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# 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 (1/2010)
- 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](http://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

Available Amount of Stable Funding (ASF)

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
<i>Less Pledged to Borrowings</i>	(131,664)
Residential Mortgages	165,858
<i>Less Pledged to Borrowings</i>	(127,880)
Loans Held for Sale	28,355
Saleable Loans (cc, student)	20,047
Brokered CD Capacity	75,000
Lines of Credit	40,000
<b>Liquidity Sources</b>	<b>310,854</b>

## 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
<b>Total Needs</b>	<b>75,084</b>

<b>Basic Surplus</b>	<b>120,770</b>
<b>Total Surplus (w/borrowings)</b>	<b>235,770</b>
<b>Total Assets</b>	<b>1,053,690</b>
<b>Liquidity Ratio</b>	<b>11%</b>
<b>Liquidity Ratio (incl. borr. cap.)</b>	<b>22%</b>

# 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

# Weaknesses 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
<i>Less operating needs</i>	(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
<i>Less current borrowings</i>	(259,544)	(180,000)	(180,000)	(180,000)	(180,000)
<i>Less FHLB stock purchase needed</i>		(2,000)	(2,000)	(2,000)	(2,000)
<b>Forecasted New Deposits</b>		<b>5,384</b>	<b>16,288</b>	<b>32,986</b>	<b>67,655</b>
<b>Total Primary Liquidity</b>	<b>104,650</b>	<b>187,578</b>	<b>198,482</b>	<b>215,180</b>	<b>249,850</b>

## Secondary Liquidity:

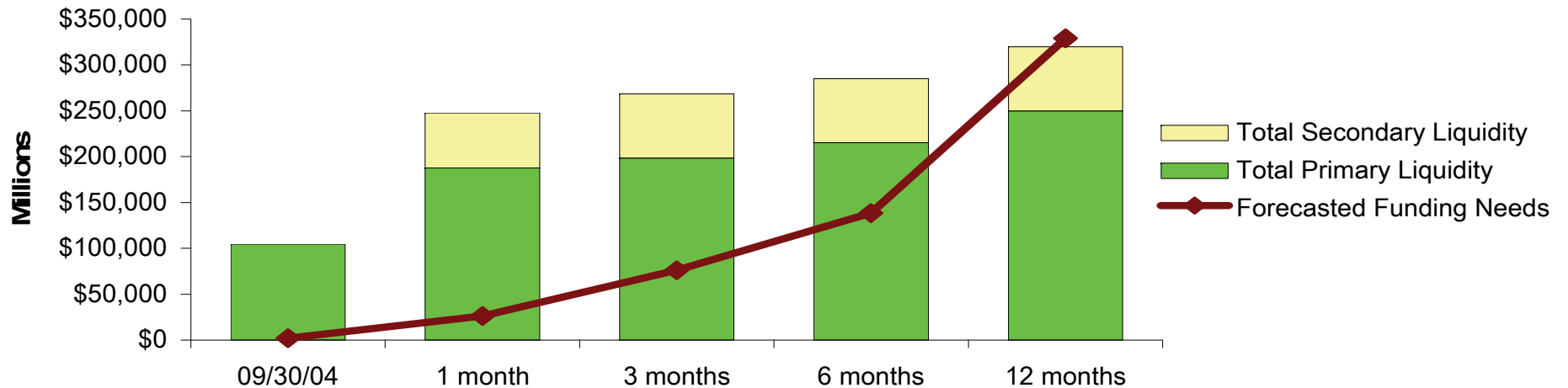
Category	12/31/08	1 month	3 months	6 months	12 months
Brokered CD Availability	0	50,000	50,000	50,000	50,000
National CD Availability	0	10,000	20,000	20,000	20,000
Guaranteed LOCs	0	0	0	0	0
<b>Total Secondary Liquidity</b>	<b>0</b>	<b>60,000</b>	<b>70,000</b>	<b>70,000</b>	<b>70,000</b>

## 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
<b>Forecasted Asset Growth</b>		<b>17,562</b>	<b>53,567</b>	<b>109,858</b>	<b>231,170</b>
<b>Total Potential Funding Outflow</b>	<b>1,817</b>	<b>26,231</b>	<b>76,001</b>	<b>138,582</b>	<b>329,006</b>

# Step 3: Report & Analyze

## Funding Coverage Forecast:



## Risk Limit Compliance:

	<u>Current</u>		<u>Limit</u>		<u>Result</u>
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