generally have a duration of equity that is positive. The economic value of this bank will decline as interest rates rise. Conversely, a bank with short-term assets funded by long-term liabilities will generally have a negative duration of equity. The economic value of this bank will increase as interest rates rise. □

## Regulatory Focus on Liquidity

When examiners conduct an examination, they do a preliminary screening of financial data to see if any issues are readily apparent. This screening will produce an analysis of the liquidity a bank currently has but not necessarily what the bank's future liquidity needs might be. One means for evaluating the current position is to look at three measures referred to as dependency ratios. These measures assist in understanding the mismatch of funding the balance sheet's long-term asset base with various types of short-term or non-core liabilities.

The first ratio, *Volatile Liability Dependence %*, measures the relationship between long-term earning assets and net short-term funds. Long-term earning assets are considered to be investment securities which mature beyond one year and all loans. Net short-term funds are large time deposits, foreign office deposits, fed funds purchased, repurchase agreements, and other borrowings maturing within one year, net of short-term investments. As a snapshot measure, this ratio signifies the existing reliance on volatile sources to fund the bank's long-term asset base. It also indicates the level to which the bank may have already tapped these more readily available funding sources, therefore, limiting their ability to do so in the future.

The second ratio, *Non-Core Funding Dependence %*, is a further refinement for measuring the bank's current position by adjusting the volatile liability base to include additional sources considered to be "non-core". Added to the volatile liability base as defined above are

*(continued, See Liquidity pg. 15)*

## Liquidity Risk

4th Qtr 1998

	Peer Group A (under \$100 Million)					Peer Group B (\$100 - \$300 Million)					Peer Group C (over \$300 Million)				
	Mean	Std. Dev.	High	Med.	Low	Mean	Std. Dev.	High	Med.	Low	Mean	Std. Dev.	High	Med.	Low
Cash to Deposits	4.6	2.0	12.7	4.3	0.0	4.2	1.7	10.8	3.9	0.3	4.6	1.9	14.4	4.4	0.2
Loans to Deposits	68.6	15.1	107.4	70.1	17.9	72.4	14.0	121.0	73.6	26.3	79.7	15.1	140.3	79.2	36.7
Unrealzd Gain(Loss) on AFS Sec.	0.5	0.8	5.6	0.5	-3.7	0.7	0.9	7.3	0.6	-1.2	0.8	1.8	17.1	0.5	-0.7
AFS Securities to Total Assets	21.7	12.3	60.2	21.4	0.0	22.4	12.1	69.4	21.0	0.0	20.5	11.9	46.3	19.1	0.2
Short Term Inv. to Total Assets	5.5	5.0	24.8	4.3	0.0	3.6	4.3	30.1	2.2	0.0	2.8	3.5	20.4	1.4	0.0
Total Deposits to Total Assets	86.6	4.4	93.7	87.7	64.3	85.1	5.7	93.9	86.1	56.7	81.0	8.6	91.1	83.1	42.0
Purch Funds to Earning Assets	13.2	6.8	56.4	12.9	1.1	13.4	7.1	52.1	12.2	2.1	17.2	9.5	60.4	15.9	4.8
Net Borrowed Funds to Equity	-46.2	63.9	179.4	-38.6	-379.0	-19.9	59.3	216.6	-19.2	-249.6	29.3	77.9	267.4	21.4	-109.5
Volatile Liability Dependence	6.3	10.5	28.0	7.7	-36.3	9.2	10.7	53.8	9.2	-50.7	15.5	12.6	63.2	14.0	-9.3
Non-Core Funding Dependence	2.3	15.5	40.0	4.1	-115.3	4.7	15.0	39.2	5.5	-87.9	13.1	15.0	54.6	10.4	-19.3
Short-Term Non-Core Funding Dep.	-1.8	14.3	33.7	0.6	-115.3	0.6	14.2	37.3	2.1	-104.7	7.7	12.7	56.1	6.7	-21.3

The average Bank in Peer Group B has:

- Asset Liquidity** - a Loan to Deposit Ratio of 72.4%;
- Asset Liquidity** - 22.4% of its Assets in AFS Securities;
- Funding Liquidity** - Total Deposits to Total Assets of 85.1%;
- Funding Liquidity** - and 13.4% Purch. Funds to Earning Assets.

### Analyzing Your Current Liquidity Position

Although effective liquidity management requires looking ahead at expected future cash flows, it is also necessary to have an initial understanding of the bank's current position.

Typically, when evaluating this current liquidity position we start by constructing ratios that communicate the inherent liquidity on the asset side of the balance sheet as well as the potential funding sources. A traditional asset liquidity measurement is the Loans to Deposits ratio. It is designed to depict the percentage of deposit funding that is "tied-up" in the loan portfolio which is not normally considered to be very liquid. The AFS Security to Total Asset ratio is a complimentary measure to the Loans to Deposits ratio. It communicates the percentage of assets that could be readily converted to cash in a liquidity crunch (pledging requirements and individual security market values within the portfolio would potentially affect the true "availability" of the portfolio).

On the liability side, the ratio of Total Deposits to Total Assets is another traditional liquidity measure that indicates the broad "reliable" base of funding for the bank. Although this ratio establishes how much of the bank's assets are funded by deposits, rather than borrowed funds or equity, it falls short in helping to understand the nature of the deposits deemed to be reliable. In conjunction with this measure, the Purchased Funds to Earning Assets ratio assists in recognizing the nature of funding sources. By definition, Purchased Funds include large CDs, public CDs, foreign deposits, brokered CDs, fed funds purchased, repurchase agreements, and other short-term borrowings (e.g. S-T FHLB advances). Used together, these two measures could reveal that although a bank might be funding 90% of assets via deposits, if the Purchased Funds ratio is 45% it's a strong indicator that most of the bank's deposits are, on the surface, not necessarily considered reliable. Certainly, these two measures can give a clearer indication of the bank's potential future funding position by better identifying the nature of the funding sources already employed and depended on by the bank. ■

# Asset Quality

4th Qtr 1998

	Peer Group A (under \$100 Million)					Peer Group B (\$100 - \$300 Million)					Peer Group C (over \$300 Million)				
	Mean	Std. Dev.	High	Med.	Low	Mean	Std. Dev.	High	Med.	Low	Mean	Std. Dev.	High	Med.	Low
Non-Perf. Assets to Total Loans	1.4	2.7	32.1	0.8	0.0	1.1	1.5	16.7	0.8	0.0	1.1	0.8	4.4	0.9	0.1
Allow for Loan Loss to Total Loans	1.5	0.7	4.6	1.4	0.3	1.3	0.5	4.0	1.3	0.3	1.4	0.5	3.6	1.3	0.5
Net Charge-Offs to Total Loans	0.2	0.3	2.5	0.1	-0.4	0.2	0.3	3.1	0.1	-0.4	0.3	0.3	2.5	0.2	-0.6
Loan Loss Provision to Total Loans	0.3	0.4	3.4	0.2	-0.5	0.3	0.3	2.1	0.3	0.0	0.4	0.3	2.0	0.3	-0.3
Total Inv. Sec. Market Value Premium	1.0	0.9	4.2	0.9	-2.5	1.3	1.1	5.6	1.1	-0.7	1.2	1.4	9.6	1.0	-0.8
Net Loans Present Value Premium	3.8	1.9	15.8	3.8	-3.0	4.0	1.5	8.3	4.0	-1.6	3.8	1.8	14.0	3.6	0.1
Total Dep. Present Value Premium	-0.2	0.8	3.7	-0.2	-2.5	0.2	1.0	5.3	0.2	-3.6	0.5	1.1	3.3	0.5	-6.6
Total Inv. Sec. to Total Assets	27.0	12.7	68.0	25.9	0.3	27.5	11.8	70.5	25.6	5.0	26.6	11.0	64.6	25.2	0.7
Total Loans to Total Assets	58.9	13.2	86.4	60.8	16.0	61.2	11.6	86.7	62.3	19.9	62.7	10.3	89.4	63.3	29.4
Risk Wghd Assets to Tot Assets	63.2	12.3	101.2	63.2	27.1	64.6	10.0	94.6	63.9	32.9	66.0	11.3	93.4	65.1	41.1

## The average Bank in Peer Group B has as a % of Total Loans:

- 1.1% Non-Performing Assets;
- an Allowance for Loan Loss of 1.3%;
- 0.2% Net Charge-offs;
- and a 0.3% Loan Loss Provision.

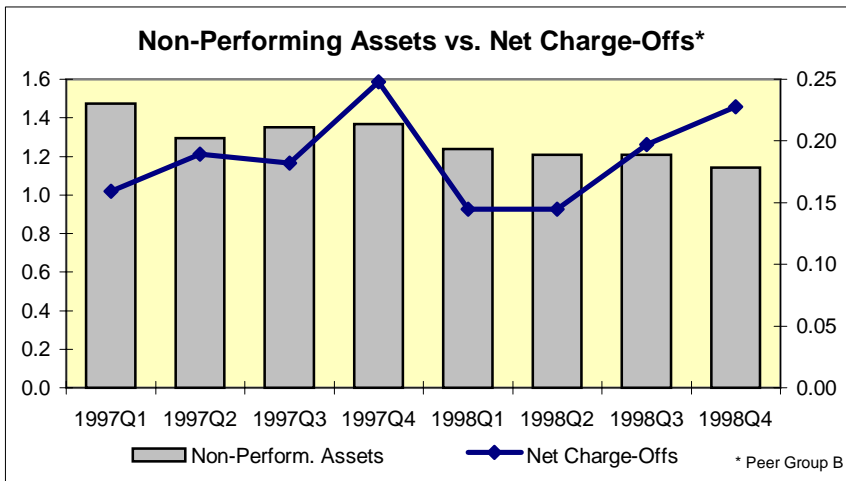
## Loan Quality

Bank management can focus on four related key measures to establish a current and prospective view of possible loan loss. These four measures are Non-Performing Assets, Allowance for Loan Loss, Net Charge-Offs, and Loan Loss Provision.

Begin by looking at Non-Performing Assets which are primarily past-due, non-accruing, and foreclosed loans. Such "assets" represent past credit decisions which are now recognized as bad loans. Non-Performing Assets are a drag on current earnings and an indication of what may need to be charged-off in the future.

Next look at the Allowance for Loan Loss which is the bank's reserve for bad debts. It represents prior charges against earnings which can absorb current and future charge-offs. When viewed in comparison to Non-Performing Assets, the adequacy of current reserves can be judged. If the Allowance is below the Non-Performing Assets, additional provision expense may be necessary.

(continued, See Asset Quality, pg. 15)



## Market Values and Asset Quality?!?- Do market values of financial instruments indicate asset quality?

Yes. A market value is the price a willing buyer and a willing seller would offer and accept, to trade an item owned, for cash or equivalent, in a free and open market ("at-arms length"). Presumably a willing buyer expects normal quality, will pay a premium for good quality and will require a discount for poor quality.

The quality of a financial instrument is indicated by the credit worthiness of the maker, the length of time until principal is to be repaid, estimates of prepayment speeds, the rate of return, the structure of the interest rate contract (i.e. fixed rate, floating or adjustable) and timing of interest rate changes. Of the above, credit quality is the most important.

Asset quality, as suggested by market values, of a commercial bank is reflected in three items: the market value of its investment securities; the fair value of its loans; and the fair value of its deposit premium (the recorded value less the calculated economic value of deposit liabilities).

For traded financial instruments, such as investment securities, active markets with published prices provide an independent source of information for market values.

The major difference between a loan contract and an investment security is the absence of a trading market to set prices "at-arms-length". None-the-less, a fair value (the financial world's substitute for market value) can be estimated.

Like loans, deposits of most commercial banks are not traded in any public market on a daily basis.

(cont, See Market Values, pg.15)



## Growth Measures and Capital Adequacy?

Why are we concerned about various aspects of growth and what is its significance when measuring capital adequacy?

Growth in balance sheet size is necessary for banks to meet the growing needs of customers, to offset inflationary pressures on operating costs, and to increase the returns to investors.

Evaluation of growth has several components. First, asset growth compared to the rate of inflation indicates whether the bank is growing in real terms or slipping in relation to changes in the economy.

Second, asset growth indicates how well the management team can do compared to other banks operating in the same environment.

Third, net income growth compared to asset growth indicates whether the bank is sacrificing profitability to achieve rapid asset growth.

Finally, consistency among the growth rates of loans, deposits, assets, and equity (this is the concept of balanced growth) indicates how well management has balanced diverse pressures.

In today's market environment, maintaining a balance of growth, especially between loans and deposits, is increasingly more difficult due to competitive pressures from other financial institutions and non-bank entities.

As traditional "core" deposits leave the banking system, many bankers have employed available funding programs such as FHLB advances. These programs have allowed bankers to satisfy short-term financing needs or to leverage the

*(continued, See Growth pg. 16)*

## Capital Adequacy

4th Qtr 1998	Peer Group A (under \$100 Million)					Peer Group B (\$100 - \$300 Million)					Peer Group C (over \$300 Million)				
	Mean	Std. Dev.	High	Med.	Low	Mean	Std. Dev.	High	Med.	Low	Mean	Std. Dev.	High	Med.	Low
	Total Risk-Based Capital %	17.9	7.4	53.7	15.6	8.3	16.3	6.5	59.8	14.6	9.0	14.3	3.6	28.7	13.5
Tier 1 Risk-Based Capital %	16.8	7.4	52.8	14.5	7.2	15.2	6.5	58.5	13.6	7.9	13.0	3.6	25.8	12.3	6.8
MVPE to Book Value of Equity	120.9	16.8	179.0	120.0	57.0	128.7	16.1	190.0	127.0	89.0	130.9	15.5	192.0	130.0	97.0
Equity to Total Assets	10.3	2.9	20.8	9.5	5.4	9.8	2.8	26.9	9.2	5.9	9.1	2.3	18.8	8.6	5.5
Growth Rate - Balance Measure	16.6	18.0	146.6	11.2	1.3	12.6	9.0	61.2	10.8	1.9	15.5	13.7	96.5	11.5	0.5
Growth Rate - Loans	11.6	18.6	118.1	8.1	-22.0	10.4	12.7	93.1	8.9	-18.5	13.1	18.3	86.0	9.3	-11.4
Growth Rate - Assets	11.2	14.8	85.9	7.4	-11.4	12.1	11.5	103.9	10.4	-8.9	16.8	19.1	106.6	11.0	-4.7
Growth Rate - Deposits	11.0	16.0	99.6	7.2	-20.6	11.5	12.1	117.1	9.9	-12.1	15.1	19.3	123.5	9.8	-6.2
Growth Rate - Equity	9.0	18.3	146.0	6.6	-37.4	8.3	9.2	70.8	8.0	-31.3	15.5	23.3	128.3	10.0	-27.3

FDICIA Capital Category	Total Risk-Based Capital %	Tier I Risk-Based Capital %	Leverage Ratio %
Well Capitalized	10%	6%	5%
Adequately Capitalized	8%	4%	4%
Undercapitalized	less than 8	less than 4	less than 4
Significantly Undercapitalized	less than 6	less than 3	less than 3
Critically Undercapitalized			2% or less

## Risk-Based Capital Standards

The regulatory capital category that your bank falls under can have significant impact on your ability to run your bank. The provisions for capital based supervision, as established by FDIC Improvement Act (FDICIA), are summarized here.

"Well Capitalized" banks are the only ones that escape required regulatory sanctions.

"Adequately Capitalized" banks are prohibited from accepting brokered deposits without the prior approval of the FDIC, and may not pay interest "significantly above prevailing interest rates" on any deposits.

"Undercapitalized" banks are subject to all of the restrictions of adequately capitalized banks, must also submit acceptable capital restoration plans to the appropriate federal banking agency (including a parent company guarantee of compliance in the case of a bank holding company subsidiary), are prohibited from paying dividends or paying management fees to a parent bank holding company, cannot increase total assets, and are limited in their ability to make acquisitions, open new branch offices, or enter new lines of business.

"Significantly Undercapitalized" banks are subject to the same restrictions as undercapitalized institutions, may not pay a bonus or give a raise to a senior executive officer without prior regulatory agency approval, and may also be required, among other things, to raise additional capital, reduce total assets, terminate certain activities, replace officers or directors, or seek to be acquired.

"Critically Undercapitalized" banks must be closed or placed into conservatorship unless good cause to do otherwise exists, and if allowed to survive are to be subjected to an even broader array of operating restrictions.

Additionally, at each lower level of capital, the premiums for FDIC deposit insurance coverage increases. ■

# Earnings Performance

4th Qtr 1998

	Peer Group A (under \$100 Million)					Peer Group B (\$100 - \$300 Million)					Peer Group C (over \$300 Million)				
	Mean	Std. Dev.	High	Med.	Low	Mean	Std. Dev.	High	Med.	Low	Mean	Std. Dev.	High	Med.	Low
Return on Assets	1.15	0.50	3.13	1.12	-0.26	1.25	0.42	2.83	1.22	-0.10	1.27	0.41	3.02	1.23	0.38
Return on Equity	11.38	5.20	27.75	10.79	-4.85	13.06	4.80	37.34	12.49	-1.07	14.36	4.80	35.33	13.84	2.94
Yield on Earning Assets	8.41	0.73	11.14	8.34	6.59	8.34	0.60	10.69	8.24	6.51	8.30	0.77	11.63	8.14	6.83
Cost of Funds	4.52	0.54	5.87	4.55	2.86	4.43	0.49	5.66	4.45	2.68	4.45	0.56	6.54	4.52	2.74
Interest Margin	4.69	0.77	8.05	4.63	2.99	4.72	0.78	7.29	4.60	2.92	4.58	0.87	7.22	4.59	2.45
Net Overhead to Earning Assets	2.72	0.74	5.17	2.61	1.12	2.49	0.70	5.17	2.46	0.60	2.22	0.67	4.39	2.25	0.07
Operating Efficiency Ratio	64.00	11.76	102.23	63.22	35.25	59.90	10.78	91.83	59.55	28.45	58.90	9.05	82.66	58.72	36.56
Non-Int Inc. to Non-Int Exp.	22.54	10.56	94.58	20.77	4.81	26.19	11.13	95.65	24.24	6.72	34.06	15.42	99.07	33.22	4.38
Inc. Taxes to Net Inc. Before Tax	23.75	16.56	0.00	26.32	-50.57	29.10	9.46	68.89	31.26	0.00	32.15	6.15	48.18	33.02	0.00

## The average Bank in Peer Group B has:

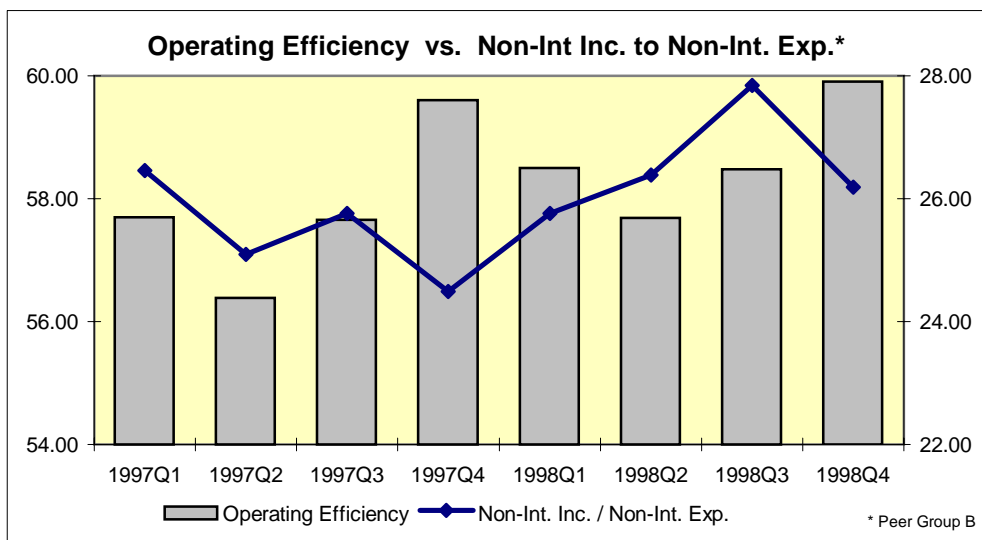
- a Return on Equity (ROE) of 13.06%;
- a Return on Assets (ROA) of 1.25%;
- and a 4.72% Interest Margin.

## Measuring your Bank's Operating Efficiencies

With increased competition from outside the industry, banks continue to experience interest margin pressures. Individual banking companies and the banking industry as a whole are striving to find greater efficiencies in their day-to-day operations. In large banking companies, some of these efficiencies are sought by merging entities and therefore in the process, eliminating redundancies in all aspects of operations. For smaller institutions, efficiency gains are usually achieved by controlling costs and generating more diverse and higher levels of non-interest revenues.

When evaluating a bank's operating efficiency, a series of measures that incorporate an analysis of the bank's level of non-interest expense relative to the bank's non-interest income, earning asset level and overall revenue base are necessary.

The first of these measures, the Operating Efficiency Ratio, is created by dividing non-interest *(continued, See Operating Efficiencies pg. 16)*



## The components of Margin

When evaluating the earnings performance of your financial institution, if you unravel the bank's return measures, ROA and ROE, you quickly realize that the net interest margin is still the most significant factor in determining a bank's profitability. A strong and consistent interest margin, regardless of the interest rate environment, allows a bank to absorb net overhead costs, provide for possible loan losses, pay income taxes, and return a respectable level of net income.

Expressed in dollars, margin is known as net interest income. Net interest income is interest income from all earning assets less interest expense on all interest bearing deposits and liabilities. Stated as a percentage of average earning assets, net interest income represents the bank's interest income (tax equivalent basis) net of interest expense and is known as net interest margin.

By converting interest margin to a ratio, it can be easily compared to competitors and peers. The higher the interest margin ratio the more effective the bank is in managing its earning assets and interest bearing liabilities. A good margin ratio is reflective of good yields, lower cost rates, competent use of earning assets and a judicious mix of interest-bearing liabilities. □

## Peer Data Demographics

### Peer Group Sizes:

#### 534 Total Banks

194 Group A (< \$100M)

231 Group B (\$100M-\$300M)

109 Group C (> \$300M)

### FDIC Region:

- 16% Southeast (Atlanta)  
(AL,FL,GA,NC,SC,VA,WV)
- 17% MidAtlantic (New York)  
(DC,DE,MD,NJ,NY,PA)
- 4% Northeast (Boston)  
(CT,MA,ME,NH,RI,VT)
- 13% South (Memphis)  
(AR,KY,LA,MS,TN)
- 22% Central (Chicago)  
(IL,IN,MI,OH,WI)
- 10% MidWest (Kansas City)  
(IA,KS,MN,MO,ND,NE,SD)
- 10% SouthWest (Dallas)  
(CO,NM,OK,TX)
- 9% West (San Francisco)  
(AK,AZ,CA,GU,HI,ID,MT,NV,OR,UT,WA,WY)

### Total Assets (in thousands)

<b>All Banks</b>	<b>\$327,059,089</b>
Group A	11,133,545
Group B	39,886,505
Group C	276,039,039

### Asset Sizes (in thousands)

(rounded to the nearest million)

#### Group A:

High	\$100,000
Median	56,000
Low	8,000

#### Group B:

High	\$300,000
Median	157,000
Low	100,000

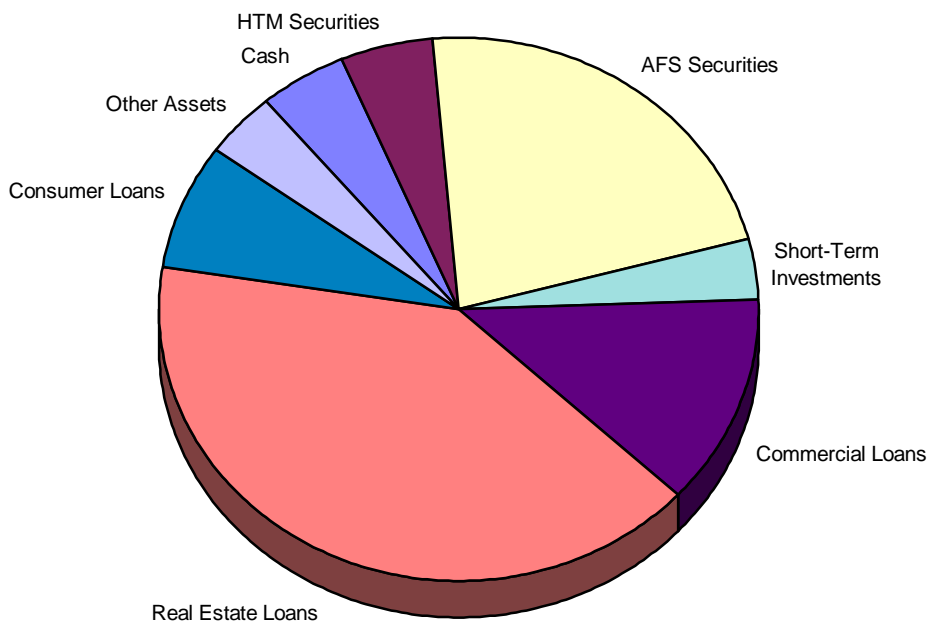
#### Group C:

High	\$79,966,000
Median	584,000
Low	301,000

## Balance Sheet Mix - Assets

4th Qtr 1998	Peer Group A (under \$100 Million)					Peer Group B (\$100 - \$300 Million)					Peer Group C (over \$300 Million)				
	Mean	Std. Dev.	High	Med.	Low	Mean	Std. Dev.	High	Med.	Low	Mean	Std. Dev.	High	Med.	Low
Cash	5.5	3.7	30.4	4.7	0.9	4.7	2.9	26.7	4.2	0.9	4.6	2.8	19.0	3.8	1.5
Held to Maturity Securities	5.3	8.9	56.4	0.9	0.0	5.1	8.8	66.9	1.2	0.0	6.2	8.5	46.0	2.1	0.0
Available for Sale Securities	21.7	12.3	60.2	21.4	0.0	22.4	12.1	69.4	21.0	0.0	20.5	11.9	46.3	19.1	0.2
Short Term Investments	5.5	5.0	24.8	4.3	0.0	3.6	4.3	30.1	2.2	0.0	2.9	3.5	20.4	1.9	0.0
Commercial & All Other Loans	16.7	10.9	49.2	13.8	0.0	12.5	7.8	43.2	11.3	0.0	13.9	9.0	43.4	11.9	0.0
Real Estate Loans	34.2	13.7	82.8	34.4	3.5	41.1	13.0	83.5	41.8	5.4	40.7	13.5	87.9	40.6	4.3
Consumer Loans	8.1	5.5	34.4	6.8	1.0	7.6	5.6	31.1	6.4	0.1	8.2	7.4	42.7	6.5	0.2
Other Assets	4.0	1.6	9.1	3.7	1.1	3.8	1.6	12.6	3.5	1.2	4.1	1.8	14.5	3.9	1.1

### Asset Mix - Peer Group B Mean



*When evaluating guidelines for risk management and the level of capital needed for interest rate risk, bank management and examiners should consider the nature and complexity of the bank's activities.*

Joint Policy Statement on Interest Rate Risk, 1996



# Balance Sheet Mix - Funding Sources

4th Qtr 1998

	Peer Group A (under \$100 Million)					Peer Group B (\$100 - \$300 Million)					Peer Group C (over \$300 Million)				
	Mean	Std. Dev.	High	Med.	Low	Mean	Std. Dev.	High	Med.	Low	Mean	Std. Dev.	High	Med.	Low
Non-Interest Deposits	13.8	6.4	47.7	12.6	1.2	13.8	6.3	39.1	12.3	0.2	12.8	5.9	31.5	12.6	1.1
Now, Savings and MMDA	29.2	8.2	57.3	28.2	7.1	31.5	8.8	67.2	30.9	12.0	32.0	8.7	57.9	31.3	7.8
CDs less than \$100M	32.4	9.5	57.8	32.9	5.4	29.3	9.5	51.3	30.4	1.0	24.9	9.3	51.4	25.7	0.0
Jumbo CDs	11.3	5.9	46.6	10.6	1.0	10.5	6.0	46.6	9.4	1.2	11.2	7.4	43.2	9.4	1.8
Short Term Borrowed Funds	0.9	2.1	21.6	0.0	0.0	2.0	3.1	22.5	0.5	0.0	4.9	5.0	23.7	3.4	0.0
Long Term Debt	1.4	2.6	13.4	0.0	0.0	2.3	3.7	22.0	0.1	0.0	4.0	6.5	44.7	1.0	0.0
Other Liabilities	0.8	0.4	3.1	0.7	0.1	0.8	0.5	3.0	0.7	-0.1	1.0	0.7	4.5	0.8	0.2
Equity	10.3	2.9	20.8	9.5	5.4	9.8	2.9	26.9	9.2	5.9	9.1	2.3	18.8	8.6	5.5

## "Don't put all your eggs in one basket."

This adage can be traced from ancient Chinese proverbs, through biblical times, to modern business theory. Diversification remains the most fundamental of all principles in the world of risk management and explains why A/L BENCHMARKS provides information on Balance Sheet Mix (%).

The Balance Sheet Mix information identifies three categories of investment securities and three categories of loans. There are two other asset categories, Cash and Other Assets, which are not interest rate sensitive.

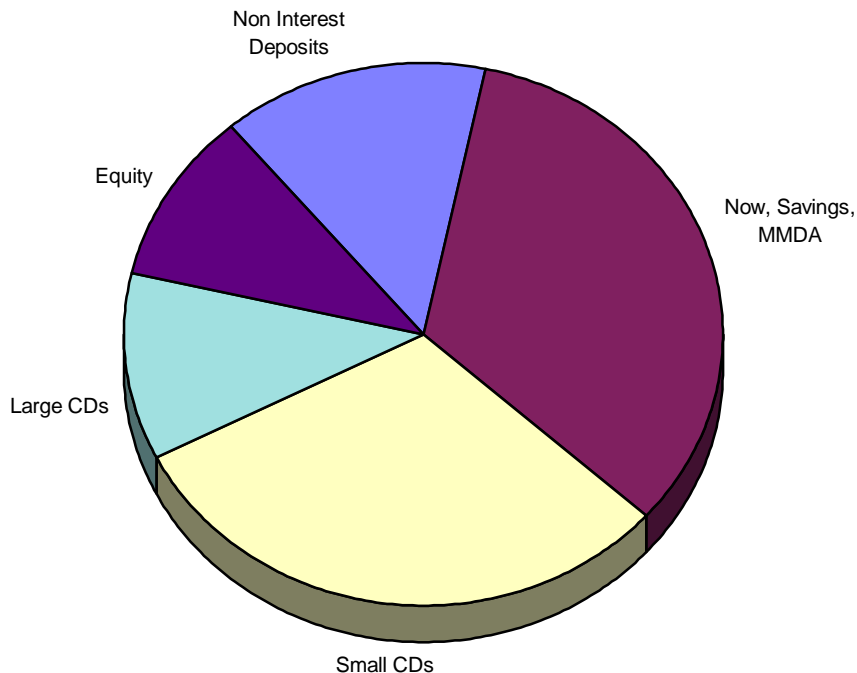
How do you compare? Are your percentages within one standard deviation of the mean? Have you decisively established your asset mix, or is your allocation a result of competition and your marketplace? Regardless of how you measure, are you comfortable with your asset allocation?

The mix percentages also identify four categories of deposits and two categories of borrowed funds. The Other Liabilities and Equity categories complete the liability side of the balance sheet. All sources of funding are expressed as a percentage of Total Assets to give comparability to asset mix percentages.

Where does the majority of your funding come from? Core Deposits, Purchased Funds, or Equity? Can you change your funding mix? Do you want to change your mix?

Balance Sheet Mix provides a useful insight into the major areas of financial risk; asset quality, liquidity, and interest rate risk. The regulators are interested in all three, and bank executives need to measure all three for adequate risk/return analysis. A/L BENCHMARKS provides key information to help your analysis. Is your asset allocation comparable to your peers? Is it consistent with your sources of funding?

## Funding Mix - Peer Group B Mean



*The balance sheet mix percentages will help explain how the duration of individual accounts weigh into the duration of Total Assets and Total Liabilities. Do you have a heavy concentration in a certain asset or funding category? If so, have you taken adequate precautions to reduce your risk? If not, does your rate of return compensate you for the added risk?*

## The New Approach to Examinations

In April of 1998 the regulatory agencies published the Joint Policy Statement on Investment Securities and Derivative Financial Instruments. This statement was effective May 26, 1998 and is a follow-up to the 1996 Joint Policy Statement on Interest Rate Risk.

The new Joint Policy Statement places major emphasis on a subjective approach to examinations. It clearly dispels any notions of regulatory reliance on specific measures or benchmarks but rather, focuses on examiner evaluation of management practices and managerial systems of risk identification, measurement and control.

In short, the new examination approach is good for regulators and bankers so far as the actual examination process is concerned, but leaves bankers short of clear guidance for compliance. Within the regulatory materials on interest rate risk, no standards have been defined; no specific techniques are required; no clear benchmarks are established; and discussions of policy statements are broad generalizations. **Yet the examination process fully expects standards, techniques, benchmarks and policies to be in place and used on a regular basis.**

Further, since bankers are required to complete a fairly comprehensive call report on a quarterly basis, the examiners have some data to use for preliminary screening. The results of screening systems pinpoint examination questions and provide data to support examination conclusions. With each regulatory agency using a different screening calculation, with the lack of standards, with the lack of defined techniques, how is a banker to design, implement, and use a system of measurement and control?

The answer lies in the development of industry definitions, standards, agreed upon techniques, and peer statistics for benchmarks. Interest rate risk must be measured by an earnings at risk

*(continued, See Examinations pg. 15)*

## Regulatory Measures

4th Qtr 1998	Peer Group A (under \$100 Million)					Peer Group B (\$100 - \$300 Million)					Peer Group C (over \$300 Million)				
	Mean	Std. Dev.	High	Med.	Low	Mean	Std. Dev.	High	Med.	Low	Mean	Std. Dev.	High	Med.	Low
	3 Year Average Return on Assets	1.1	0.7	2.6	1.2	-3.1	1.2	0.4	2.6	1.2	0.0	1.3	0.4	3.0	1.2
Tier 1 Capital to Average Assets	10.2	2.9	19.5	9.3	4.9	9.5	2.7	25.4	8.8	5.8	8.6	2.0	16.4	8.3	5.3
Assets Mat or Rep over 5 years	16.4	11.7	67.1	14.3	0.0	22.3	14.7	76.5	18.7	0.5	20.9	15.5	66.2	16.8	0.0
Not'l Amts of Deriv Fin Inst to Tier 1 C	0.3	4.1	56.9	0.0	0.0	3.0	29.0	407.2	0.0	0.0	35.5	93.3	538.0	0.0	0.0
Pretax Operating Income to Earning Assets															
4 quarter average	1.8	0.7	4.5	1.8	-0.3	2.0	0.7	4.1	2.0	-0.2	2.1	0.6	4.9	2.0	0.6
12 quarter average	1.8	0.8	3.7	1.9	-1.6	2.0	0.7	4.2	2.0	0.0	2.0	0.8	4.8	2.0	-0.5
Net Interest Income to Earning Assets															
4 quarter average	4.7	0.8	8.1	4.6	3.0	4.7	0.8	7.3	4.6	2.9	4.6	0.9	7.2	4.6	2.5
12 quarter average	4.8	0.8	8.1	4.7	2.9	4.8	0.8	7.2	4.7	2.6	4.5	0.9	7.2	4.6	2.0
Total Securities Market Value Premium															
4 quarter average	0.8	0.8	3.0	0.8	-3.0	1.2	1.1	7.5	1.0	-1.0	1.2	1.5	9.3	0.9	-0.8
12 quarter average	0.6	3.4	46.3	0.4	-3.6	0.8	3.3	46.3	0.5	-14.1	0.6	1.9	9.6	0.5	-12.9
Loan Growth %															
4 quarter average	14.8	22.8	153.3	9.7	-16.9	12.7	28.3	409.8	9.4	-18.0	16.0	27.5	258.0	10.2	-36.8
12 quarter average	16.4	25.6	174.8	9.8	-11.3	13.2	27.4	409.8	10.1	-8.2	17.2	17.8	156.3	13.5	-0.9
Mortgage Backed Securities to Total Assets															
4 quarter average	5.9	7.2	33.1	3.0	0.0	6.0	7.2	42.3	3.5	0.0	6.4	7.1	30.1	4.0	0.0
12 quarter average	6.4	7.5	34.7	3.9	0.0	6.3	7.4	37.6	3.6	0.0	6.1	6.5	27.1	4.1	0.0
Core Deposits to Total Assets															
4 quarter average	42.0	10.8	78.6	41.2	15.8	44.5	12.1	84.6	42.8	17.5	44.2	11.1	72.1	43.0	13.9
12 quarter average	42.4	10.6	78.8	41.1	14.1	44.7	11.9	84.0	43.8	18.2	44.7	10.7	72.9	44.5	16.2

### The average Bank in Peer Group B has:

- a 3-year average ROA of 1.25%;
- 9.5% Tier 1 Capital to Assets;
- 22.3% of it assets maturing or repricing in over 5 years;
- and has 3.0% of its Capital in Derivative Instruments.

The four items shown first on this page are four key items of interest to many bank examiners. While bank regulators do not have explicit benchmarks for each of these measures, how any one bank compares to the peer average will have an impact on the examiner's judgment about the bank's risk profile.

The last six items above focus on three major factors of financial performance: Net interest margin and/or net income volatility; securities appreciation or depreciation; and balance sheet composition. By comparing the 4 quarter average of each of the six measures with the 12 quarter average, the recent trend is evident. If the most recent 4 quarter average is higher than the 12 quarter average, the trend is up and vice versa.

For example, the average bank in Peer Group B shows a decreasing trend in core deposit funding and a level trend in net interest income. □

# ALCO Policy Development

The peer information in this document combined with individual performance measures for your bank will help you develop credible and usable asset/liability management policies. Such information reveals much about your current managerial philosophy and usually reveals unstated past policies that are effective and that should be continued. The information gathered while collecting historical data and developing a financial forecast, as available via A/L BENCHMARKS, may also suggest possible policy conflicts that must be resolved.

Asset/liability (A/L) management policies are senior management's formal written statements and guidelines that serve as a basis for financial decision-making. A/L policies assist in controlling performance and help educate line managers and others who may succeed senior management. To ensure that policies are written to achieve these desired results, keep the following guidelines in mind:

## Define Specific Areas for Policies

Avoid tackling the entire subject of A/L management in one or two broad areas because it will lead to unnecessarily long and complex policies. Limiting policy areas to specific issues will simplify communication. Once specific areas for policies have been selected, writing generalized policy statements will be easier to accomplish.

## Write Flexible Policy Statements

Most bankers have a natural aversion for formal, structured policy because it ties one's hands. Good policy, however, allows changing managerial strategy decisions.

## A/L Policies Should Not Conflict with Other Policies

Policies in functional areas such as lending, investment, and operations should complement the A/L policies and should not be replaced by them.

## Policies Must Comply with the Law

Banking regulations and laws are regularly being revised. Management should be careful to ensure that the A/L policies comply with all appropriate regulations.

## Policy Performance Should Be Measurable

For the policies to be useful to the board of directors and management, a method of determining whether the policies are producing the intended financial performance must be available. Where possible, each policy statement should be accompanied by a guideline that can be used to monitor the effectiveness of the policy statement. Policies cannot be monitored without measurable guidelines; therefore, establishment of these guidelines becomes a natural focal point in policy development requiring considerable thought and attention.

## Policies are Unique

Policy statements and guidelines must be tailored to each bank and to its current conditions. Each bank's policies must reflect its individual attributes: its size, marketplace, competition, customers, regulations, management philosophy, operational characteristics, and financial performance.

## Format is Important

In order to be easily understood, asset/liability policy statements and guidelines must be presented in a well-structured format that enables visualization of the components. Although the substance of the policies is crucial for managing the bank, the form of presentation is also important.

## (LEAD from pg. 1)

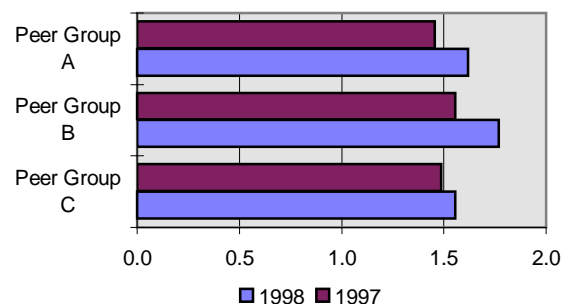
(interest rate elasticity) or duration for both Total Investment Securities and Total Loans is higher (longer) for 1998 compared to 1997. If market rates move farther down, earnings will not fall as fast with the longer duration. However, the current financial environment suggests that rates are more likely to move up than down. Bank earnings will move more sluggishly up with the longer duration of Earning Assets.

Second, during 1998 bankers stepped up the growth rate of Total Assets. In every Peer Group, the Growth Rate of Total Assets jumped by approximately 50%. And, that jump in asset growth rates was not matched by a similar growth in equity. Thus, bankers have increased the balance sheet leverage. The Equity to Total Asset ratio for each Peer Group dropped for 1998 from 1997.

Third, bankers appear to be a little less liquid in 1998 compared to 1997. For Peer Groups A and B, banks average a little higher ratio of Purchased Funds to Earning Assets. Peer Group C simply maintained its average for 1998 close to the 1997 percentage. All Peer groups show a higher average percentage mix of Large CDs for 1998, compared to 1997. The larger percentage mix of Large CDs helps explain why the Average Cost of Funds is rising.

With the squeeze in interest margin, bankers are reacting to the risk/return notion of business. More risk must be assumed to hold back slipping margins. It happened in 1998. The squeeze is on.

Duration (years) Total Loans  
December 31



# Glossary of Terms

**Allowance for Loan Losses** A valuation reserve to provide for possible losses on loans. The reserve is a contra-asset which is subtracted from total loans to determine the net carrying value of loans for a bank's statement of condition. Also referred to as reserve for loan & lease loss.

**Asset Quality Risk** The potential loss of cash flows due to poor quality borrowers or counterparties; low investment grades of securities; or excessive concentration of similar assets and contracts.

**Balance Measure** See Growth Rate - Balance Measure

**Balance Sheet Mix** Asset, liability, and equity accounts all stated as a percentage of total assets on the balance sheet date (EOP).

**Book Value** The amount for an item shown on the statement of condition which follows generally accepted accounting principles (GAAP). In many instances, book value is the original transaction value, plus or minus any premium, discount, or other amortization adjustment. For some items, however, GAAP now requires the use of fair value such as is the case for investment securities classified as available-for-sale.

**Borrowed Funds** Includes all funds acquired from creditors in the form of debt, payable in less than one year and usually at money market interest rates.

**Capital Adequacy** The level of capital funds required to support the institutional structure and to provide protection against unanticipated and excessive losses. In the A/L BENCHMARKS Peer Information a balanced growth of loans, assets, deposits, and capital; acceptable leverage; and risk-based capital of 10% or better (well capitalized) are indications of adequate capital.

**Cash** In the A/L BENCHMARKS Peer Information, cash includes till cash, cash reserve balances, deposits with other banks, and items in process of collection.

**Charge-offs** Loans which have been written off the books and charged against the allowance for loan losses.

**Commercial Loans** See Loans

**Consumer Loans** See Loans

**Core Deposits** Includes Noninterest Deposits, NOW and Savings Deposits, and Money Market Deposits.

**Cost of Funds** The cost of funds percentage is total annualized interest expense divided by total average interest-bearing funds, including deposits and all borrowed funds.

**Deposit Present Value Premium** The amount by which the book value of total deposits exceeds the computed present value (market value) of total deposits.

For purposes of the A/L BENCHMARKS Peer Information, the present values of the various deposits were computed using the discounted cash flow method. The maturity assumptions for non-maturing deposits (decay factors) are indicated by the duration estimates (IRE) for each deposit classification.

**Duration** See Interest Rate Elasticity

**Earnings at Risk** See Net Earnings at Risk and Net Interest Earnings at Risk

**Equity Value at Risk** The potential adverse change in the present value (market value) of total equity (MVPE) arising from an assumed change in interest rates.

For the A/L BENCHMARKS Peer Information, the base MVPE is determined by subtracting the present value (market value) of total liabilities from the present value (market value) of total assets. Present values for assets and liabilities are either current quoted market prices or discounted cash flows using current market rates. The potential adverse impact on present value of equity is calculated by using a +/-200 basis point change in interest rates; assuming a parallel shift in the treasury yield curve; and simulating changes in repricing, prepayments and other rate-driven parameters which effect the level and timing of cash flows.

**Growth Rate** (Annual growth rate) The year-to-year change in the account balance expressed as a percentage of the prior year's balance.

**Growth Rate - Balance Measure** A measure of the difference between the highest and lowest of four growth rates (loans, assets, deposits, and equity). The smaller the difference, the better the balance among the four growth rates.

For example, if all four of the growth rates were exactly 3.76%, then the difference between the high and low percentage is zero and the growth rates are in perfect balance. Alternatively, if the four growth rates were 23.5, 18.2, 9.8, and 2.3, the difference between the high and the low percentage is 21.2.

**Interest Margin (\$)** See Net Interest Income

**Interest Margin (%)** Annualized net interest income on a taxable equivalent basis divided by average earning assets.

**IRE** See Interest Rate Elasticity

**Interest Rate Elasticity (IRE)** IRE is a measure of interest rate sensitivity. It is the expected percentage change in the present value (market value) of a financial instrument or portfolio of financial instruments if market yields increase 100 basis points. (continued...)

In addition, IRE can be used to estimate Macaulay's duration. Macaulay's duration is the present value weighted average time until all the cash flows from a financial instrument or portfolio will be received or repriced to current market rates. As a measure of Macaulay's duration, the IRE percentage is used to express the number of years to receive or reprice cash flows.

**Interest Rate Risk** The potential economic losses due to future interest rate changes. Economic losses can be reflected as a loss of future net interest income (earnings at risk); a loss of current fair market values (value at risk); or both.

**Liquidity Risk** The potential shortage of cash funds to meet deposit withdrawals, loan disbursements, or other obligations on a timely basis.

**Loan Loss Provision** The expense item on a bank's statement of income that reflects both current and anticipated loan loss experience (sometimes referred to as provision for loan loss).

**Loans** For the A/L BENCHMARKS Peer Information, loan definitions are consistent with call report definitions as follows:

- Loans is total loans.
- Total Loans is gross loans and leases without offset by the allowance for loan losses.
- Net Loans is total loans less the allowance for loan losses.
- Commercial Loans includes commercial loans, foreign loans, agriculture loans, and lease contracts.
- Consumer Loans includes consumer installment loans, credit cards loans, and all other consumer loans except real estate loans.
- Real Estate Loans includes commercial, residential, construction, multi-family, agriculture real estate, home equity, and all other loans secured by real estate collateral.

**Mean** The sum of a group or sample of values divided by the number of observations in the group or sample.

**Median** The value of the middle or center-most item within a group or sample.

**MVPE (Market Value of Portfolio Equity)** The present value (market value) of total assets, less the present value (market value) of total liabilities.

For purposes of the A/L BENCHMARKS Peer Information, market values of assets and liabilities are quoted market prices or calculated present values for all financial instruments. For non-financial instruments, the book or carrying value is assumed to be market value.

**Net Borrowed Funds** Short-term borrowed funds less short-term investments. A negative value represents net funds sold. When used in the ratio of net borrowed funds to equity, the average net borrowed funds (either positive or negative) is divided by average equity.

**Net Charge-Offs** Charge-offs less recoveries. When used in the ratio of net charge-offs to total loans, net charge-offs is divided by average total loans.

**Net Earnings at Risk** The potential adverse change in net income arising from a change in interest rates, measured over a one-year forecast horizon.

For the A/L BENCHMARKS Peer Information, the base net income is computed using a current or constant forecast of statement of condition balances, market interest rates, and noninterest items. The potential adverse net income is calculated by using a +/-200 basis point change in interest rates; assuming a parallel shift in the treasury yield curve; simulating changes in repricing, prepayments and other rate-driven parameters which impact cash flows; and assuming all noninterest items will not change.

**Net Interest Earnings at Risk** The potential adverse change in net interest income arising from a change in interest rates, measured over a one-year forecast horizon.

For the A/L BENCHMARKS Peer Information, the base net interest income is computed using a current or constant forecast of statement of condition balances, market interest rates, and noninterest items. The potential adverse net interest income is calculated by using a +/-200 basis point change in interest rates; assuming a parallel shift in the treasury yield curve; and simulating changes in repricing, prepayments and other rate-driven parameters which impact cash flows.

**Net Interest Income** Interest income from all earning assets less interest expense on all interest bearing deposits and liabilities. Generally, interest income includes fees on loans, amortization of premiums on securities, and accretion of discounts on securities.

**Net Overhead** Noninterest expense minus noninterest income, exclusive of security gains/losses. When expressed as a percentage, the annualized dollar amount of net overhead is divided by average earning assets.

**Non-Core Funding Dependence %** A measure which shows the relationship between long-term earning assets and non-core liabilities net of short-term investments. Long-term earning assets are investment securities which mature beyond one year, other real estate owned, and net loans reduced by acceptances from other banks and commercial paper. Non-core liabilities are time CDs and open account time deposits greater than \$100K, other borrowed money, foreign office deposits, brokered CDs less than \$100K, securities sold under agreement to repurchase, federal funds purchased, and demand notes issued to the U.S. Treasury. Short-term investments are interest bearing bank balances, federal funds sold, securities purchased under agreement to resell, debt securities with remaining maturity less than one year, acceptances from other banks, and commercial paper.



## Glossary of Terms (continued...)

**Non-Performing Assets** Includes non-accruing, renegotiated, and 90-days or more past due loans. Non-Performing assets also includes other real estate owned and other foreclosed loan collateral.

**Operating Efficiency Ratio** Noninterest expense divided by bank revenue.

For the A/L BENCHMARKS Peer Information, bank revenue is net interest income (tax equivalized) plus noninterest income, exclusive of security gains/losses.

**Purchased Funds** Includes all short-term borrowed funds plus all large deposits. Purchased funds are considered highly sensitive to money market interest rates.

**Recoveries** Loans recovered which had been written off the books and charged against the allowance for loan losses.

**Reserve for Loan & Lease Loss** See Allowance for Loan Losses

**Real Estate Loans** See Loans

**Return on Assets** Annualized net income divided by average total assets.

**Return on Equity** Annualized net income divided by average total equity.

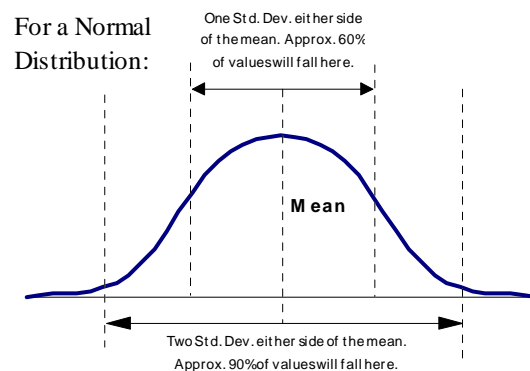
**Risk-Weighted Assets** Those bank assets and off-balance sheet financial instruments which are included by federal banking regulations in the calculation of risk-based capital ratios.

**Short-Term Non-Core Funding Dependence %** A measure which shows the relationship between long-term earning assets and short-term non-core liabilities net of short-term investments.

Long-term earning assets are investment securities which mature beyond one year, other real estate owned, and net loans reduced by acceptances from other banks and commercial paper.

Short-term non-core liabilities are the portion of time CDs and open account time deposits greater than \$100K, other borrowed money, foreign office deposits and brokered CDs less than \$100K which mature within one year, plus securities sold under agreement to repurchase, federal funds purchased, and demand notes issued to the U.S. Treasury. Short-term investments are interest bearing bank balances, federal funds sold, securities purchased under agreement to resell, debt securities with remaining maturity less than one year, acceptances from other banks, and commercial paper.

**Standard Deviation** The statistical measure of variance from the mean representing the dispersion of data (distance) from the mean.



**Std. Dev.** See Standard Deviation

**Tier 1 Risk-based Capital** Tier 1 capital divided by risk-weighted assets. Tier 1 capital consists of total common equity adjusted for cumulative preferred stock and goodwill.

**Total Risk-based Capital** Total capital divided by risk-weighted assets. Total capital is tier 1 capital plus a defined portion of the allowance for loan losses, subordinated long-term debt, and miscellaneous other qualifying equity or near equity items.

**Total Loans** See Loans

**Treasury Yield Curve** The treasury yield curve represents the relationship of yields on U.S. Government debt instruments of various maturities at a point in time. The treasury yield curve, also known as the term structure of interest rates, is charted daily in The Wall Street Journal and other business publications.

**Volatile Liability Dependence %** A measure which shows the relationship between long-term earning assets and net short-term funds.

Long-term earning assets are investment securities which mature beyond one year and all loans. Short-term funds are large time deposits, foreign office deposits, federal funds purchased, securities sold under repurchase agreements, trading liabilities net of revaluation losses, and other borrowings maturing within a year. Net short-term funds are net of short-term investments.

**Yield on Earning Assets** Annualized and taxable equivalent gross interest income on all earning assets (loans and investments) divided by average earning assets.

## (Market Values, from pg. 5)

However over the past several decades branches and banks have been sold with a portion of the selling price determined by a valuation of deposit premium. The valuation process used in branch sales has established the concept of deposit premiums (or discounts) based on economic or future value.

### Market Value of Investment Securities

Although past trade values are not guaranteed for the future, tradition accepts the most recently reported trade value as an estimate of market value or "future worth". When recent trading values for investment securities are above or below the face value of an instrument, the difference is either a premium or a discount.

Such premiums or discounts indicate that since the time the financial instrument was created, a change has occurred in the market evaluation of risk and return. Generally, changes in credit quality can have an impact on premiums and discounts. Non U.S. Treasury securities are rated by various rating organizations and higher or lower ratings are determined by credit worthiness of the issuer. If the evaluation of credit worthiness changes after a security is issued, the "bond" rating will change and a premium or discount will be reflected in the trading price.

### Fair Value of Loans

Generally, the calculated present value of discounted future cash flows serves as a fair estimate of market value. The future cash flows can be calculated, but selecting a discount rate for these cash flows requires judgment.

The notion of a discount rate is to adjust for the time value of money. Such adjustment is necessary because of risk—that the principal may not be repaid, that cash will be reinvested at a different rate of return in the future (interest rate risk), or that the investor may need cash before the principal is to be repaid (liquidity). If the risks remain the same as at the time the loan is made, the fair value is face value; if any of the risks have changed, or if the market generally has changed its definition of what is normal, the discount rate will be different from the earnings rate and a premium or discount will be computed.

### Deposit Premiums

The primary technique used to determine the economic value of deposits has been discounted cash flows. The technique used to estimate cash flows for non-maturing deposits is to assume a decay rate (maturing pattern of existing dollar balances) based upon an analysis of historical account balances. The estimate for the discount rate is an adjusted alternative cost of funding.

The alternative source rate most often used is the rate at various term points on the U.S. Treasury yield curve. The adjustments are for expenses of deposit generation and for the credit quality of the bank. The expense adjustment is a matter of cost allocation and the credit quality adjustment is the difference between the federal funds borrowing rate for the bank and the one day rate on the US Treasury yield curve. ■

## (Liquidity, cont. from pg. 4)

brokered deposits less than \$100K and demand notes issued to the U.S. Treasury. This ratio measures the reliance on funding the bank with all non-core sources, although all of these are not considered to be purchased or wholesale because of their size (brokered less than \$100K) or their nature (U.S. Treasury demand deposits).

The third ratio, *Short-Term Non-Core Funding Dependence %*, evaluates the short-term, non-core portion as it relates to funding long-term earning assets. This ratio includes all of the same funding categories included in the non-core ratio, but includes only those deposits that mature within one year. This indicator again refines the above measure to further pinpoint the funding of long-term earning assets with non-core, volatile sources of a short-term nature.

Obviously, these three measures do not completely communicate any bank's total liquidity risk position, but they do quickly convey a glimpse of the institution's current and potential future mismatch between funding sources and asset utilization. ■

## (Asset Quality, cont. from pg. 5)

The next measure, Net Charge-Offs, represents loans actually charged-off, net of recoveries. The current amount and trend of charge-offs is an indication of prior credit decisions and management's balance sheet philosophy. A steady amount of charge-offs at a low level indicates that some bad debts are simply a cost of doing business. Large swings in charge-offs are an indication of surprises and the possibility of less than adequate credit approval procedures.

Finally, Loan Loss Provision is the current loss expense recognized for the lending and credit function. When viewed in comparison with the charge-offs over time, the provision indicates whether the expense provision is required to build reserves for a growing loan portfolio or is required to absorb the bad and charged-off loans in excess of the current reserve position. ■

## (Examinations from pg. 10)

calculation and an equity at risk calculation. Duration and gap calculations will not suffice—not because they are wrong or totally inappropriate, but simply because one technique is needed to promote education and understanding and to compile group statistics.

Group statistics are needed as benchmarks for understanding—not because everyone should be at the average. Rather, the highs, the lows, and the central tendencies are needed to evaluate where any one bank stands within the industry. Standardized definitions for input, calculation and reporting may be tough to agree upon, but are necessary to communicate and compare.

The measurements reported in this peer sample reflect what a large group of bankers have agreed upon. The specific measurements on interest rate risk reflect a uniformly defined set of techniques. ■

**(Operating Efficiencies, from pg. 7)**

expense by net bank revenue on a tax equalized basis. Net bank revenue is defined as the sum of tax equivalent interest income plus non-interest income less interest expense. This efficiency ratio demonstrates the institution's ability to support its net revenue stream with as little overhead expense as possible. In today's operating environment, targeted efficiency ratios between 50-55% are considered to be acceptable.

The second measure, Net Overhead to Earning Assets, is computed by subtracting non-interest income from gross non-interest operating expense, excluding the provision of loan losses. This net overhead "burden", expressed as a percentage of earning assets provides for a comparison with the net interest margin percentage. The expression of efficiency is useful for demonstrating the net expense level of the bank relative to its earning asset base. For most banking companies today, (with the exception of some large banks whose net overhead % is below 1.00%) net overhead to earning asset ratios that are maintained below 2.00% are considered to be exceptional. ■

**(Growth, cont. from pg. 6)**

bank's capital position with targeted longer term borrowings to fund specific asset growth opportunities.

If asset growth is more rapid than growth in capital, the bank's leverage is increased, creating a double-edged sword. From the shareholders perspective, increased leverage is acceptable because it increases their returns per dollar invested. Regulators, however, are critical of asset growth which increases leverage above a conservative level. Balanced growth rates between assets and capital hold leverage constant, therefore, minimizing pressure on the equity to asset relationship. ■



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