

OCC Telephone Seminar
The Challenges of Sound Liquidity Risk Management
OCC Expectations and Policy for Community Banks

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Speaker Biographies

John D. Hawke, Jr.

Comptroller of the Currency



John D. Hawke, Jr. was sworn in as the 28th Comptroller of the Currency on December 8, 1998. After serving for 10 months under a Recess Appointment, he was sworn in for a full five-year term as Comptroller on October 13, 1999.

The Comptroller of the Currency is the Administrator of National Banks. The Office of the Comptroller (OCC) supervises 2,600 federally chartered commercial banks and about 66 federal branches and agencies of foreign banks in the United States comprising more than half of the assets of the commercial banking system. The Comptroller also serves as a Director of the Federal Deposit Insurance Corporation, the Federal Financial Institutions Examination Council, and the Neighborhood Reinvestment Corporation.

Prior to his appointment as Comptroller, Mr. Hawke served for 3-1/2 years as Under Secretary of the Treasury for Domestic Finance. In that capacity he oversaw the development of policy and legislation in the areas of financial institutions, debt management and capital markets, and served as Chairman of the Advanced Counterfeit Deterrence Steering Committee and as a member of the board of the Securities Investor Protection Corporation. Before joining Treasury, Mr. Hawke was a

Senior Partner at the Washington, D.C. law firm of Arnold & Porter, which he first joined as an associate in 1962. At Arnold & Porter he headed the Financial Institutions practice, and from 1987 to 1995 he served as Chairman of the firm. In 1975 he left the firm to serve as General Counsel to the Board of Governors of the Federal Reserve System, returning in 1978.

Mr. Hawke graduated from Yale University in 1954 with a B.A. in English. From 1955 to 1957 he served on active duty with the U.S. Air Force. After graduating in 1960 from Columbia University School of Law, where he was Editor-in-Chief of the Columbia Law Review, Mr. Hawke was a law clerk for Judge E. Barrett Prettyman on the United States Court of Appeals for the District of Columbia Circuit. From 1961 to 1962 he served as counsel to the Select Subcommittee on Education in the House of Representatives.

From 1970 to 1987 Mr. Hawke taught courses on federal regulation of banking at the Georgetown University Law Center. He has also taught courses on bank acquisitions and financial regulation and serves as the Chairman of the Board of Advisors of the Morin Center for Banking Law Studies.

In 1987 Mr. Hawke served as a member of a Committee of Inquiry appointed by the Chicago Mercantile Exchange to study the role of futures markets in connection with the stock market crash in October of that year.

Mr. Hawke has written extensively on matters relating to the regulation of financial institutions, and is the author of "Commentaries on Banking Regulation," published in 1985. He was a founding member of the Shadow Financial Regulatory Committee, and served on the committee until joining Treasury in April 1995.

Mr. Hawke is a member of the Cosmos Club, the Economic Club of Washington and the Exchequer Club of Washington.

Born in New York City on June 26, 1933, Mr. Hawke resides in Washington, D.C. He was married in 1962 to the late Marie R. Hawke and has four adult children, Daniel, Caitlin, Anne and Patrick, and one grandchild, Spencer Patrick Hawke.

Kathryn E. Dick

Director, Treasury and Market Risk

Office of the Comptroller of the Currency



Since September 1998, Kathryn Dick has served as the director, Treasury and Market Risk Division (TMR), of the Office of the Comptroller of the Currency (OCC).

As TMR director, Ms. Dick is responsible for developing bank regulatory and supervisory policies and examiner guidance for trading, interest rate risk, liquidity, securitization, derivatives, and dealer activities. She also serves as the agency's primary liaison with its cadre of capital market examiners.

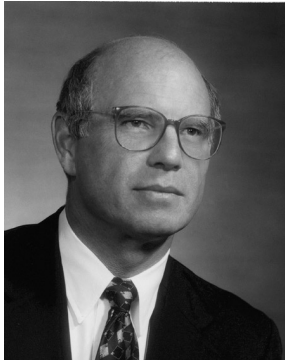
Prior to her current position, Ms. Dick spent three years managing the OCC's London office. In her capacity there, Ms. Dick was responsible for supporting the supervision of U.S. national bank branches throughout Europe.

Ms. Dick has spent most of her 17 year career at the OCC examining the capital market activities of national banks. She earned an M.B.A. from the Carlson School of Management, University of Minnesota in 1983 and a B.A. from the University of Minnesota in 1981. Ms. Dick received the chartered financial analyst (CFA) designation in 1992.

John F. Robinson

Deputy Comptroller

Office of the Comptroller of the Currency



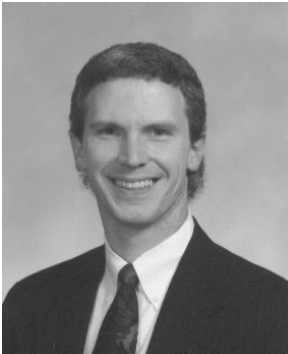
John F. Robinson is the deputy comptroller for the Office of the Comptroller of the Currency's (OCC) district office in San Francisco, California. In this position, Mr. Robinson is responsible for the supervision of community and mid-sized national banks in the states of Alaska, Arizona, California, Colorado, Guam, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. Mr. Robinson also serves as the principal contact with members of the banking industry, the broader financial services industry, trade groups, the media, public interest groups, and other members of the general public within his assigned area. He also represents the OCC in discussions with federal, state, and local government officials and federal and state regulators.

Before joining the OCC, Mr. Robinson was regional director of the West Region of the Office of Thrift Supervision (OTS), where he was responsible for the examination and supervision of the savings and loan industry. He was also assistant director for Policy at OTS. He joined the Federal Home Loan Bank System in 1987, before it became the OTS. He has a B.S. in finance from Washington University in St. Louis and an M.B.A. from the Harvard Business School. He is also a chartered financial analyst (CFA).

Joey H. Johnson

Lead Capital Markets Expert

Office of the Comptroller of the Currency



Joey H. Johnson serves as the lead capital markets expert for the Southeastern District of the Office of the Comptroller of the Currency (OCC). Mr. Johnson joined the OCC in 1985 and was commissioned as a national bank examiner in 1990. Throughout his 16-year career, he has held positions of increasing responsibility that focused on direct supervision of national banks of various sizes and levels of complexity.

Prior to his current position, Mr. Johnson spent two years as a district capital markets specialist. In his specialist role, he led capital market examinations of complex community banks and large banks throughout the Southeastern District.

Mr. Johnson has served as his district's lead expert for the past three years. In this role, he coordinates capital market examination activities in the largest and most complex banks. He routinely prepares macro analyses to identify trends and emerging issues in district banks and provides technical consultation to field examiners and bankers.

Mr. Johnson received a B.S. in commerce and business administration from the University of Alabama.

Michael C. Drennan

National Bank Examiner, Treasury and Market Risk

Office of the Comptroller of the Currency



Mike Drennan is a national bank examiner in the Treasury and Market Risk Division of the Office of the Comptroller of the Currency (OCC). In his current position, Mr. Drennan is responsible for developing supervision policy and examiner guidance on asset-liability management issues.

Mr. Drennan joined the OCC in 1985. He developed a broad range of experience participating in examinations of community and large banks. Mr. Drennan joined Treasury and Market Risk in 1997 after five years of working in regional bank supervision in the Southwestern District. He

received a BSBA in accounting from the Sam M. Walton College of Business at the University of Arkansas in 1983 and is a certified public accountant (CPA).

Stephen R. Sage

National Bank Examiner

Office of the Comptroller of the Currency



Steve Sage is a national bank examiner in the Treasury and Market Risk Division, Office of the Comptroller of the Currency (OCC), and currently resides in Washington, D.C. Through the late 1980's and early 1990's, Mr. Sage was responsible for establishing regulatory processes for liquidity monitoring and crisis management in the largest or most troubled banks under OCC supervision. Mr. Sage continues to specialize in liquidity risk monitoring, management, and policy issues involving bank funding and liquidity, and drafted the recently published Comptroller's Handbook on Liquidity.

Mr. Sage joined the OCC in 1972 and has examined a wide range of institutions, from small community banks to the largest money center banks in the United States. He is a graduate of New Mexico State University.

ELECTRONIC POLLING QUESTIONS

1. How many people are at your listening site? Press:

- 1 for one person,
- 2 for two people,
- 3 for three people,
- 4 for four people,
- 5 for five people,
- 6 for six people,
- 7 for seven people,
- 8 for eight people, or
- 9 for 9 or more people listening at your site.

2. How many people at your site saw OCC's banner ad on AmericanBanker.com? Press:

- 1 for one person,
- 2 for two people,
- 3 for three people,
- 4 for four people,
- 5 for five people,
- 6 for six people,
- 7 for seven people,
- 8 for eight or more people, or
- 9 for zero (no one saw the banner ad).

The Challenges of Sound Liquidity Risk Management:

OCC Expectations and Policy for Community Banks



Kathryn E. Dick
John F. Robinson
Joey Johnson

May 15 & 16, 2001



Comptroller of the Currency
Administrator of National Banks

Objectives

- Recap the effects of changes in customer behavior on the composition of community bank funding.
- Articulate OCC expectations for liquidity risk management in community banks.
- Stress liquidity risk management “lessons learned” from recent community bank examinations.



Opening Remarks

John D. Hawke, Jr.
Comptroller of the Currency



Liquidity Risk Changes

- Loan portfolios larger, liquid assets smaller.
- Core deposits shrinking, banks must seek alternatives.
- Non-relationship deposits increasing and more credit and rate sensitive.
- Commercial bank funding more reliant on capital markets.
- Problem bank resolution framework less flexible.



Canary

- Early warning system for community banks
- Liquidity ratios:
 - Loans-to-deposits
 - Net non-core funding dependence
 - Net short-term liabilities-to-assets
 - On-hand liquidity-to-total liabilities
 - Reliance on wholesale funding



Polling Question #1

The following best describes the use of alternative funding sources at my bank:

1. FHLB only
2. Internet deposits only
3. Brokered deposits only
4. Some combination of 1, 2, and 3
5. None at present, but plan to use in the next 12 months
6. None and no plans of using these sources



Changes in Community Bank Funding

John Robinson
Deputy Comptroller
Western District



Changes in Community Bank Funding

- The way it was...
- What's changed?
- What does it mean for banks?
- What does it mean for examiners?



The Way It Was...

- Core deposits were the main funding source.
- Liquidity was managed on the asset side.
- Liquidity risk was simple -- safety margin.
- Healthy net interest margin



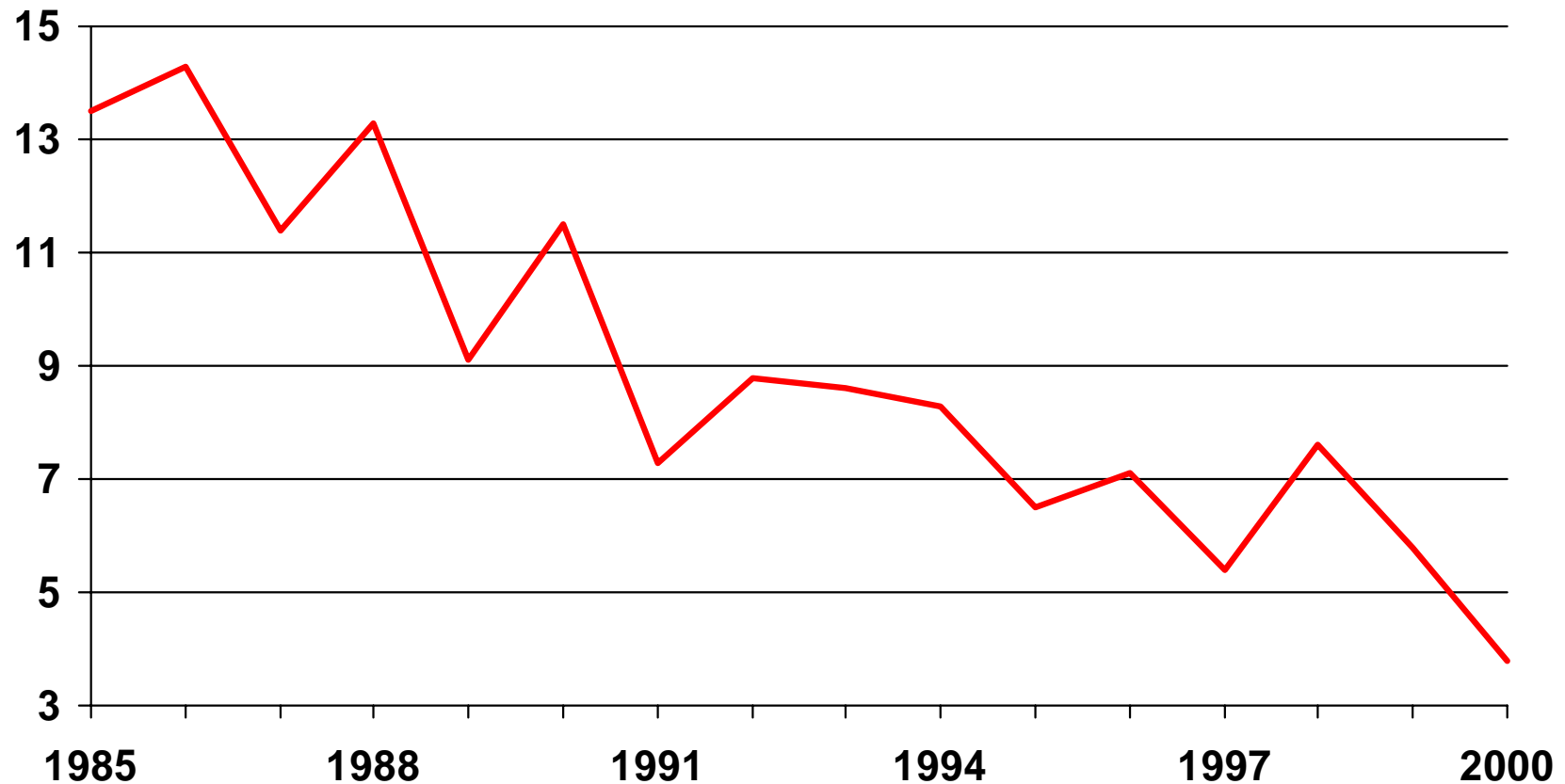
What's Changed?

- **Consumers are saving less.**
- Competition for funds has increased, and consumers opt for higher yield investments.
- Reduced liquid assets
- Technology and financial innovation
- Federal Home Loan Bank availability



Consumers Are Saving Less

Personal Savings as a Percent of Disposable Personal Income (FOF Basis)



Source: Federal Reserve

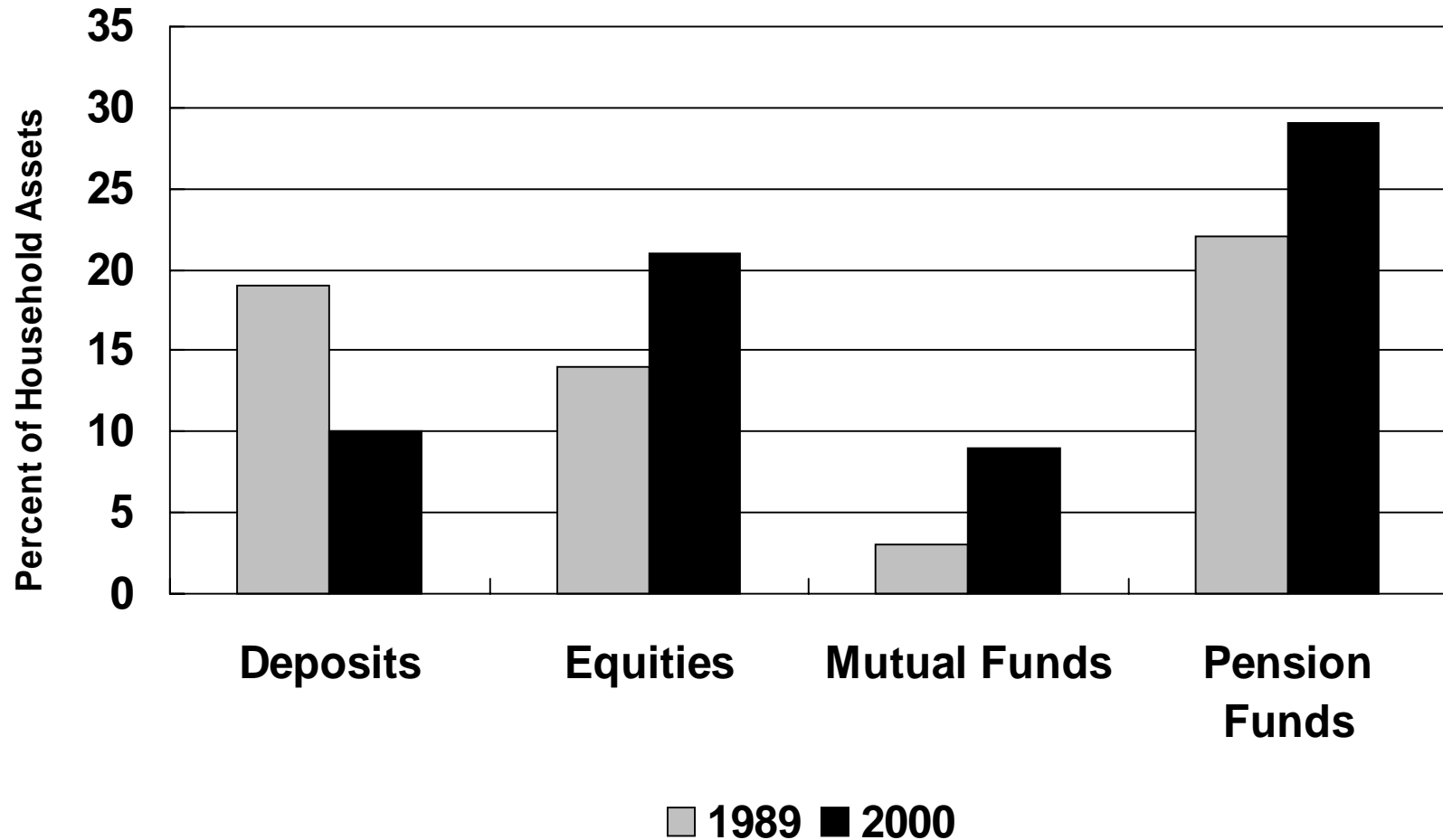


What's Changed?

- Consumers are saving less.
- **Competition for funds has increased, and consumers opt for higher yield investments.**
- Reduced liquid assets
- Technology and financial innovation
- Federal Home Loan Bank availability



Consumers Opt for Higher Yields

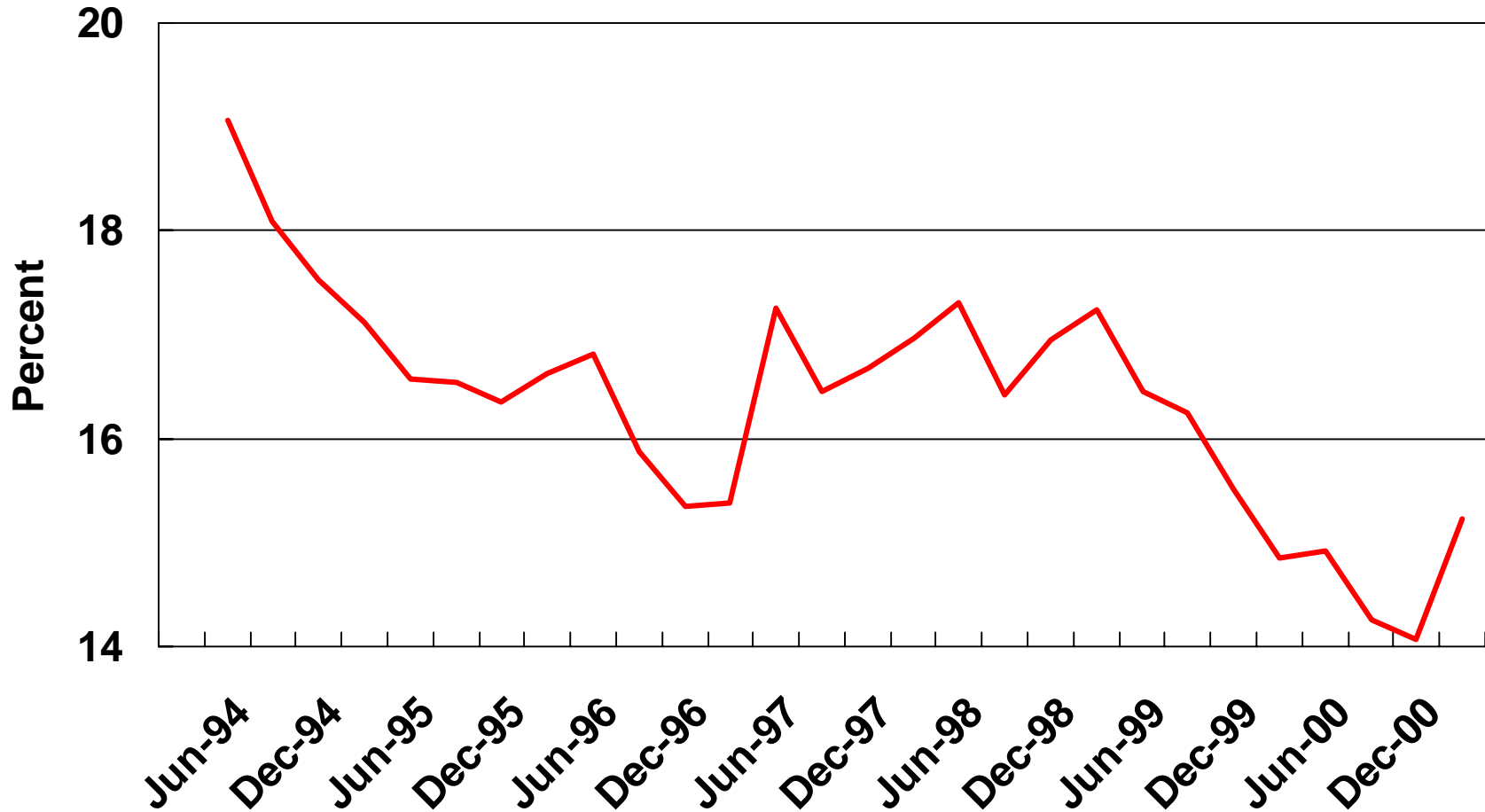


What's Changed?

- Consumers are saving less.
- Competition for funds has increased, and consumers opt for higher yield investments.
- **Reduced liquid assets**
- Technology and financial innovation
- Federal Home Loan Bank availability



Reduced Liquid Assets



% Liquid Assets to Total Assets



What's Changed?

- Consumers are saving less.
- Competition for funds has increased, and consumers opt for higher yield investments.
- Reduced liquid assets
- **Technology and financial innovation**
- Federal Home Loan Bank availability



Technology and Financial Innovation Provide New Tools

- Deposit brokerage
- Securitization
- Internet-based deposits



What's Changed?

- Consumers are saving less.
- Competition for funds has increased, and consumers opt for higher yield investments.
- Reduced liquid assets
- Technology and financial innovation
- **Federal Home Loan Bank availability**



What Does It Mean for Banks?

- Less core deposits = Need for alternatives
- More alternatives = Higher cost, more risk

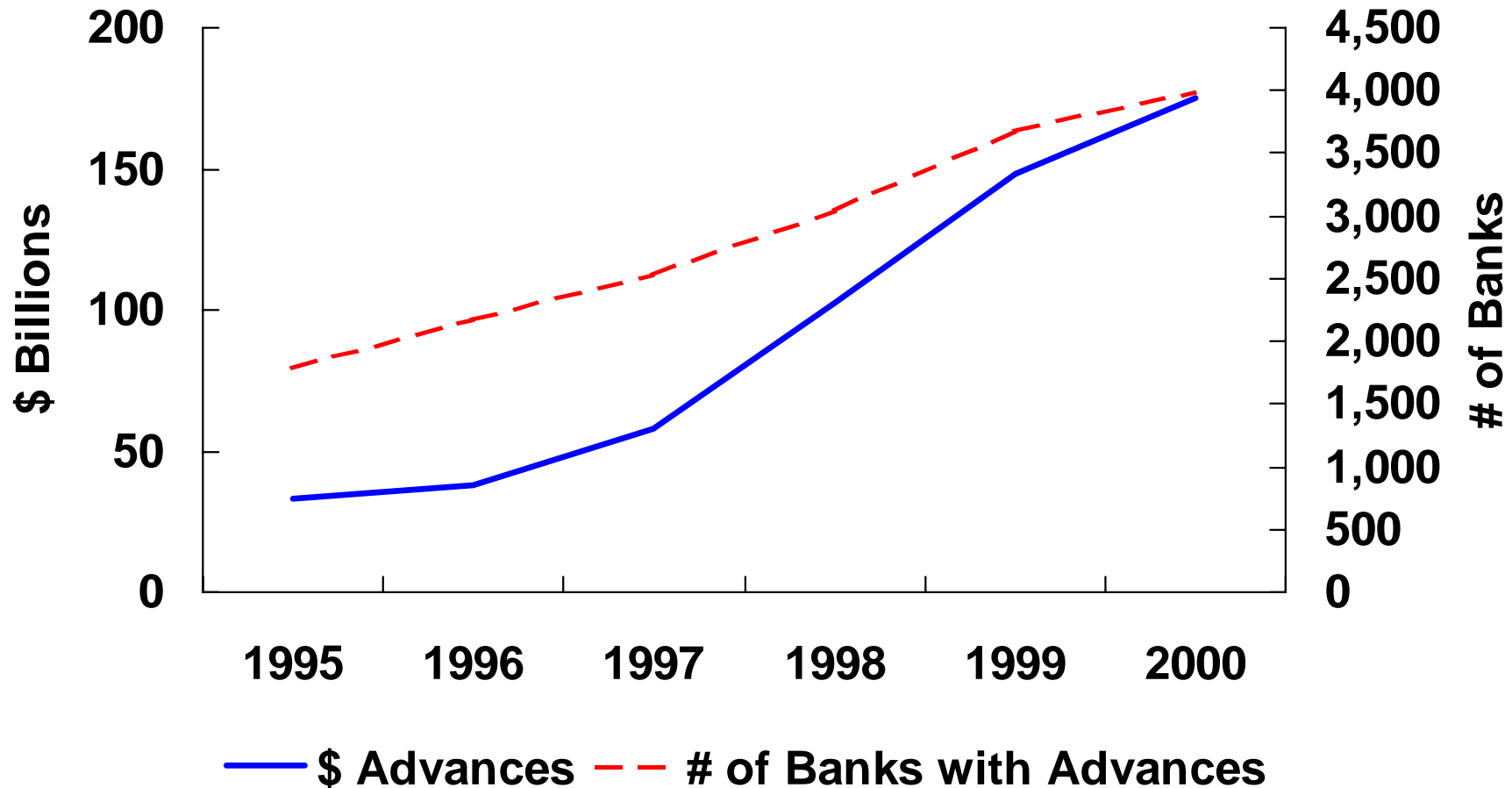


What Type of Risks?

- Credit sensitive funds providers
- Increased risk-to-earnings
- Increased interest rate risk
- More complicated products



Federal Home Loan Banks Have Major Role in Commercial Bank Funding



Risks in FHLB Advances

- Credit sensitivity
- Suitability of some options
- Temptation to go short-term

... Make sure you understand!



What Does It Mean for Examiners?

- The liquidity world is changing.
- Expect to see more nontraditional funding in banks.
- Banks' risk management must be commensurate with the risks.

... The quality of risk management is becoming increasingly important.



Polling Question #2

For banks using FHLB advances, which of the following best describes your use of putable/callable/convertible funding:

1. None
2. All advances contained these features
3. 50 percent or more contained these features
4. Less than 50 percent of advances contained these features



Liquidity Risk Management Expectations

Kathryn E. Dick
Director, Treasury and Market
Risk Division



Who Should Be Involved ?

- Asset/liability manager manages daily funding.
- ALCO should be composed of representatives from each significant operating area.
- Board should receive information periodically on the bank's liquidity risk exposure and contingency funding plan.



Understanding Funds Providers

- Credit sensitivity
 - Sensitivity of funds provider to changes in the bank's real or perceived financial condition
- Rate sensitivity
 - Sensitivity of funds provider to changes in rates paid on invested funds



Primary Components of Liquidity Risk

- Rollover Risk
 - Most common source of exposure
 - Funding concentrations are primary risk
- Market Risk
 - Depreciated assets more difficult to sell
 - Risk is often underestimated
- Event Risk
 - Low probability/high impact
 - Most serious potential threat
 - Few think it could happen to them.



Successful Risk Management for the New Funding World

- Five elements for successful liquidity risk management in community banks:
 - *Consolidated liquidity strategy*
 - *Effective risk measurement tools*
 - *Strong internal controls framework*
 - *Sound contingency funding plan*
 - *Reliable management information systems*



Consolidated Liquidity Strategy

- ALCO should:
 - Establish the bank's funding strategy.
 - Identify funding needs and determine what sources will be used.
 - Establish risk measurement and control mechanisms.
 - Develop and manage funding plan on a consolidated basis.
 - Communicate to bank staff.



Risk Measurement Tools

- There is rarely a single measurement of liquidity risk.
- Sound liquidity risk management requires a complement of measurement tools.
- Forward-looking or prospective measures are superior to retrospective ones.



Forward-Looking Tools

- Measurement tool projects future funding needs for tomorrow, next month, six months, and so on.
- When based upon sound assumptions, measurement tool provides a reasonable basis for planning.



Retrospective Tools

- Measurement tool reflects past liquidity positions and tells what happened yesterday, one month ago, and so on.
- Although useful for analyzing historical behavior, measurement tool will not necessarily prepare you for tomorrow, next week, or next month.



Risk Measurement Tools

- Forward-Looking:
 - Projected needs and sources
 - Cash flow or funding gap report *
 - Funding concentration analysis *
 - Funds availability report *
- Retrospective:
 - Historical analysis of sources and uses
 - Funds flow analysis

* Critical for banks with material sensitive funds providers



Internal Controls

- Risk limits are a most effective risk control tool. Consider ceilings on:
 - Use of borrowing capacity.
 - Exposure to single source or market.
 - Funding maturity gap.
 - Exposure to unsecured borrowing.
- Internal audit is another important risk control tool.



Contingency Funding Plans

- Define stress scenarios.
- Quantify projected effect on cash flow for each scenario.
- Define action plans and estimate cash flow impact.
- Identify triggers to alert management to potential problems.
- Establish objectives and assign staff responsibilities.



Management Information Systems

- Capture meaningful exposure information.
- Are produced and distributed to Board and senior management regularly.
- Reflect compliance with risk limits.
- Are validated periodically.



Balance Sheet Ratios Are Not Effective Liquidity Measures

- Balance sheet ratios **alone** are ineffective measures of liquidity adequacy.
- Ratios at best provide point-in-time measures and give little insight into how well existing funding sources can meet funding needs.
- Balance sheet ratios do not capture properly:
 - Expected funding needs or commitments.
 - Available borrowing sources.
 - Ability to convert assets to cash.



But ... Can Be Useful as Supplementary Limits

- Key balance sheet liquidity ratios can complement other risk measures. Consider:
 - Cash flow coverage = $\frac{\text{projected cash in-flow}}{\text{projected cash out-flow}}$
 - Liquid asset ratio = $\frac{\text{Liquid assets}}{\text{Short-term liabilities}}$
 - Liquid asset coverage = $\frac{\text{net liquid assets}}{\text{total volatile liabilities}}$

Polling Question #3

The following best characterizes the contingency funding plan at my bank:

1. Written plan with scenario analysis and funding plans, updated in last 12 months
2. Written plan with scenario analysis and funding plans, not updated in last 12 months
3. Informal plan with scenario analysis and funding plans, updated in last 12 months
4. Informal plan with scenario analysis and funding plans, not updated in last 12 months
5. No contingency funding plan



Lessons Learned in Liquidity Risk Management

Joey Johnson
Lead Capital Markets Expert
Southeastern District



Lessons Learned in Liquidity Risk Management

- Identify, control, and monitor funding concentrations.
- Understand structured advances.
- Implement dynamic, forward-looking liquidity risk measurement tools.
- Ensure accurate cash flow reporting.
- Implement meaningful liquidity risk limits.
- Develop viable contingency funding plan.



Identify, Control, and Monitor Funding Concentrations

- Well-managed banks ensure that funding concentrations are identified, controlled, and monitored.
- Changes in community bank funding structure have resulted in increased funding concentrations.
- Alternative funding sources provide large sums of funding that are readily accessible, but carry similar behavioral characteristics.



Understand the Risk in Structured Advances

- Bankers must be diligent in using “puttable” advances (also known as callable or convertible).
- Essential is understanding risk characteristics of structured FHLB products.
- If FHLB exercises its option, replacement funds cost more.
- If rates fall, the bank cannot reprice funding despite lower market rates.



Cash Flow Analysis

| | <u>-200</u> | <u>-100</u> | <u>Base</u> | <u>+100</u> | <u>+200</u> | <u>+300</u> |
|---------|----------------|----------------|----------------|----------------|----------------|----------------|
| Int Inc | 394,428 | 495,564 | 802,500 | 802,500 | 802,500 | 802,500 |
| Int Exp | <u>637,403</u> | <u>637,403</u> | <u>637,403</u> | <u>698,279</u> | <u>799,479</u> | <u>900,679</u> |
| Spread | (\$242,974) | (\$141,839) | \$164,717 | \$104,221 | \$3,021 | (\$98,179) |

8% FNMA 10/2 funded with 6.39% FHLB 10/2 Callable Advance.
Cash flow analysis for Year 3.



Valuation Analysis

| | <u>-200</u> | <u>-100</u> | <u>Base</u> | <u>+100</u> | <u>+200</u> | <u>+300</u> |
|----------------|----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|
| FNMA | 10,528 | 10,293 | 9,975 | 9,563 | 9,093 | 8,601 |
| Funding | <u>11,587</u> | <u>10,744</u> | <u>9,975</u> | <u>9,790</u> | <u>9,609</u> | <u>9,431</u> |
| Value | (\$1,059) | (\$451) | \$0 | (\$227) | (\$516) | (\$830) |
| % Chg | -10.6% | -4.53% | - - | -2.3% | -5.17% | -8.3% |

8% FNMA 10/2 funded with 6.39% FHLB 10/2 Callable Advance.



Implement Dynamic, Forward-Looking Risk Measurement Tools

- Well-run banks manage liquidity risk with dynamic forward-looking tools, such as **cash flow reports** or **needs and sources analysis**.
- Those tools allow bankers to project funding needs reasonably and identify sources.
- Many banks still rely on static liquidity measures, such as balance sheet ratios.
- Static balance sheet ratios are point-in-time indicators, but not reliable risk measures.



Ensure Accurate Cash Flow Reporting

- Cash flow or funding GAP reports are excellent risk tools, when prepared properly.
- The increased use of products with embedded options on both sides of the balance sheet create challenges in reporting cash flows accurately.
- Capturing the effect of embedded options ensures an accurate cash flow report. ALM models can be useful here.



Implement Meaningful Risk Limits as a Risk Control Tool

- Risk limits are a most effective risk control tool, and the easiest to implement.
- Limit structures vary from a simple % reliance on borrowed funds or volatile funding to more complex measures, such as cash flow availability.
- Many problems can be avoided by using simple limit structures that provide the foundation for risk control.



Develop a Viable Contingency Funding Plan

- Sound CFPs enable banks to project liquidity under declining scenarios.
- Unsecured lines of credit are often cited as back-up funding, but likely will not be available to the bank when needed.
- FHLB advances commonly are reflected as major contingent funding sources, but may already be drawn, negating their availability as a contingent funding source.



Polling Question #4

The following best describes the liquidity risk limit structures at my bank:

1. Balance Sheet Ratio Limits
2. Cash Flow Ratio Limits
3. Concentration Limits
4. Some combination of 1, 2, & 3
5. None



Take Home Messages

- The funding composition for many community banks has become more price and credit sensitive in the past decade.
- Banks with higher or more complex levels of liquidity risk must upgrade risk management commensurately.
- A strong risk management process remains the key to well-managed liquidity.
- A well-developed contingency funding plan will prepare bank management to deal with potential funding disruptions.



Ask Yourself.....

- How much reliance does my bank place on funds provided by credit and/or rate sensitive providers?
- What do I know about rollover risk at my bank?
- Do I receive a periodic analysis of the large funds providers at my bank?
- Is our contingency funding plan consistent with OCC expectations -- commensurate with risk, realistic, reliable, and up-to-date?
- Does my bank's liquidity information system provide satisfactory information for forward-looking consideration?

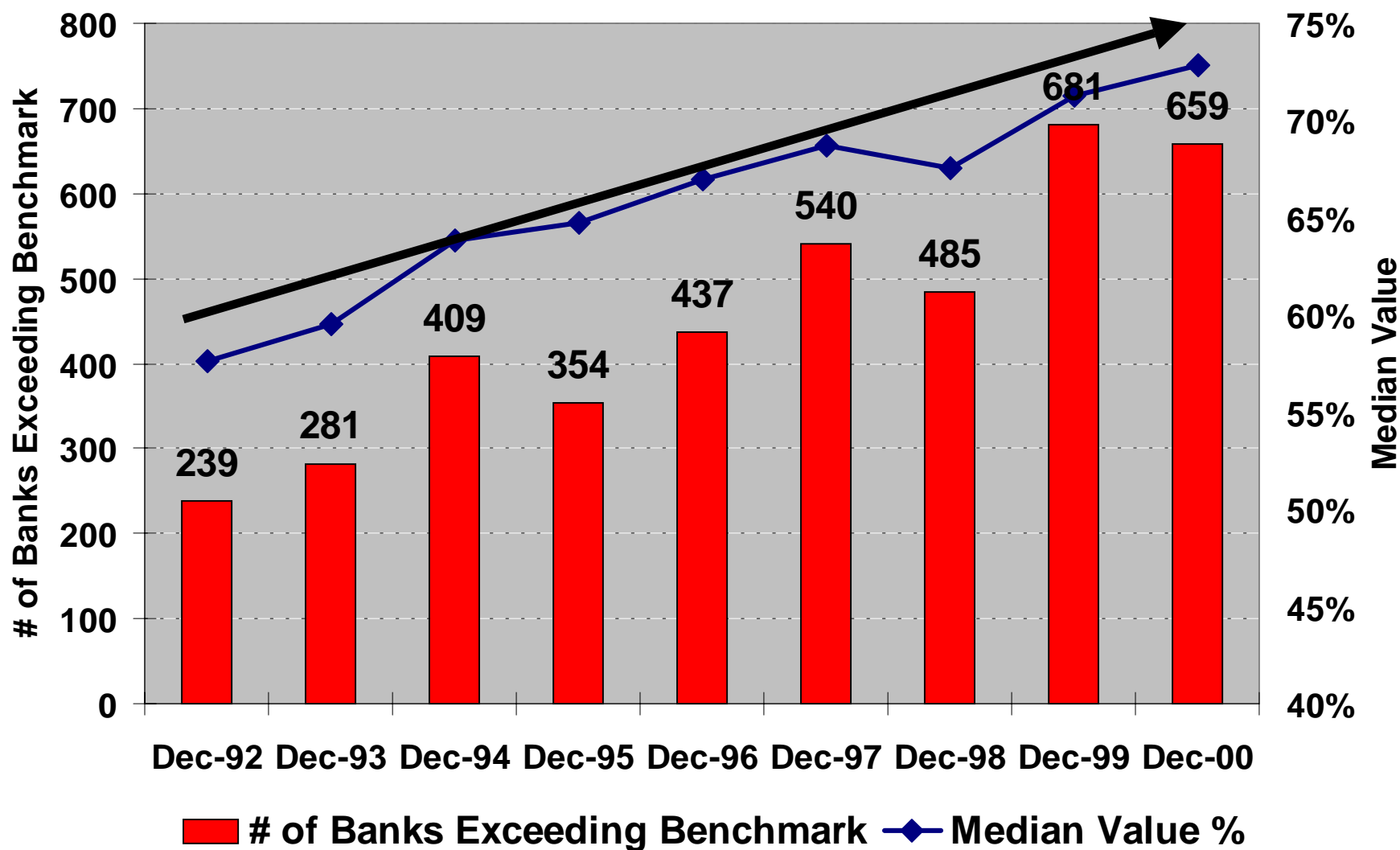


Appendix

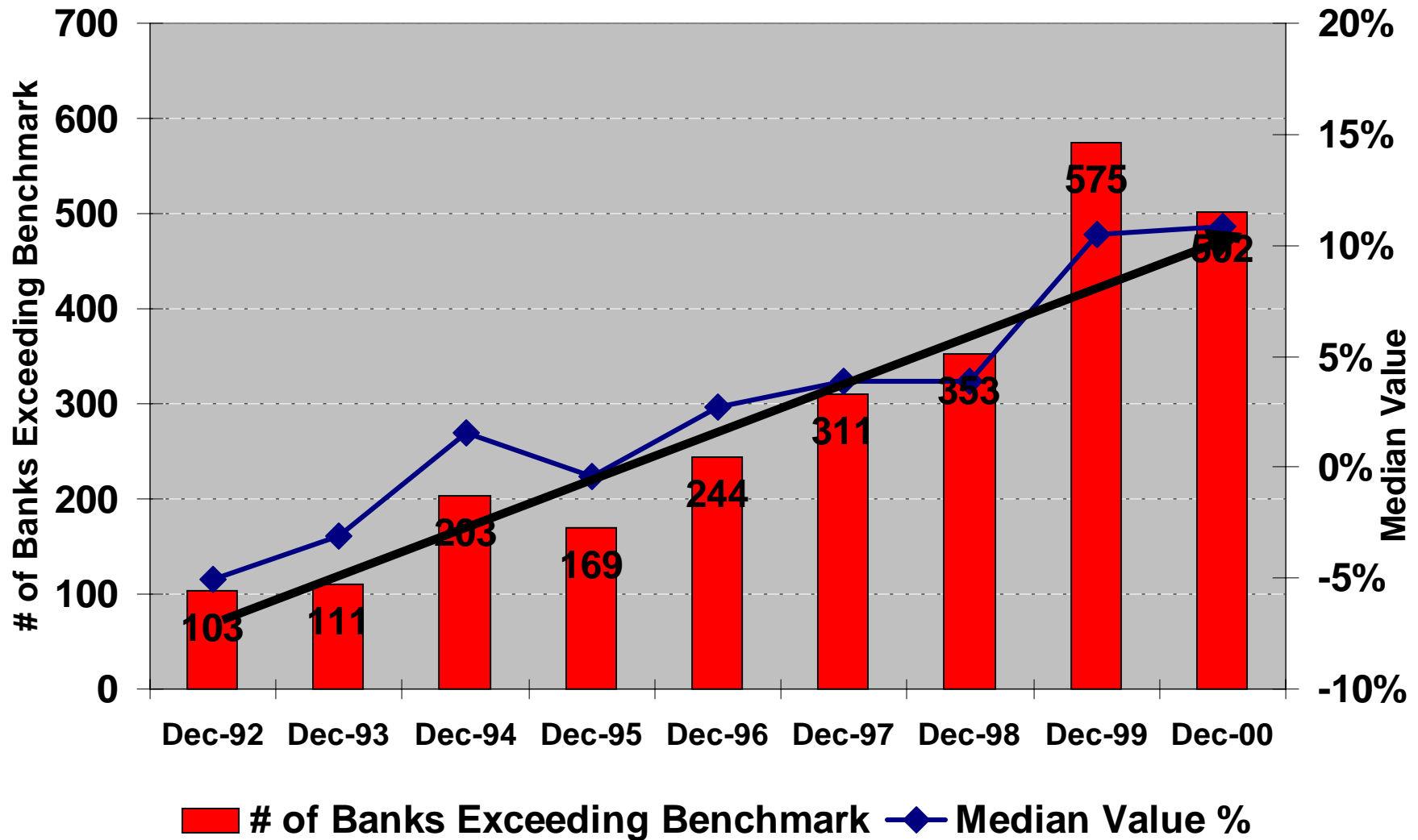
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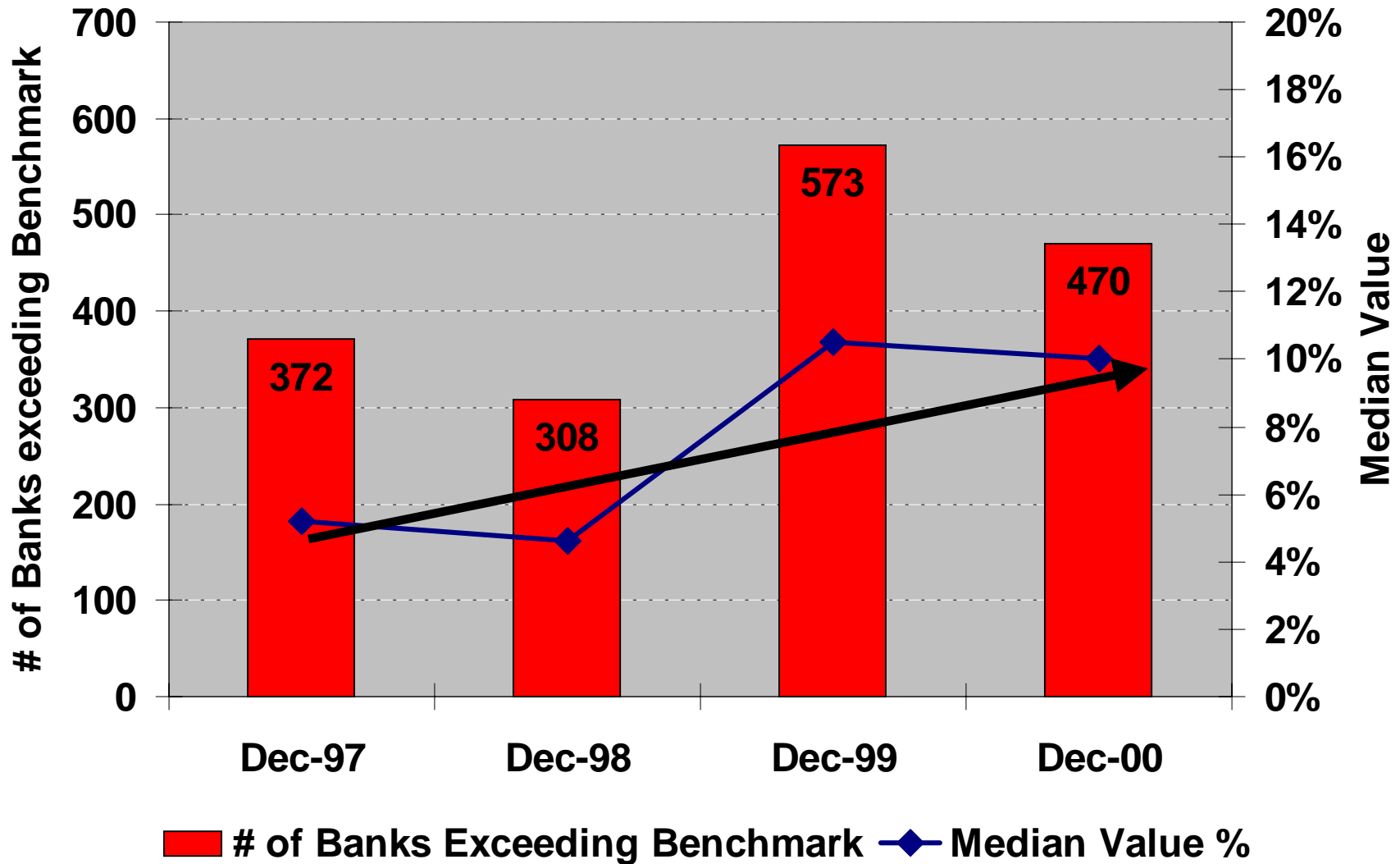
Loans-to-Deposits



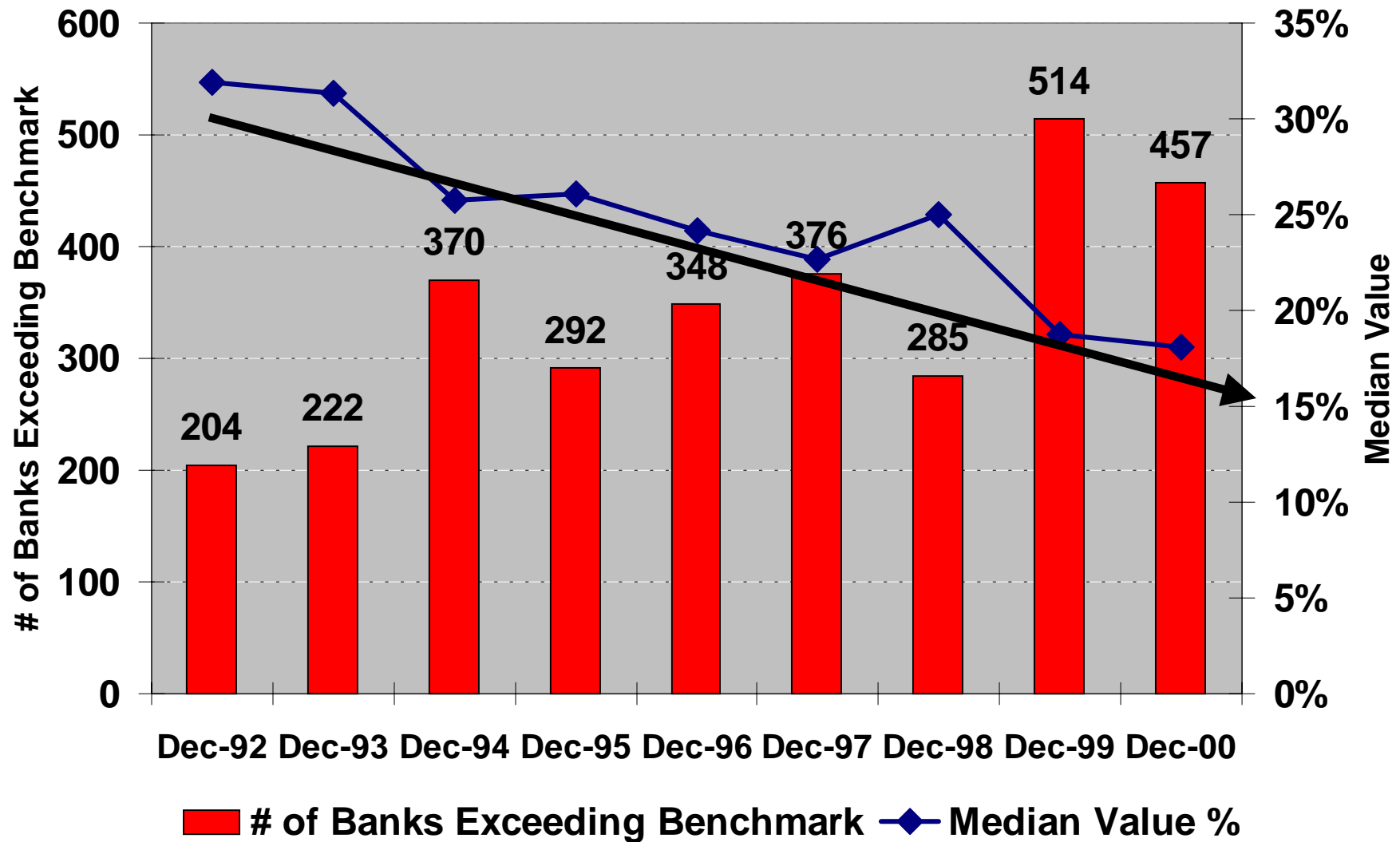
Net Non-Core Funding Dependence



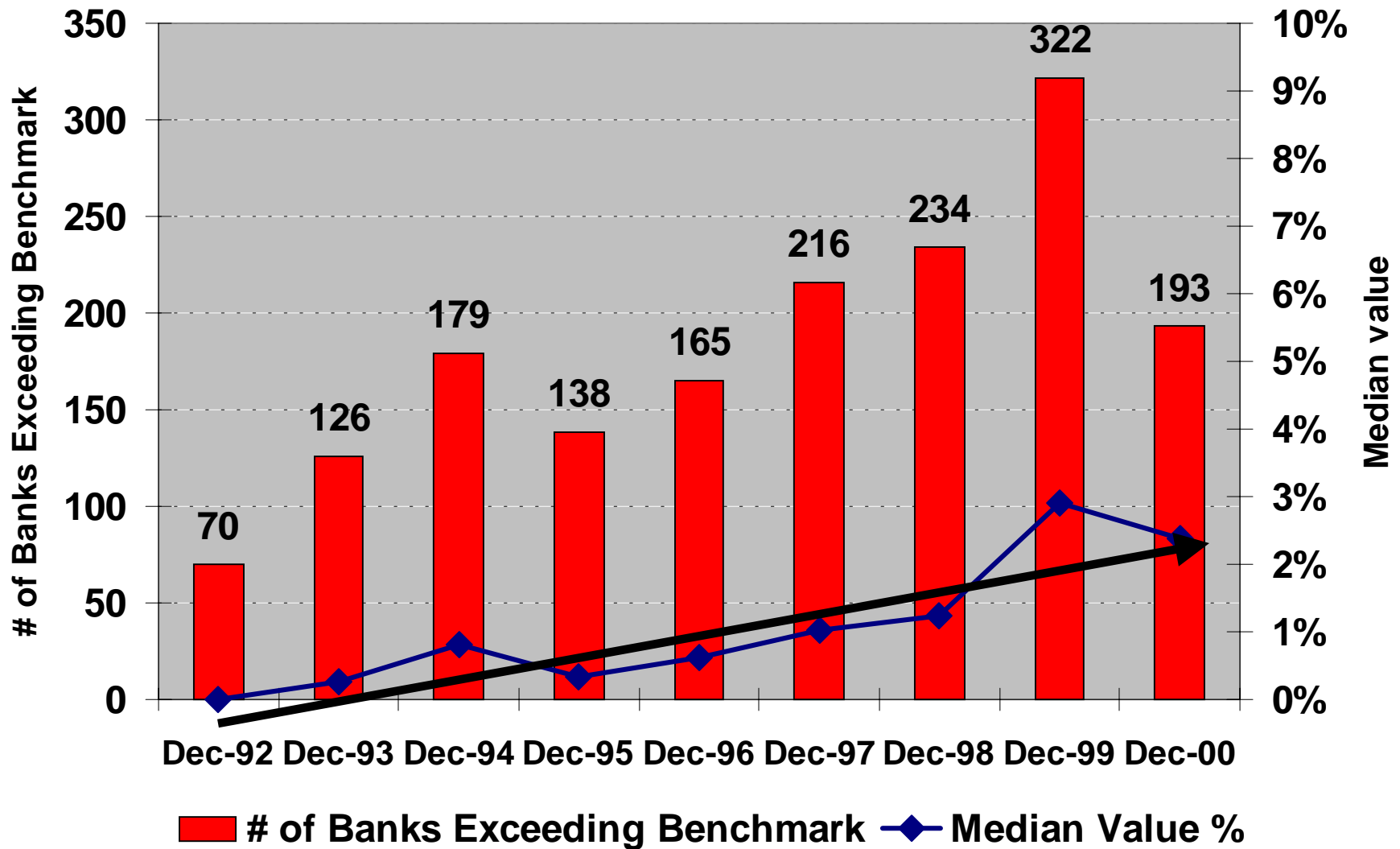
Net Short-Term Liabilities-to-Assets



On-Hand Liquidity-to-Total Liabilities



Reliance on Wholesale Funding



COMMUNITY BANK CONTINGENCY FUNDING PLAN SUMMARY

(Example format, tailor as appropriate)

POTENTIAL FUNDING EROSION

| | Scenarios: | | | |
|---|--------------------|---------|---------|---------|
| | CURRENT BALANCE | 1 C* | 2 D* | 3 E* |
| LARGE FUND PROVIDERS | | | | |
| FED FUNDS | _____ | _____ | _____ | _____ |
| FHLB "Investments" (Fed Funds) | _____ | _____ | _____ | _____ |
| BROKERED DEPOSITS | _____ | _____ | _____ | _____ |
| CDs | _____ | _____ | _____ | _____ |
| DDAs | _____ | _____ | _____ | _____ |
| MMDA, | _____ | _____ | _____ | _____ |
| SAVINGS, | _____ | _____ | _____ | _____ |
| ETC. | _____ | _____ | _____ | _____ |
| <u>TOTAL LARGE FUNDS</u> | _____ | _____ | _____ | _____ |
| <u>TOTAL OTHER UNINSURED FUNDS</u> | _____ | _____ | _____ | _____ |
| INSURED OR COLLATERALIZED | | | | |
| BROKERED DEPOSITS | _____ | _____ | _____ | _____ |
| DEPOSITS RAISED ON THE INTERNET | _____ | _____ | _____ | _____ |
| OTHER INSURED FUNDS (any product) | _____ | _____ | _____ | _____ |
| FHLB "Advances" (Collateralized) | _____ | _____ | _____ | _____ |
| <u>TOTAL INSURED OR COLLATERALIZED</u> | _____ | _____ | _____ | _____ |
| <u>TOTAL FUNDING BASE</u> | _____ | _____ | _____ | _____ |
| OFF-BALANCE-SHEET FUNDING REQUIREMENTS | | | | |
| L/Cs | _____ | _____ | _____ | _____ |
| LOAN COMMITMENTS | _____ | _____ | _____ | _____ |
| SECURITIZATIONS (AMORTIZING) | _____ | _____ | _____ | _____ |
| DERIVATIVES | _____ | _____ | _____ | _____ |
| <u>TOTAL OFF-BALANCE-SHEET ITEMS</u> | _____ | _____ | _____ | _____ |
| <u>TOTAL POTENTIAL FUNDING EROSION</u> | ===== | ===== | ===== | ===== |

SOURCES OF FUNDS TO MEET DEMANDS

(WHICH MAY OR MAY NOT BE UTILIZED IN THE FUTURE, DEPENDING ON NEED)

(ASSUMING NEEDED ASAP)

| | IMMEDIATE | 30 DAYS | 60 DAYS | 90 DAYS | 180+ DAYS |
|--------------------------------------|-----------|---------|---------|---------|-----------|
| SURPLUS MONEY MARKET ASSETS | | | | | |
| FREE SECURITIES | _____ | _____ | _____ | _____ | _____ |
| FHLB - NET BORROWING BASE | _____ | _____ | _____ | _____ | _____ |
| ASSET SALES / SECURITIZATION | _____ | _____ | _____ | _____ | _____ |
| CREDIT CARDS, | _____ | _____ | _____ | _____ | _____ |
| AUTOs, | _____ | _____ | _____ | _____ | _____ |
| CMOs, | _____ | _____ | _____ | _____ | _____ |
| ETC. | _____ | _____ | _____ | _____ | _____ |
| LOAN ATTRITION | _____ | _____ | _____ | _____ | _____ |
| <u>TOTAL INTERNAL SOURCES</u> | ===== | ===== | ===== | ===== | ===== |

ESTIMATED LINE CAPACITY TO BORROW IN MARKET _____

BROKERED FUNDS CAPACITY _____

DISCOUNT WINDOW COLLATERAL "BORROWING VALUE" _____

* Fitch ratings (for example - can be used for rating scenario definitions)

Modified Basic Surplus Deficit (BSD) Worksheet

| BSD Measure of Liquidity | |
|--|-----------------|
| <i>Liquidity from Assets</i> | |
| Securities of U.S. governments and agencies (carried as available-for-sale, market-value, unpledged, and net of repurchase agreements) maturing more than 30 days from now | _____ |
| Loans that can be sold within the next 30 days (excluding loans maturing within the next 30 days) | _____ |
| Cash flow from maturities within the next 30 days (this includes federal funds sold, short-term investment securities and maturing loans) | _____ |
| Current Asset Liquidity (Subtotal) | \$ _____ |
| Minus ____% of legally binding, unfunded loan commitments expected to be drawn down within the next 30 days | (_____) |
| Minus ____% of other standby letters of credit and other legally binding off-balance sheet commitments expected to be used within the next 30 days | (_____) |
| Minus ____% of nonbinding off-balance sheet commitments expected to fund within the next 30 days | (_____) |
| Minus estimated new loans expected to fund within the next 30 days | (_____) |
| Net Liquid Assets at the Time Horizon (Total) | \$ _____ |
| <i>Volatile Liabilities</i> | |
| Federal funds purchased and other borrowings maturing within 30 days | _____ |
| ____% of uninsured time deposits maturing within the next 30 days | _____ |
| ____% of insured time deposits maturing within the next 30 days | _____ |
| ____% other insured deposits that might be withdrawn within the next 30 days (usually insignificant in the event of a run) | _____ |
| ____% other uninsured deposits that might be withdrawn within the next 30 days | _____ |
| Current Short-Term and Volatile Liabilities (Subtotal) | \$ _____ |
| Minus estimated net new deposits expected within the next 30 days | (_____) |
| Net Volatile Liabilities at the Time Horizon (Total) | _____ |
| BSD (at the Time Horizon) = Net Liquid Assets Total – Net Short-Term and Volatile Liabilities Total | \$ _____ |

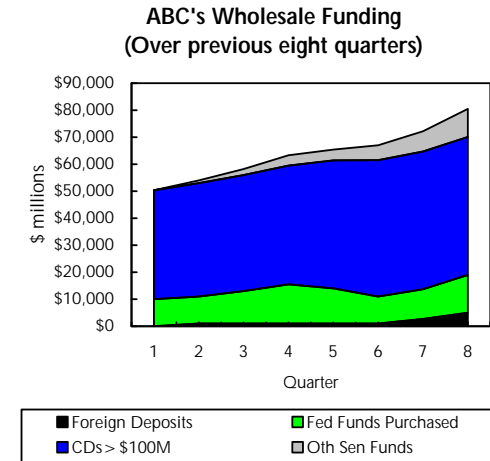
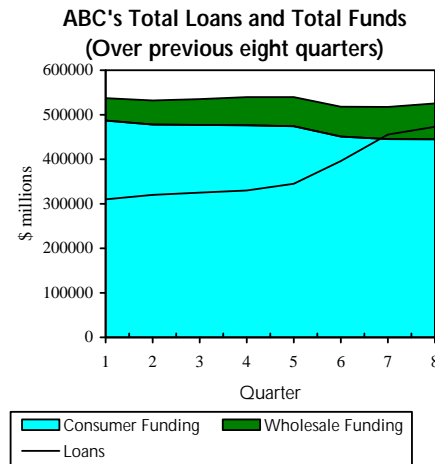
This form was developed by Leonard Matz in his book *Liquidity Risk Management* (Sheshunoff 1999). Reprinted with permission of the publisher and sole copyright owner. Sheshunoff Information Services (c) 1999, 2001. All rights reserved. For more information on this manual, call (800)456-2340 or see the Sheshunoff Web site at <https://secure.sheshunoff.com/394.html>.

**FUNDS FLOW ANALYSIS
OF THE ABC BANK (CONSOLIDATED COMPANY)
FOR SELECTED ASSETS AND CREDIT SENSITIVE LIABILITIES
\$ Thousands**

Sample format, tailor as appropriate.

| Quarter | BANK ASSETS | | | | BANK LIABILITIES | | | | | | PARENT | NONBANK | NONBANK |
|-----------------------------|-------------------------|----------------------|-----------------|---------------------|------------------|-------------------|---------------------|--------------|------------------|---------------------------|-------------------|------------------|---------|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | ASSETS | LIABILITIES | |
| | Federal Reserve Balance | Total Loans & Leases | Free Securities | Money Market Assets | DDA Net of Float | Consumer Deposits | Fed Funds Purchased | CDs > \$100M | Foreign Deposits | Other Sensitive Funds/Dep | Short-Term Assets | Short-Term Liabs | |
| 1 | \$5,000 | \$310,000 | \$70,000 | \$7,500 | \$98,000 | \$389,000 | \$10,000 | \$40,350 | \$0 | \$0 | \$10,000 | \$8,500 | |
| 2 | \$5,000 | \$320,000 | \$68,000 | \$7,500 | \$94,000 | \$384,000 | \$10,000 | \$42,000 | \$1,000 | \$1,000 | \$10,000 | \$8,500 | |
| 3 | \$5,200 | \$325,000 | \$66,500 | \$6,800 | \$94,000 | \$383,000 | \$12,000 | \$43,000 | \$1,000 | \$2,200 | \$10,000 | \$8,500 | |
| 4 | \$5,100 | \$330,000 | \$67,500 | \$5,500 | \$92,400 | \$384,000 | \$14,500 | \$44,000 | \$1,000 | \$3,800 | \$10,000 | \$8,500 | |
| 5 | \$5,000 | \$345,000 | \$68,000 | \$5,000 | \$90,400 | \$383,900 | \$13,000 | \$47,400 | \$1,000 | \$4,000 | \$10,000 | \$8,500 | |
| 6 | \$4,800 | \$396,000 | \$23,200 | \$5,000 | \$74,000 | \$377,000 | \$10,000 | \$50,500 | \$1,000 | \$5,500 | \$10,000 | \$8,500 | |
| 7 | \$5,100 | \$455,500 | \$19,000 | \$4,000 | \$75,300 | \$370,000 | \$11,000 | \$51,000 | \$2,700 | \$7,500 | \$6,000 | \$4,500 | |
| 8 | \$3,900 | \$473,000 | \$12,500 | \$2,000 | \$80,000 | \$365,000 | \$14,000 | \$51,100 | \$5,000 | \$10,400 | \$4,500 | \$3,000 | |
| Change from previous period | (\$1,200) | \$17,500 | (\$6,500) | (\$2,000) | \$4,700 | (\$5,000) | \$3,000 | \$100 | \$2,300 | \$2,900 | (\$1,500) | (\$1,500) | |

| Sources and Uses - Quarter 7 to Quarter 8 | | | |
|---|----------|----------------|----------|
| Sources | | Uses | |
| FRB BALANCE | \$1,200 | LOANS & LEASES | \$17,500 |
| FREE SECURITIES | \$6,500 | CONSUMER DEP | \$5,000 |
| MMA | \$2,000 | | ----- |
| DDA | \$4,700 | | \$22,500 |
| FFP | \$3,000 | | |
| CDs | \$100 | | |
| FOREIGN DEP | \$2,300 | | |
| OTHER LIABS | \$2,900 | | |
| | ----- | | |
| | \$22,700 | | |



NOTE: Sources and uses do not balance on this schedule, since it purposely includes only balance sheet line items likely to affect liquidity. Longer term assets/liabilities, such as fixed assets or other liabilities, which usually have little impact on liquidity, are excluded in order to focus on meaningful cash flows. The out-of-balance condition can be monitored and controlled, and if significant should be researched. This process allows for a more timely availability and presentation of data.

Funds Availability Report April 30, 2001

| Wholesale Funds Available | <u>Approved Amount</u> | <u>Amount Outstanding</u> | <u>Amount Available</u> | |
|--|-----------------------------------|--------------------------------------|------------------------------------|--------------------------------------|
| FHLB Advances | 50,000 | 20,000 | 30,000 | |
| FHLB Investments | 15,000 | - | 15,000 | |
| Fed Funds Purchased | 5,000 | - | 5,000 | |
| Securities Sold with Agreement to Repurchase | 15,000 | 5,000 | 10,000 | |
| Total | 85,000 | 25,000 | 60,000 | |
| | | | | |
| Collateral Available | <u>Market Value</u> | <u>Amount Pledged</u> | <u>Margin</u> | <u>Borrowing Capacity</u> |
| Residential RE | 60,000 | 20,000 | 85% | 34,000 |
| UST | 15,000 | 10,000 | 100% | 5,000 |
| MBS | 10,000 | 5,000 | 95% | 4,750 |
| Agencies | 20,000 | 5,000 | 95% | 14,250 |
| Total | 105,000 | 40,000 | | 58,000 |

Rollover Risk Analysis

| December 31, 2000 | 1st Month | 2-3 Months | 4-6 Months | 7-12 Months | Total Tactical | 2nd Year | 3rd Year | 4-5 Years | > 5 Years | Total Strategic | Total |
|--|--------------|---------------|---------------|----------------|-------------------|-------------|-------------|--------------|--------------|--------------------|--------|
| Wholesale Funding | | | | | | | | | | | |
| Jumbo Certificates of Deposit | 3,524 | 2,498 | 2,314 | 3,210 | 11,546 | 1,560 | 400 | | 100 | 2,060 | 13,606 |
| Repurchase Agreements | 500 | | | | 500 | | | | | - | 500 |
| Internet CDs | | | | | | | | | | | |
| Brokered Certificates of Deposit | | 1,000 | 1,000 | 2,000 | 4,000 | 1,000 | | | | | 4,000 |
| Fed Funds Purchased | 1,200 | | | | 1,200 | | | | | - | 1,200 |
| Long-Term Debt | | | | | - | | | 1,000 | | 1,000 | 1,000 |
| Total | 5,224 | 3,498 | 3,314 | 5,210 | 17,246 | 2,560 | 400 | 1,000 | 100 | 4,060 | 21,306 |
| FHLB Advances | | | | | | | | | | | |
| Advance # 1 (Two Year Bullet) | | | 1,000 | | 1,000 | | | | | - | 1,000 |
| Advance # 2 (10/1 Convertible) | | | | | - | | | | 5,000 | 5,000 | 5,000 |
| Advance # 3 (10/5 Convertible) | | | | | - | | | | 5,000 | 5,000 | 5,000 |
| FHLB Short-Term Borrowings | 3,000 | | | | 3,000 | | | | | - | 3,000 |
| Total FHLB Advances | 3,000 | - | 1,000 | - | 4,000 | - | - | - | 10,000 | 10,000 | 14,000 |
| Rollover Amount | 8,224 | 3,498 | 4,314 | 5,210 | 21,246 | 2,560 | 400 | 1,000 | 10,100 | 14,060 | 35,306 |
| Percentage of Assets | 8.1% | 3.4% | 4.2% | 5.1% | 20.8% | 2.5% | 0.4% | 1.0% | 9.9% | 13.8% | |
| Cumulative Rollover Amount | 8,224 | 11,722 | 16,036 | 21,246 | | 23,806 | 24,206 | 25,206 | 35,306 | | |
| Cumulative Percentage of Assets | 8.1% | 11.5% | 15.7% | 20.8% | | 23.3% | 23.7% | 24.7% | 34.6% | | |

Projected Funding Needs and Sources
FNB Anytown, USA
April 30, 2001

| Projected Funding Needs: | <u>30</u> | <u>60</u> | <u>90</u> | <u>180</u> | <u>365</u> | <u>Total</u> |
|---|------------------|------------------|------------------|-------------------|-------------------|---------------------|
| <u>New Loan Originations:</u> | | | | | | |
| Commercial | 1,000 | 500 | 400 | 500 | 600 | 3,000 |
| Personal | 250 | 400 | 200 | 100 | 100 | 1,050 |
| Mortgage | 100 | 125 | 150 | 100 | 300 | 775 |
| <u>Commitments to Purchase Assets:</u> | | | | | | |
| Muni's | - | 1,000 | - | - | - | 1,000 |
| MBS | 2,000 | - | - | - | - | 2,000 |
| <u>Expected Deposit Decrease (Increase):</u> | | | | | | |
| DDA | (50) | (50) | (50) | (50) | (50) | (250) |
| MMDA | 200 | (25) | (50) | (50) | (50) | 25 |
| Public Funds | - | - | 3,000 | - | 3,000 | 6,000 |
| Corporate | 1,000 | | | | | 1,000 |
| CDs > 100,000 | (100) | 500 | - | 600 | - | 1,000 |
| CDs < 100,000 | (125) | 100 | - | - | 125 | 100 |
| <u>Fixed Assets</u> | - | 1,200 | - | - | 60 | 1,260 |
| Total Projected Needs | 4,275 | 3,750 | 3,650 | 1,200 | 4,085 | 16,960 |
| Cumulative Total | | 8,025 | 11,675 | 12,875 | 16,960 | |
| Projected Funding Sources | | | | | | |
| | <u>30</u> | <u>60</u> | <u>90</u> | <u>180</u> | <u>365</u> | <u>Total</u> |
| Fed Funds Sold | 1,500 | - | - | - | - | 1,500 |
| CDs | 100 | - | 100 | - | 100 | 300 |
| | | | | | | - |
| <u>Marketable Securities:</u> | | | | | | |
| AFS maturing | 1,000 | 1,500 | - | | 1,500 | 4,000 |
| HTM maturing | 500 | - | - | 1,000 | | 1,500 |
| AFS cashflow | 300 | 290 | 275 | 325 | 310 | 1,500 |
| HTM Cashflow | 100 | 90 | 95 | 110 | 105 | 500 |
| <u>Loan Portfolio:</u> | | | | | | |
| Loan Paydowns | | | | | | |
| Commercial | 250 | 300 | 300 | 1,000 | 700 | 2,550 |
| Personal | 150 | 200 | 250 | 225 | 300 | 1,125 |
| Mortgage | 75 | 100 | 350 | 125 | 200 | 850 |
| Fed Funds Purchased | 400 | - | 2,000 | - | - | 2,400 |
| Other Sources | - | - | - | | | |
| Total Sources | 4,375 | 2,480 | 3,370 | 2,785 | 3,215 | 16,225 |
| Cumulative | | 6,855 | 10,225 | 13,010 | 16,225 | |
| Funding Sources or (Needs) | 100 | (1,270) | (280) | 1,585 | (870) | |
| Cumulative Position | | (1,170) | (1,450) | 135 | (735) | |

This report is a simple example and was designed for discussion purposes. The concept may be customized for practical application. Positive numbers reflect increases and negative numbers reflect decreases.

Quarterly Wholesale Funding Plan

Wholesale Funding as of December 31, 2000

| | |
|-----------------------|---------------|
| Fed Funds Purchased | 2,000 |
| Jumbo CD's | 20,000 |
| Brokered CD's | 5,000 |
| FHLB Advances | 30,000 |
| Short Term Borrowings | 4,000 |
| Total | 61,000 |

Forecasted Asset Changes as of March 2001

| | |
|----------------------|--------------|
| Investment Portfolio | (3,000) |
| Loans | 10,000 |
| Other Assets | 500 |
| Total Assets | 7,500 |

| | |
|-------------------------------------|------------|
| Transaction Deposits | 200 |
| Retail CDs | 500 |
| Non Interest Bearing | (300) |
| Equity | 400 |
| Total Liabilities and Equity | 800 |

Change in Funding Needs 6,700

Projected Wholesale Funding as of March, 2001

| | <u>Limit</u> | <u>Amount</u> | <u>Change</u> |
|-----------------------|---------------|---------------|---------------|
| Fed Funds Purchased | 5,000 | 3,700 | 1,700 |
| CD's > 100,000 | 0 | 21,000 | 1,000 |
| Brokered CD's | 10,000 | 5,000 | 0 |
| FHLB Advances | 32,000 | 32,000 | 2,000 |
| Short Term Borrowings | 10,000 | 6,000 | 2,000 |
| Total | 57,000 | 67,700 | 6,700 |

LIQUIDITY SOURCES AND NEEDS

LIQUIDITY SOURCES

| | | |
|---|-----------|-----------|
| Fed Funds Sold | _____ | |
| Less: Treasury, Tax and Loan, Note Option | (_____) | |
| Anticipated increases in deposits | | _____ |
| Anticipated cash flows from securities: (only use if these securities are not included in the AFS or HTM figures below) | | |
| Pass through securities | _____ | |
| Collateralized Mortgage Obligations (CMOs) | _____ | |
| Anticipated cash flows from the loan portfolio | | _____ |
| 1-4 family residential | _____ | |
| Installment loans | _____ | |
| Commercial loans | _____ | |
| Securities classified Available for Sale (AFS) (only list those that management would realistically liquidate for liquidity needs) | | _____ |
| U.S. Treasuries | _____ | |
| Agencies | _____ | |
| Municipals | _____ | |
| CMOs | _____ | |
| Mutual Funds | _____ | |
| Securities classified Held to Maturity | | _____ |
| Maturing in less than 90 days | _____ | |
| Remaining Book Value less than 85% of original (tails) | _____ | |
| Less: Pledged Securities | | (_____) |
| Available Fed Funds Purchased Lines | | _____ |
| Other borrowing lines | | _____ |

| |
|-----------------------------------|
| TOTAL SOURCES OF LIQUIDITY |
|-----------------------------------|

ANTICIPATED LIQUIDITY NEEDS:

Large scheduled loan closings _____

Seasonal loan demand _____

Estimated usage of off-balance sheet commitments _____

Maturing CDs _____
(you should make some assumptions about the likelihood of rollover)

Anticipated loss of public funds _____

Additional cash needs (1st and 15th) _____

TOTAL ANTICIPATED NEEDS

LIQUIDITY POSITION (difference between sources and anticipated needs)