Liquidity Analysis and Reporting

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Objectives

- Current trends
- Recent regulatory releases
- Consider a new approach
  - Better liquidity and NIM management
  - Meet changing examiner expectations

Senate Financial Reform Bill

- Provide for transparency of derivatives
- Separate regulation of large banks
- "Streamlines" federal bank supervision
- Stronger enforcement of regulations currently on the books
  - Higher capital standards
  - Stronger liquidity requirements
  - "Traditional" bank balance sheets

Regulatory Updates

- Interagency Policy Statement on ALLL (12/3/2009)
- Interagency Advisory on IRR (1/7/2010)
- 10-CU-02 Business Lending (1/20100
- 10-CU-03 Concentration Risk (3/2010)
- Interagency Policy Statement on Funding and Liquidity Risk Management (3/22/2010)

Current Trends

- US Consumer savings*
  - 11/2009 4.7%
  - 2/2010 3.4%
  - 3/2010 3.1%
- US Consumer debt **
  - 2005 +4.5%
  - 2006 +4.1%
  - 2007 +5.7
  - 2008 +1.5%
  - 2009 -4.4%
  - 2010 YTD -0.4%

* Source: US Department of Commerce, Bureau of Economic Analysis
** Source: Federal Reserve Statistical Releases

Current Trends

- Will the funding always be there?
  - Retail deposit growth is very competitive
  - Wholesale funds have regulatory stigma
- Regulation is pointing towards bringing back the traditional depository structure
- Failure to consider long-term liquidity will compress NIM

Interagency Policy Statement on Funding and Liquidity Risk Mgt (3/22/2010)

- Provides framework that stresses diversity of funding sources
- Creates guidance for risk that occurs in correspondent banking relationships
- Does not impose requirements, does not intend on replacing examiner's guides

Interagency Policy Statement on Funding and Liquidity Risk Mgt (3/22/2010)

- Three weaknesses of most financial institutions
  - Insufficient holdings of liquid assets
  - Funding illiquid assets with volatile short-term liabilities
  - Lack of meaningful cash-flow projections and liquidity contingency plans

Interagency Policy Statement on Funding and Liquidity Risk Mgt (3/22/2010)

- Emphasis of guidance is on
  - Cash-flow projections
  - Diversified funding sources
  - Stress testing
  - Cushion of liquid assets
  - Strong contingency funding plan

Interagency Policy Statement on Funding and Liquidity Risk Mgt (3/22/2010)

- Items that your policy needs to include:
  - Cash flow projections over specified time horizons for both expected and adverse conditions
  - Target amounts of liquid assets
  - Measures for unstable liabilities
    - Wholesale funding/total assets ratio
    - Volatile deposits/total deposits ratio
    - Short-term borrowings/total funding ratio
  - Concentration limits that address diversity of funding sources

Basel Committee on Banking Supervision

- International Framework for Liquidity Risk Measurement, Standards and Monitoring
  - www.bis.org
  - Published 12/2009
  - Open for comment until 4/16/2010
  - "Key element of the financial crisis was inaccurate and ineffective management of liquidity risk"

Basel Committee on Banking Supervision

- Four main recommendations
  - Liquidity Coverage Ratio
  - Net Stable Funding Ratio
  - Address contractual maturity mismatch
  - Address concentration of funding

Basel Committee on Banking Supervision

- Liquidity Coverage Ratio
  - High quality liquid assets/Net cash outflows < 30 days
  - Ratio must be > 100%
  - High quality liquid assets:
    - Cash
    - Central bank reserves
    - Marketable securities (deep repo market exists)
    - Corporates (A- or better)
    - Government or central bank debt
    - Central bank eligible

Basel Committee on Banking Supervision

- Net Stable Funding Ratio

  $$\frac{\text{Available Amount of Stable Funding (ASF)}}{\text{Required Amount of Stable Funding (RSF)}}$$

  – Ratio must be > 100%

Basel Committee on Banking Supervision

- ASF
  - 100% Factor
    - Total Capital
    - Preferred Stock w maturity > 1yr
    - Total liabilities with effective maturity > 1yr
  - 85% Factor
    - Stable non-maturity retail deposits and term deposits < 1yr
  - 70% Factor
    - Less stable retail deposits < 1 yr (i.e. uninsured amounts)
  - 50% Factor
    - Unsecured wholesale funding
    - Retail deposits provided by non-financial corporate customers

Basel Committee on Banking Supervision

- RSF
  - 0% Factor
    - Cash, money market instruments
    - Securities with maturities < 1yr
  - 5% Factor
    - Unencumbered UST's, AGY, claims on central banks > 1yr
  - 20% Factor
    - Unencumbered corporate securities > 1yr and at least AA rated
  - 50% Factor
    - Gold, Equities
    - Corporates AA- to A-
    - Loans to corporate clients w maturity < 1yr
  - 85% Factor
    - Loans to retail clients w maturity < 1yr
  - 100% Factor – all other assets

Basel Committee on Banking Supervision

- Address the contractual maturity mismatch
  - Sources and uses report
  - Apply analysis to specific time horizons
  - Stress test some of your assumptions
    - Prepayments
    - Non-maturity deposit runoff
    - CD Renewals

Basel Committee on Banking Supervision

- Concentration of funding sources
  - Identify significant counterparties
    - More than 1% of total liabilities in aggregate
  - Identify significant product/instrument
    - More than 1% of total liabilities in aggregate

Traditional Liquidity Analysis

Liquidity:	
Cash & Due	$ 23,591
Interest Bearing Balances	1,486
Fed Funds Sold	-
Investment Securities	216,061
Less Pledged to Borrowings	(131,664)
Residential Mortgages	165,858
Less Pledged to Borrowings	(127,880)
Loans Held for Sale	28,355
Saleable Loans (cc, student)	20,047
Brokered CD Capacity	75,000
Lines of Credit	40,000
Liquidity Sources	**310,854**

Funding Needs:	
Overnight Borrowings	$ 27,122
Other Borrowings Due <30 Days	-
10% of CDs Maturing <30 Days	22,016
10% of Jumbo CDs Maturing <30 Days	6,400
5% NMD Runoff (Worst Case)	19,545
Total Needs	**75,084**
Basic Surplus	**120,770**
Total Surplus (w/borrowings)	**235,770**
Total Assets	**1,053,690**
Liquidity Ratio	**11%**
Liquidity Ratio (incl. borr. cap.)	**22%**

Traditional Liquidity Analysis

- Liquidity is usually only a major concern at problem institutions
- "Pass / Fail" threshold was the default
- Regulators developed standard analysis methods
  - Geared towards identifying failure threats
  - Focused on liquidation view

Weakness of Traditional Analysis

- Static view
- Dated financials
- Does not account for:
  - Asset growth
  - Deposit behavior
- All funding is created equal
- No consideration of broader ALM impact

Improved Liquidity Analysis

- Approach liquidity measurement like IRR
- Incorporate strategic plan and budget
- Measure results for distinct time horizons
- Evaluate scenarios
  - Interest rate changes may only be an element
  - Consider best / worst / most likely
- Dynamic cash flows

Step 1: Compile Realistic Numbers

- Cash & Due is not completely liquid
- Determine true asset sale/pledge values
  - Show at current market values
  - Haircuts often apply for pledging
  - Many loan types require time to liquidate
- Accurately reflect borrowing capacity
  - FHLB or Corporate CU lines should be questioned
  - FHLB-required stock purchases should be netted
  - Collateral must be categorized properly
  - Brokered CDs take several days to settle

Step 2: Forecast

- Project asset and deposit growth
- Forecast realistic deposit volatility
- Remember other key funding needs
  - Dividend payments
  - Debt service
  - Derivative contracts
  - Anticipated acquisitions
- Apply scenarios and rate shocks to identify risks

Step 3: Report & Analyze

Primary Liquidity:

Category	12/31/08	1 month	3 months	6 months	12 months
Cash & due	23,591	23,591	23,591	23,591	23,591
Less operating needs	(5,898)	(5,898)	(5,898)	(5,898)	(5,898)
Interest-bearing balances	1,486	1,486	1,486	1,486	1,486
FHLB gross borrowing capacity	345,015	345,015	345,015	345,015	345,015
Less current borrowings	(259,544)	(180,000)	(180,000)	(180,000)	(180,000)
Less FHLB stock purchase needed		(2,000)	(2,000)	(2,000)	(2,000)
Forecasted New Deposits		**5,384**	**16,288**	**32,986**	**67,655**
Total Primary Liquidity	**104,650**	**187,578**	**198,482**	**215,180**	**249,850**

Secondary Liquidity:

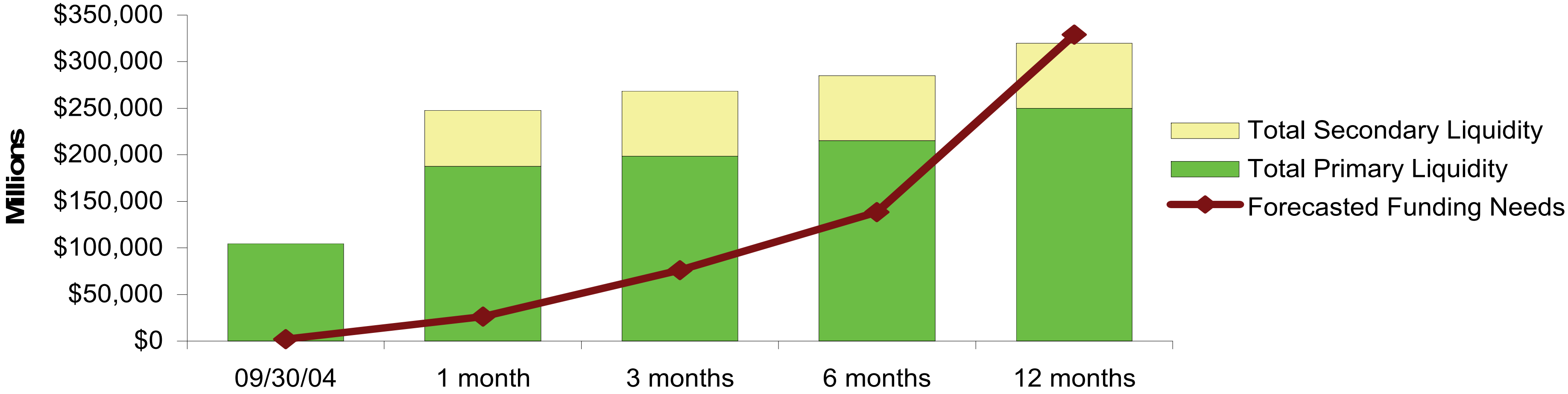
Category	12/31/08	1 month	3 months	6 months	12 months
Brokered CD Availability	0	50,000	50,000	50,000	50,000
National CD Availability	0	10,000	20,000	20,000	20,000
Guaranteed LOCs	0	0	0	0	0
Total Secondary Liquidity	**0**	**60,000**	**70,000**	**70,000**	**70,000**

Potential Funding Outflow:

Category	12/31/08	1 month	3 months	6 months	12 months
NMD Runoff Forecast	724	2,534	7,601	15,201	30,403
Maturing CD Runoff Forecast	1,093	4,736	14,208	9,472	56,833
National CD Runoff Forecast	0	0	0	0	0
Maturing Brokered CDs (not renewed)	0	0	0	0	0
Maturing Borrowings (not renewed)	0	0	0	0	0
Swap Payments			625	1,250	5,000
Dividend Payments		1,400		2,800	5,600
Forecasted Asset Growth		**17,562**	**53,567**	**109,858**	**231,170**
Total Potential Funding Outflow	**1,817**	**26,231**	**76,001**	**138,582**	**329,006**

Step 3: Report & Analyze

Funding Coverage Forecast:



Risk Limit Compliance:

	Current		Limit	Result
Primary Surplus Coverage	5760.1%	>	150.0%	Pass
Total Surplus Coverage	5760.1%	>	250.0%	Pass
Primary Surplus / Assets	9.8%	>	5.0%	Pass
Total Surplus / Assets	9.8%	>	10.0%	Fail

Benefits

- Integrates liquidity management into ALM program
- Forward-looking and dynamic
- Enables evaluation of impact on NIM from funding options
- Helps ALCO members see choices more clearly
- Demonstrates more sophisticated approach to liquidity management

Resources Needed

- Reasonable budget process
  - Includes input from functional areas
  - Includes identification of key cash flow issues
- Effective forecasting model