Introduction – Liquidity

This module will start with a basic discussion of liquidity. We will discuss the areas that examiners focus on, as well as areas board members can focus on when monitoring liquidity. At the end of the module, you will assign a rating for our sample bank's liquidity component and compare your answer to the examiner's assessment. Go to the "Next" button below to begin the instructional content for liquidity.

Instructional Content - Liquidity

Overview

When examiners evaluate liquidity, we are commenting on your bank's ability to generate funds at a **reasonable cost** to fund loan growth, deposit runoff, etc. Clearly, every bank in the nation can go on-line and acquire as many internet-based deposits as the bank is willing to pay for. While problems associated with this type of funding can be mitigated, regulators will generally be concerned with a community bank that utilizes substantial quantities of these deposits because they are extremely volatile and expensive.

So if simply having access to funding is not indicative of a strong liquidity position, what is? What should directors look at when assessing their bank's liquidity? Here are five areas to review to help understand your bank's liquidity position.

1. **Net Non-Core Funding Dependence Ratio** - This ratio measures the degree to which the bank is funding longer-term assets (loans, securities that mature in more than one year, etc.) with non-core funding. Non-core funding includes funding that can be very sensitive to changes in interest rates such as brokered deposits, CDs greater than $100,000, and borrowed money. Higher ratios reflect a reliance on funding sources that may not be available in times of financial stress or adverse changes in market conditions.

2. **The availability of liquid assets readily convertible to cash without undue loss**- Consider Federal funds sold, available for sale securities, loans for sale, etc.

3. **Core deposit/asset growth** - Are core deposits capable of funding anticipated asset growth?

4. **Diversification of funding sources** - A bank with strong liquidity has a strong core deposit base, established borrowings lines, and procedures in place for acquiring internet-based or other forms of emergency borrowing.

5. **External Forces** - Economic conditions, competition, marketing efforts, etc. have a material impact on the need for liquidity going forward.

You can see from these last three items that liquidity is about more than just your balance sheet; it's also about how well your bank manages liquidity. You'll see that management will have a material impact on all CAMELS components throughout this tutorial. When it comes to liquidity, one of the most important evaluation factors is **management's ability to measure, monitor, and control the liquidity position,** which includes more than a simple ratio or balance sheet analysis.

Liquidity Management

As board members, one of your primary responsibilities is to utilize the expertise you've acquired outside of banking to help the management team understand how depositors and borrowers will react. When it comes to evaluating liquidity, you have to ask yourself, what is going to impact this bank's liquidity position going forward and what will that impact be? Without this type of analysis, it will be difficult to determine what level of liquidity will be satisfactory. Consider as part of the bank's liquidity analysis:

1. Do we have a competitor aggressively trying to steal our depositors?
2. Does the management team anticipate exceptional loan growth?
3. How will the local or national economy influence our ability to generate and maintain deposits and loans?
4. Does an increasing trend in off-balance sheet items (loan commitments for example) suggest future liquidity strains?
5. How will the bank's marketing efforts impact loan/deposit growth?
6. How will changes in interest rates impact liquidity?

This is just a small sampling of items that could impact liquidity. Board members and managers should consider all of these things and more when evaluating a bank's liquidity position, regardless of how your bank chooses to evaluate liquidity. This strategic analysis will need to be done as a complement to your ratio analysis.

Liquidity Measurement

When it comes to monitoring liquidity, larger or more complex institutions will likely utilize some form of cash flow analysis. They will make some assumptions based on the six items listed above (and numerous others) and estimate the likely inflows and outflows of loans and deposits, providing managers with an estimate of what the likely liquidity needs will be. Most community banks, on the other hand, will primarily use ratio analysis and incorporate estimates of how the items above will impact that position in the future. We will focus on ratio analysis, which is typically based on ratios available on the Uniform Bank Performance Report (UBPR). Your bank's UBPR is available at www.ffiec.gov and an abbreviated UBPR for our sample bank is shown below.

CERT# 12345
CHARTER# 311 COUNTY: MADISON

FIRST STATE BANK
SUMMARY RATIOS

	12/31/2004			12/31/2003			12/31/2002		
AVERAGE ASSETS ($000)		182,836			145,180			143,139	
NET INCOME ($000)		2,084			2,018			1,961	
	BANK	PEER	PCT	BANK	PEER	PCT	BANK	PEER	PCT
EARNINGS AND PROFITABILITY:				*EARNINGS*					
PERCENT OF AVERAGE ASSETS:									
INTEREST INCOME (TE)	8.28	7.79	65	7.74	7.56	62	7.67	7.49	66
- INTEREST EXPENSE	3.63	3.55	49	3.36	3.33	51	3.34	3.31	51
NET INTEREST INCOME (TE)	4.65	4.24	66	4.38	4.24	58	4.33	4.18	61
+ NONINTEREST INCOME	0.52	0.75	38	0.58	0.74	35	0.50	0.72	38
- NON-INTEREST EXPENSE	2.89	2.92	46	2.64	2.95	34	2.53	2.87	33
- PROVISION: LOAN&LEASE LOSSES	0.37	0.16	61	0.16	0.17	49	0.16	0.14	51
= PRETAX OPERATING INCOME (TE)	2.01	1.90	63	2.16	1.85	75	2.14	1.87	81
NET INCOME	1.14	1.26	49	1.39	1.23	63	1.37	1.24	59
MARGIN ANALYSIS:									
NET INT INC-TE TO AV EARN ASSET	4.89	4.53	67	4.51	4.55	53	4.44	4.48	45
LOAN & LEASE ANALYSIS:				*ASSET QUALITY*					
NET LOSS / AVERAGE TOTAL LN&LS	0.22	0.12	84	0.14	0.12	56	0.16	0.14	56
LN&LS ALLOWANCE/TOTAL LN&LS	1.13	1.28	43	1.30	1.29	55	1.26	1.3	48
NON-CURRENT LN&LS/ GROSS LN&LS	3.11	0.81	89	1.01	0.83	62	1.02	0.79	63
LIQUIDITY:				*LIQUIDITY*					
NET NONCORE FUND. DEPENDENCE	21.76	15.22	68	15.25	15.09	53	15.05	14.72	54
NET LOANS & LEASES TO ASSETS	76.94	65.74	76	65.01	64.04	55	63.23	66.18	47
CAPITALIZATION:				*CAPITAL*					
TIER ONE LEVERAGE CAPITAL	8.08	9.11	41	9.61	9.09	56	9.18	9.14	54
CASH DIVIDENDS TO NET INCOME	60.55	40.04	88	59.61	40.54	89	55.69	40.35	89
GROWTH RATES:									
ASSETS	33.60	8.58	78	2.77	7.23	14	1.63	8.68	15
TIER ONE CAPITAL	5.89	12.81	42	6.21	12.78	38	7.51	12.45	37
NET LOANS & LEASES	62.56	12.92	89	6.59	11.71	32	1.13	9.72	20
SHORT TERM INVESTMENTS	-50.88	11.28	15	2.37	13.61	35	5.58	11.03	41
SHORT TERM NON CORE FUNDING	35.43	8.16	78	1.91	8.14	37	2.33	12.14	36

The first ratio to identify is the Net Non-core Funding Dependence ratio. As mentioned above, this ratio measures the extent to which you are funding longer term assets with non-core funding. The ratio is defined as *non-core liabilities, less short-term investments divided by long-term assets.*

1. What is the Net Non-core Funding Dependence ratio for 2004?
2. How does this compare to peer?
3. What is the trend?

Click here for the answer: (Answer: The Net Non-core Funding Dependence ratio reflects a rising dependence on non-core funding, having risen to 21.76%. This compares unfavorably to the peer group average, which is 15.22%. The significant amount of dependence on volatile liabilities puts the bank in the 68th percentile, meaning that their dependence on volatile liabilities is higher than 68 out of 100 banks within their peer group. At almost 22%, this ratio identifies that a significant quantity of long-term assets are funded with non-core liabilities. The situation isn't necessarily bad, but it is a red flag and you, as a director, should have questions for management.

The next ratio to identify is the Loans to Assets ratio.

As you can see, this ratio has increased substantially, which historically is a reflection of lower liquidity. However, different institutions with similar ratios may have different liquidity ratings due to differences in how those banks are managed. For example, a mortgage lender that portfolios their credits and is growing rapidly will need higher liquidity ratios than a mortgage lender with a heavily utilized securitization program and limited growth prospects.

Additionally, banks with similar ratios may have different liquidity ratings because of the nature of their loan portfolio. For example, a bank that specializes in short-term construction financing may generate significant amounts of cash flow/liquidity each month from payoffs, whereas an agricultural lender at the beginning of a growing season will receive little cash flow during a period when outstanding loan balances are expected to rise dramatically. While these banks may have similar liquidity ratios, their actual liquidity position and ratings could be very different due to foreseeable changes. Think about how principal and interest payments impact your bank's cash flow. Given your loan portfolio and growth plans, how should your liquidity ratios compare to a "peer bank"?

What are some other ways that different banks could have different liquidity positions despite having similar liquidity ratios?

- Cash flow from principal and interest payments could vary due to the types of loans on the balance sheet
- One bank may have existing relationships and procedures for loan sales
- One bank may have a large loan maturing
- One bank may be involved in securitizing credits for the bond markets
- One bank may have borrowing lines collateralized by the loan portfolio

All of these answers could dramatically impact liquidity/cash flow. And while the use of borrowings secured by the loan portfolio is typically regarded as a volatile source of funding, the Federal Financial Institutions Examination Council has stated that their usage would not necessarily be criticized, so long as the borrowing is reasonable and well managed. While these borrowings are not as cheap as most core deposits, they are not as expensive as brokered deposits and the lenders are typically very flexible with the terms – meaning management can match their characteristics with the loan portfolio the borrowings are supporting.

The point here is that your analysis should not be limited to reviewing ratios. Whether you use a cash flow analysis or not, you need to have a conscious assessment of the liquidity position that takes into account all of your sources and uses of funds. Each bank has different cash flows, growth patterns, and liquidity requirements to consider. Also, there are numerous external stimuli that can impact a bank's liquidity and these must be considered as well. One of the reasons banks have a large number of directors who are not bankers by trade is because of the fresh perspective that they provide. Try to utilize the knowledge you have gained in your personal and professional lives to help management understand what outside forces will impact your bank's liquidity position.

Let’s try to apply some of the information above to First State Bank. Please read the bank’s liquidity comment in the Report of Examination.

Examination Conclusions and Comments

LIQUIDITY

Liquidity levels and funds management practices are satisfactory; however, the position is weakening as increased competition has caused deterioration in core deposit levels, requiring loan growth to be funded with increased borrowings. As a result, the net non-core funding exposure has increased to a notable, yet still manageable 21.76%. Liquidity concerns are tempered somewhat, however, by management's commitment to discontinue asset growth until core deposit levels increase. Furthermore, the bank has ample and diverse secondary funding sources including $20 million in unpledged available-for-sale (AFS) securities and $30 million in available Federal Home Loan Bank (FHLB) borrowings.

Discussion Points – Liquidity

The first thing you should have noticed after reading the examination comment is that examiners concluded that liquidity is “Satisfactory”.

That’s a good clue as to what examiners rated the component. If you see “Strong”, the rating is likely a “1”, “Satisfactory” typically signifies a “2”, “Less than Satisfactory” is typically a “3”, “Unsatisfactory” is most closely associated with a “4” rating, and “Critically Deficient” signifies a “5” rating.

What other things did the examiners identify?

- Click here for answer #1 (Dependence on non-core funding sources is rising)
- Click here for answer #2 (Increased competition in the local market)
- Click here for answer #3 (Slight deposit runoff)

Of course, things aren’t all bad. What positive things were noted?

- Click here for answer #4 (Significant borrowing lines are available to meet unforeseen liquidity strains)
- Click here for answer #5 (Significant liquid assets are available to meet unforeseen liquidity strains)
- Click here for answer #6 (Management stated that future growth will be curtailed)

Now that we’ve reviewed the examination comment and identified strengths and weaknesses, we’re ready to rate the bank.

Rating Liquidity

The following is an excerpt from the Uniform Financial Institutions Ratings System. Take a few minutes to read the ratings guide and rate the liquidity component for First State Bank.

Uniform Financial Institution Ratings System

In evaluating a bank's liquidity position, consideration should be given to the current level and prospective sources of liquidity compared to funding needs, as well as to the adequacy of funds management practices relative to the institution's size, complexity, and risk profile. In addition, funds management practices should ensure that liquidity is not maintained at a high cost, or through undue reliance on funding sources that may not be available in times of financial stress or adverse changes in market conditions.

Liquidity is rated based upon, but not limited to, an assessment of the following evaluation factors:

- The adequacy of liquidity sources compared to present and future needs
- The availability of assets readily convertible to cash without undue loss
- Access to money markets and other sources of funding
- The level of diversification of funding sources
- The degree of reliance on short-term, volatile sources of funds, including borrowings and brokered deposits, to fund longer-term assets
- The trend and stability of deposits
- Management's ability to identify, measure, monitor, and control the institution's liquidity position, including the effectiveness of funds management strategies, liquidity policies, management information systems, and contingency funding plans

Ratings

1. A rating of "1" indicates strong liquidity levels and well-developed funds management practices. The institution has reliable access to sufficient sources of funds on favorable terms to meet present and anticipated liquidity needs.
2. A rating of "2" indicates satisfactory liquidity levels and funds management practices. The institution has access to sufficient sources of funds on acceptable terms to meet present and anticipated liquidity needs. Modest weaknesses may be evident in funds management practices.
3. A rating of "3" indicates liquidity levels or funds management practices in need of improvement. Institutions rated "3" may lack ready access to funds on reasonable terms or may evidence significant weaknesses in funds management practices.
4. A rating of "4" indicates deficient liquidity levels or inadequate funds management practices. Institutions rated "4" may not have or be able to obtain a sufficient volume of funds on reasonable terms to meet liquidity needs.

5. A rating of “5” indicates liquidity levels or funds management practices so critically deficient that the continued viability of the institution is threatened. Institutions rated “5” require immediate external financial assistance to meet maturing obligations or other liquidity needs.

Consider the ratings definitions above and compare them to the circumstances described in the Report of Examination for First State Bank. What do you think the appropriate rating for liquidity is?

1. Strong (link to liquidity answer)
2. Satisfactory (link to liquidity answer)
3. Less than Satisfactory (link to liquidity answer)
4. Unsatisfactory (link to liquidity answer)
5. Critically Deficient (link to liquidity answer)

[Answer:] Examiners rated the liquidity component a “2”. The last exam rated liquidity a “2” as well. While the position has apparently deteriorated, the examiners concluded that the position remains satisfactory given $30 million in borrowing lines and $20 million in available-for-sale securities (a substantial amount of emergency liquidity for a $200 million bank). Additionally, the management team appeared to recognize that weaknesses were developing and agreed to limit growth going forward, thus limiting future strains on liquidity. Keep in mind, that a downgrade to a “3” is possible, if “funds management practices are in need of improvement”.

Now let’s move on to the sensitivity to market risk module.