

## **Managing Liquidity**

### **Pertinent Issues Report 1Q 2008**

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# Historical Perspective of Liquidity

## Overview . . .

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- Liquidity risk is defined as the risk of not being able to obtain funds at a reasonable price within a reasonable period of time to meet financial commitments when due.
- Managing and monitoring actual and projected cash flow under a multitude of scenarios is the key to managing liquidity risk.
- The way liquidity is managed is vastly different today than in the past as the prioritization of liquidity sources have shifted away from assets to liabilities.
- Liquidity should be managed in stages: immediate, intermediate, and long term.
- Stress testing and contingency funding plans should be performed and documented on a periodic basis to ensure liquidity is properly managed.
- Liquidity risk is one of the most important risks to manage as a bank with strong earnings and asset quality can run the risk of failure if it does not have sufficient liquidity.

# An example of how liquidity has been traditionally managed . . .

Statement of Condition As of The Period Ended	Actual
<b>Assets</b>	
Total Cash & Cash Equivalents	23,713
MBS	55,327
Investments	51,202
Total MBS & Investments	106,529
1-4 Family and Mixed Use Mortgages	149,744
Multifamily and Commercial Mortgages	30,193
Construction, Land and Other Mortgages	11,817
Home Equity Loans	23,418
Consumer Loans	5,332
Commercial Loans	10,135
Loans, gross	230,638
Allowance for Loan and Lease Losses	(1,803)
Loans, net	228,835
Premises and Equipment	15,204
Other Assets	2,692
<b>Total Assets</b>	<b>\$ 376,973</b>
<b>Liabilities</b>	
Transaction Accounts	125,749
Savings Accounts	65,825
Money Market Accounts	38,899
Certificates of Deposit	89,495
Total Deposits	319,969
Borrowings	19,000
Other Liabilities	3,956
Total Liabilities	342,925
Equity	34,048
<b>Total Liabilities and Equity</b>	<b>\$ 376,973</b>



The Bank has \$23 million in cash liquidity that can be used to fill immediate liquidity need



The Bank has \$106 million in securities that can be sold or pledged



The Bank has utilized \$19 million in outstanding borrowings to fund balance sheet growth.

Traditional key liquidity measures do not project future liquidity needs . . .

<b>LIQUIDITY RATIOS:</b>	<b>Actual</b>
Cash Liquidity	7.21%
Total Liquidity	37.88%
Total Deposits/Assets	84.88%
Total Borrowings/Assets	5.04%
Total Borrowings/Liabilities	5.54%
Regulatory Total Liquidity	40.70%

- **Cash Liquidity:**  $(\text{Cash} + \text{Cash equivalents}) \div \text{Total deposits}$ .
- **Total Liquidity:**  $(\text{Cash} + \text{Cash equivalents} + \text{Investments} - \text{Borrowings}) \div (\text{Total deposits} + \text{Short term borrowings})$
- **Total Deposits/ Assets:**  $\text{Total deposits} \div \text{Total assets}$
- **Total Borrowings/ Assets:**  $\text{Total borrowings} \div \text{Total assets}$
- **Total Borrowing/ Liabilities:**  $\text{Total borrowings} \div \text{Total liabilities}$
- **Regulatory Total Liquidity:**  $(\text{Cash} + \text{Cash equivalents} + \text{Investments}) \div \text{Total deposits}$

Additional liquidity ratios try to project future liquidity levels, but can not accurately project liquidity at future points in time due to the dynamic nature of a bank's balance sheet . . .

LIQUIDITY RATIOS:	Actual
Reliance on Wholesale Funding %	5.61%
On Hand Liquidity %	32.15%
Net Short-term Liabilities %	19.47%
Net NonCore Funding Dependence (%)	10.98%
Non-maturity Deposit %	76.42%

- **Core Deposit percentage:** Core deposits ÷ Total deposits
- **Reliance on Wholesale Funding:** (Brokered deposits + Borrowings) ÷ (Total borrowing + Total deposits)
- **On hand liquidity:** (Liquid assets – pledged assets) ÷ (Total liabilities)
- **Net short term liability percentage:** (Short term liabilities - Short term assets) ÷ (Total assets).
- **Net noncore funding dependence:** (Non-core liabilities - Short term investments) ÷ (Total long term assets).
- **Non-maturity deposit percentage:** Non maturity core deposits ÷ long term assets.

Over the past 15 years, liquidity management has changed and become more complex as the sources of liquidity have expanded . . .

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- Historically, liquidity was routinely managed on the asset side of the balance sheet. Investment portfolios were short term and seen as the primary source for managing liquidity.
- In light of the increased earnings pressures from investors, bank managers have begun to look at alternative liquidity sources other than short term investments as they may have a lower opportunity cost.
- Likewise, the increase in capital and need to leverage it, accompanied by strong loan growth, has necessitated the need for additional and alternative sources of funding.
- Therefore, many banks have turned to wholesale funding and off-balance-sheet sources to manage liquidity.



# Liquidity Issues and Trends

The key issues effecting how liquidity is managed are . . .

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- **Brokered deposits:** Seen as an easy source of obtaining liquidity. There has been increased scrutiny on the types of assets these deposits are funding.
- **Pledging of assets:** With the decline in asset quality and overall uncertainty of the value of mortgage-backed securities, liquidity sources have increased the level of “haircut” on assets that can be pledged to obtain funding.
- **Hot money/ Internet deposits:** Although not considered a brokered deposit by definition. Regulators are concerned with the stability of deposits that are acquired with a high interest rate, outside the Bank’s primary market area and from customers that have no other relationships with the Bank.
- **Deterioration of the secondary market:** Liquidity sources have “dried up” due to the recent turmoil of the mortgage-backed securities and auction-rate bond markets. The uncertainty surrounding these markets have made these securities virtually illiquid since there are no buyers of the paper in the secondary market. Additionally, the decline in asset quality in these markets have forced institutions to pledge more assets to cover their current outstanding obligations; further reducing their liquidity options.

Since 1996, asset, loan, and capital growth have outpaced retail deposit growth, facilitating the need for banks to increase their reliance on wholesale funding . . .

(in billions)	12/31/2006	3/31/2008	Growth	Growth %
Total Assets	\$ 2,474	\$ 13,355	\$ 10,881	440%
Total Loans	\$ 1,508	\$ 7,956	\$ 6,448	428%
Total Equity Capital	\$ 206	\$ 1,359	\$ 1,153	560%
Total Retail Deposits	\$ 1,698	\$ 7,954	\$ 6,256	368%
Brokered Deposits	\$ 22	\$ 600	\$ 578	2587%
Total Borrowings	\$ 461	\$ 3,044	\$ 2,583	561%

With an increase in wholesale funding, institutions have had to pledge a greater percentage of their investment portfolios . . .

(in billions)	Total Brokered Deposits and Borrowings	Total Liabilities	Total Wholesale Funding %
12/31/1996	\$ 483	\$ 2,267	21.30%
3/31/2008	\$ 3,644	\$ 11,975	30.43%

(in billions)	FHLB Members	Total Advances
12/31/1996	6,146	\$ 161
3/31/2008	8,080	\$ 841

(in billions)	Pledged Securities	Total Investments	Pledged Security %
12/31/1996	\$ 178	\$ 471	37.79%
3/31/2008	\$ 917	\$ 1,961	46.76%

# The FinPro Liquidity Method™

Management needs to understand its liquidity position, as it will drive how strategies will be implemented . . .

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- The FinPro Liquidity Method™ focuses on managing liquidity through projected cash flows in the context of its overall strategic plan, not on historical or point in time ratios.
- Liquidity needs should be managed in stages
  - Immediate term Liquidity
  - Intermediate term Liquidity
  - Long term Liquidity
- Liquidity should be stress-tested under multiple scenarios that account for:
  - Changing interest rate environments
  - Changes in deposit runoff and asset prepayments
  - Declines in market values of securities

The speed and cost associated with each funding option should be carefully analyzed to maximize value.

Liquidity should be monitored by management on a immediate, intermediate, and long term basis based on actual and projected cash flow from its strategic plan . . .

<b>Statement of Condition</b> As of The Period Ended	Actual	Immediate 30 days	Intermediate 6 months	Long 12 Months	
<b>Assets</b>					
Total Cash & Cash Equivalents	23,713	9,839	10,750	12,831	(1)
MBS	55,327	59,904	54,693	50,737	
Investments	51,202	55,479	50,001	48,964	
Total MBS & Investments	106,529	115,384	104,693	99,701	(2)
1-4 Family and Mixed Use Mortgages	149,744	152,818	158,489	164,378	
Multifamily and Commercial Mortgages	30,193	30,632	33,506	37,376	
Construction, Land and Other Mortgages	11,817	11,406	11,645	12,523	
Home Equity Loans	23,418	23,757	24,792	26,507	
Consumer Loans	5,332	4,824	4,616	4,871	
Commercial Loans	10,135	10,580	12,727	15,359	
Loans, gross	230,638	234,018	245,776	261,014	(3)
Allowance for Loan and Lease Losses	(1,803)	(1,830)	(1,971)	(2,093)	
Loans, net	228,835	232,188	243,805	258,921	
Premises and Equipment	15,204	15,144	14,866	15,918	
Other Assets	2,692	2,754	2,804	2,861	
Total Assets	\$ 376,973	\$ 375,308	\$ 376,918	\$ 390,233	
<b>Liabilities</b>					
Transaction Accounts	125,749	124,965	125,956	131,326	
Savings Accounts	65,825	65,531	65,815	67,935	
Money Market Accounts	38,899	38,605	38,990	41,185	
Certificates of Deposit	89,495	88,907	89,476	93,341	(4)
Total Deposits	319,969	318,009	320,237	333,787	
Borrowings	19,000	19,000	19,000	19,000	(5)
Other Liabilities	3,956	4,003	4,087	4,227	
Total Liabilities	342,925	341,011	343,324	357,014	
Equity	34,048	34,297	33,594	33,218	
Total Liabilities and Equity	\$ 376,973	\$ 375,308	\$ 376,918	\$ 390,233	

1. Excess cash liquidity is being deployed as the primary source of liquidity in the immediate term, but is maintained around 3.00% thereafter . . .

Statement of Condition As of The Period Ended	Actual	Immediate 30 days	Intermediate 6 months	Long 12 Months
<b>Assets</b>				
Cash & Due From Banks	\$ 8,286	\$ 6,739	\$ 7,550	\$ 9,531
Fed Funds Sold	15,426	3,100	3,200	3,300
Total Cash & Cash Equivalents	23,713	9,839	10,750	12,831
Cash Liquidity	7.41%	3.09%	3.36%	3.84%
Policy Target	3.00%	3.00%	3.00%	3.00%

2. Investments initially increase as excess cash liquidity is invested in the immediate term. However, management plans to utilize cash flow from the investment portfolio to fund the anticipated growth in the loan portfolio . . .

Statement of Condition As of The Period Ended	Actual	Immediate 30 days	Intermediate 6 months	Long 12 Months
MBS	55,327	59,904	54,693	50,737
Investments	51,202	55,479	50,001	48,964
Total MBS & Investments	106,529	115,384	104,693	99,701

### 3. The Bank projects strong net loan growth over the course of the next 12 months . . .

<b>Statement of Condition As of The Period Ended</b>	<b>Actual</b>	<b>Immediate 30 days</b>	<b>Intermediate 6 months</b>	<b>Long 12 Months</b>
1-4 Family and Mixed Use Mortgages	149,744	152,818	158,489	164,378
Multifamily Mortgages	-	-	-	-
Commercial Mortgages (Non-owner Occupied)	-	-	-	-
Multifamily and Commercial Mortgages	30,193	30,632	33,506	37,376
Construction, Land and Other Mortgages	11,817	11,406	11,645	12,523
Home Equity Loans	23,418	23,757	24,792	26,507
Consumer Loans	5,332	4,824	4,616	4,871
Commercial Loans	10,135	10,580	12,727	15,359
Loans, gross	230,638	234,018	245,776	261,014
Allowance for Loan and Lease Losses	(1,803)	(1,830)	(1,971)	(2,093)
Loans, net	228,835	232,188	243,805	258,921
Loan to Asset Ratio	61%	62%	65%	67%
Loan to Deposit Ratio	72%	74%	77%	78%

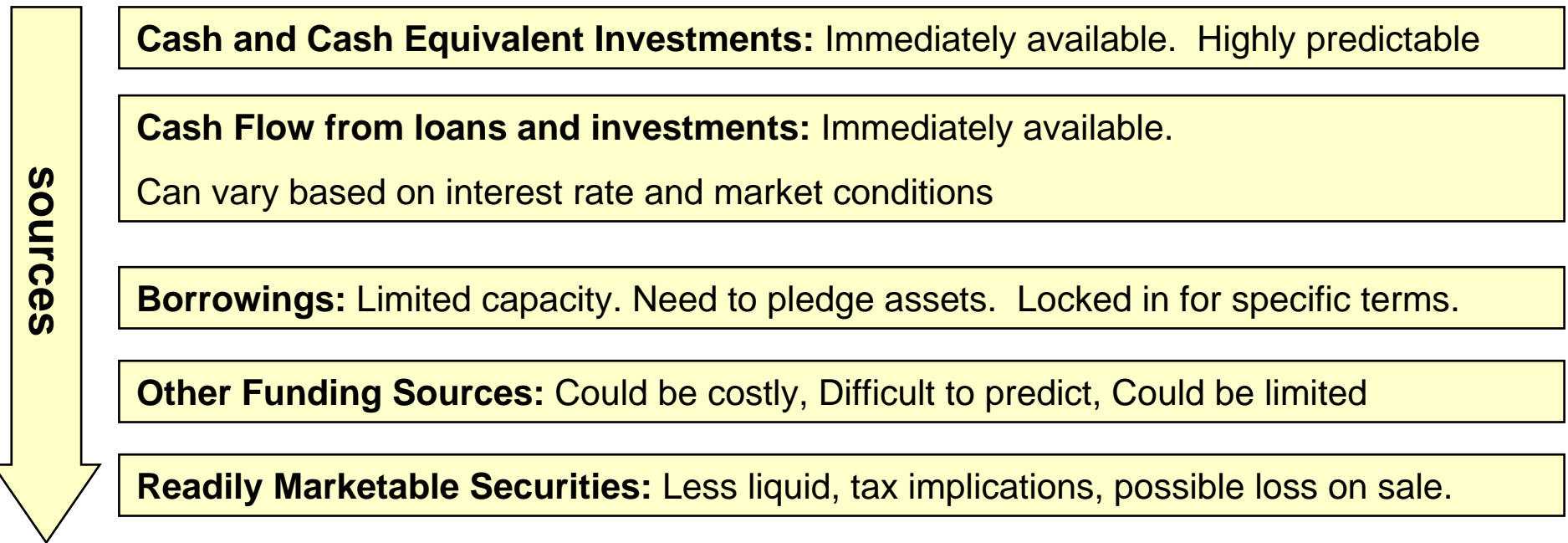
4. The Bank is strategically allowing high rate deposits to runoff in the immediate term but will create core deposit strategies over the next 12 months to increase deposits as a source of liquidity . . .

Statement of Condition As of The Period Ended	Actual	Immediate 30 days	Intermediate 6 months	Long 12 Months
<b>Liabilities</b>				
Transaction Accounts	125,749	124,965	125,956	131,326
Savings Accounts	65,825	65,531	65,815	67,935
Money Market Accounts	38,899	38,605	38,990	41,185
Certificates of Deposit	89,495	88,907	89,476	93,341
<b>Total Deposits</b>	<b>319,969</b>	<b>318,009</b>	<b>320,237</b>	<b>333,787</b>
 Core Deposits / Total Deposits	 72%	 72%	 72%	 72%

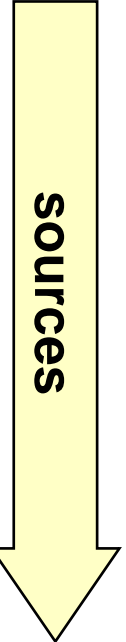
5. The Bank does not project to increase its percentage of borrowings to fund balance sheet growth . . .

<b>Statement of Condition As of The Period Ended</b>	<b>Actual</b>	<b>Immediate 30 days</b>	<b>Intermediate 6 months</b>	<b>Long 12 Months</b>
Borrowings	19,000	19,000	19,000	19,000
Borrowings / Total Assets	5.04%	5.06%	5.04%	4.87%
Policy Target	50.00%	50.00%	50.00%	50.00%

In order to properly manage liquidity, management needs to monitor, evaluate, and prioritize the various sources of liquidity to meet each of its liquidity stage needs . . .



In order to properly manage liquidity, management needs to monitor, evaluate, and prioritize the various sources of liquidity to meet each of its liquidity stage needs . . .



**Cash and Cash Equivalent Investments:** Immediately available. Highly predictable

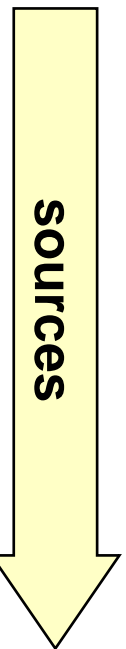
**Cash Flow from loans and investments:** Immediately available.  
Can vary based on interest rate and market conditions

Liquidity management is all about managing cash flow and understanding your liquidity sources and capacity to increase liquidity when needed . . .

<b>Cash on Hand</b>				
		<i>Market Price</i>		
Cash&Noninterest-bearing Deps (\$000)	\$ 8,286	100.0%	\$	8,286
Interest Bearing Balances (\$000)	-	100.0%	\$	-
Fed Funds Sold (\$000)	15,426	100.0%	\$	15,426
Short term investments	-	100.0%	\$	-
<b>Total Cash Position</b>			<b>\$</b>	<b>23,713</b>

<b>Projected Cash Flow</b>				
	<i>Immediate</i>	<i>Intermediate</i>	<i>Long</i>	
	<b>30 Days</b>	<b>2-6 Months</b>	<b>7-12 Months</b>	
<b>Outflows</b>				
New Investments and Securities	\$ 10,000	\$ -	\$ -	
Loan Originations	\$ 7,223	\$ 24,000	\$ 41,000	
Maturing Borrowings	\$ -	\$ -	\$ -	
Deposit Runoff	\$ 2,961	\$ 4,000	\$ 7,250	
FF&E, Leasehold Additions and Other Assets	\$ 63	\$ 49	\$ 1,665	
<b>Total Outflows</b>	<b>\$ 20,247</b>	<b>\$ 28,049</b>	<b>\$ 49,914</b>	
<b>Inflows</b>				
MBS and INV Paydown	\$ 1,145	\$ 10,690	\$ 4,992	
Loan Principal and Prepayment Paydowns	\$ 3,844	\$ 12,242	\$ 25,761	
New Deposits	\$ 1,000	\$ 6,229	\$ 20,800	
Loan Loss Provision	\$ 26	\$ 141	\$ 122	
Depreciation of FFE and Leasehold Improvements	\$ 61	\$ 278	\$ 555	
Other Liabilities	\$ 47	\$ 85	\$ 140	
Net Income/(Loss)	\$ 249	\$ (703)	\$ (375)	
Addition to Capital	\$ -	\$ -	\$ -	
<b>Total Inflows</b>	<b>Starting Cash</b>	<b>\$ 6,372</b>	<b>\$ 28,961</b>	<b>\$ 51,995</b>
<b>Total Cash Flow</b>	<b>\$ 23,713</b>	<b>\$ (13,875)</b>	<b>\$ 911</b>	<b>\$ 2,081</b>
<b>Total Cash and Cash Equivalents on Hand</b>	<b>\$ 9,838</b>	<b>\$ 10,749</b>	<b>\$ 12,830</b>	

In order to properly manage liquidity, management needs to monitor, evaluate, and prioritize the various sources of liquidity to meet each of its liquidity stage needs . . .



**Borrowings:** Limited capacity. Need to pledge assets. Locked in for specific terms.

Wholesale borrowings also provide a great source of liquidity but the level of availability is subject to the amount of assets you can pledge against . . .

**Borrowing Capacity- Immediate**

	<i>Month 1 Book Value</i>	<i>Pledged Balance</i>	<i>Market Price</i>	<i>Collateralization Rate</i>	<i>Borrowing Capacity Balance</i>
MBS-AFS	\$ 59,904	\$ 20,000	100.0%	97.0%	\$ 38,707
INV-AFS	\$ 36,780	\$ -	100.0%	99.0%	\$ 36,413
MBS-HTM		\$ -	100.0%	97.0%	\$ -
INV-HTM	\$ 18,699	\$ -	98.0%	99.0%	\$ 18,142
Res 1-4	\$ 152,818	\$ -	98.0%	90.0%	\$ 134,786
HELOC	\$ 23,757	\$ -	98.0%	60.0%	\$ 13,969
Multifamily/Commercial Real Estate	\$ 30,632	\$ -	100.0%	60.0%	\$ 18,379
Construction Loans	\$ 11,406	\$ -	100.0%	45.0%	\$ 5,133
Consumer Loans	\$ 4,824	\$ -	100.0%	50.0%	\$ 2,412
Commercial Loans	\$ 10,580	\$ -	100.0%	50.0%	\$ 5,290

**Borrowing Capacity** **\$ 273,230**

Global Discount **10.0%**

Amount currently pledged against borrowings

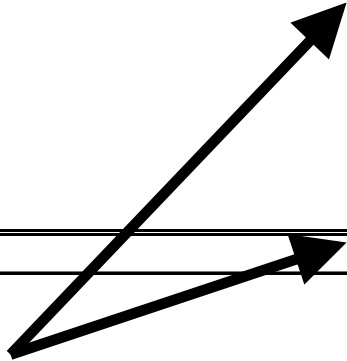
**Total Borrowing Capacity** **\$ 245,907**

Can be determined by securities broker or by a fair market value computation

Collateral Rate will be determined by funding source and based on quality of collateral and financial stability of the institution

Policy thresholds within an institution's liquidity policy may also limit borrowing capacity

<b>Borrowing Capacity- Immediate</b>					
	<i>Month 1 Book Value</i>	<i>Pledged Balance</i>	<i>Market Price</i>	<i>Collateralization Rate</i>	<i>Borrowing Capacity Balance</i>
<b>Total Borrowing Capacity</b>					<b>\$ 245,907</b>
<b>Total Borrowing Policy Limit Threshold</b>	<b>% Limit</b> 50%	<b>Total Assets</b> \$ 375,308			\$ 187,654
<b>Less Total Outstanding Borrowings</b>					\$ 19,000
<b>Total Borrowing Capacity</b>					<b>\$ 168,654</b>



The lesser of the two calculations determines the Bank's borrowing capacity. This is case, the Bank's capacity is limited to \$168 million by the policy

Borrowing capacity in the intermediate term declined slightly from the immediate term due to a decline in market pricing . . .

<b>Borrowing Capacity- Intermediate</b>					
	<i>Month 6 Book Value</i>	<i>Pledged Balance</i>	<i>Market Price</i>	<i>Collateralization Rate</i>	<i>Borrowing Capacity Balance</i>
MBS-AFS	\$ 54,693	\$ 20,000	100.0%	97.0%	\$ 33,652
INV-AFS	\$ 33,148	\$ -	100.0%	99.0%	\$ 32,817
MBS-HTM	\$ -	\$ -	100.0%	97.0%	\$ -
INV-HTM	\$ 16,852	\$ -	96.5%	99.0%	\$ 16,100
Res 1-4	\$ 158,489	\$ -	97.5%	90.0%	\$ 139,074
HELOC	\$ 24,792	\$ -	97.5%	60.0%	\$ 14,503
Multifamily/Commercial Real Estate	\$ 33,506	\$ -	98.0%	60.0%	\$ 19,701
Construction Loans	\$ 11,645	\$ -	100.0%	45.0%	\$ 5,240
Consumer Loans	\$ 4,616	\$ -	100.0%	50.0%	\$ 2,308
Commercial Loans	\$ 12,727	\$ -	99.0%	50.0%	\$ 6,300
<b>Borrowing Capacity</b>					<b>\$ 269,696</b>

Global Discount

10.0%

Total Borrowing Capacity

\$ 242,727

Market pricing declines due to a projected rise in interest rates

Capacity has increased due to the increase in book value of assets in Month 6



Long term borrowing capacity increases as more loans can be pledged as collateral . . .

<b>Borrowing Capacity- Long</b>						
	<i>Month 12 Book Value</i>	<i>Pledged Balance</i>	<i>Market Price</i>	<i>Collateralization Rate</i>	<i>Borrowing Capacity Balance</i>	
MBS-AFS	\$ 50,737	\$ 20,000	100.0%	97.0%	\$ 29,815	
INV-AFS	\$ 32,461	\$ -	100.0%	99.0%	\$ 32,137	
MBS-HTM		\$ -	100.0%	97.0%	\$ -	
INV-HTM	\$ 16,503	\$ -	97.0%	99.0%	\$ 15,848	
Res 1-4	\$ 164,378	\$ -	97.5%	90.0%	\$ 144,242	
HELOC	\$ 26,507	\$ -	96.0%	60.0%	\$ 15,268	
Multifamily/Commercial Real Estate	\$ 37,376	\$ -	98.0%	60.0%	\$ 21,977	
Construction Loans	\$ 12,523	\$ -	100.0%	45.0%	\$ 5,635	
Consumer Loans	\$ 4,871	\$ -	100.0%	50.0%	\$ 2,435	
Commercial Loans	\$ 15,359	\$ -	99.0%	50.0%	\$ 7,603	
<b>Borrowing Capacity</b>					<b>\$ 274,960</b>	
<b>Global Discount</b>						<b>10.0%</b>
<b>Total Borrowing Capacity</b>						<b>\$ 247,464</b>

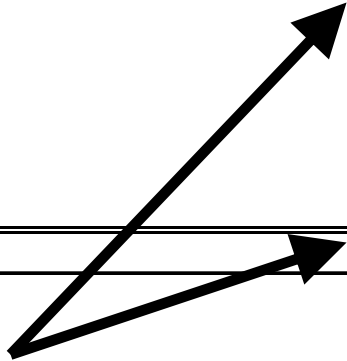
Market pricing declines due to a projected rise in interest rates

Capacity has increased due to the increase in book value of assets in Month 12

The policy threshold on borrowings also increases due to the increase in total assets . . .



<b>Borrowing Capacity- Long</b>					
	<i>Month 12 Book Value</i>	<i>Pledged Balance</i>	<i>Market Price</i>	<i>Collateralization Rate</i>	<i>Borrowing Capacity Balance</i>
<b>Total Borrowing Capacity</b>					<b>\$ 247,464</b>
<b>Total Borrowing Policy Limit Threshold</b>	<b>% Limit</b>	<b>Total Assets</b>			
Less	50%	\$ 390,233			\$ 195,116
<b>Total Outstanding Borrowings</b>					\$ 19,000
<b>Total Borrowing Capacity</b>					<b>\$ 176,116</b>

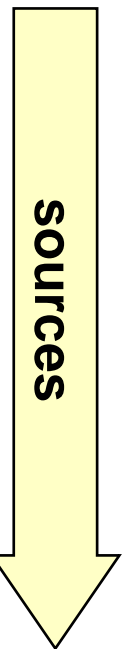


The lesser of the two calculations determines the Bank's borrowing capacity. This is case, the Bank's capacity is limited to \$176 million by the policy

# Borrowing Capacity Summary . . .

Borrowing Capacity	Immediate- 1 Month		Intermediate- 6 Months		Long- 12 Months	
	<i>Borrowing Capacity Balance</i>		<i>Borrowing Capacity Balance</i>		<i>Borrowing Capacity Balance</i>	
MBS-AFS	\$	38,707	\$	33,652	\$	29,815
INV-AFS	\$	36,413	\$	32,817	\$	32,137
MBS-HTM	\$	-	\$	-	\$	-
INV-HTM	\$	18,142	\$	16,100	\$	15,848
Res 1-4	\$	134,786	\$	139,074	\$	144,242
HELOC	\$	13,969	\$	14,503	\$	15,268
Multifamily/Commercial Real Estate	\$	18,379	\$	19,701	\$	21,977
Construction Loans	\$	5,133	\$	5,240	\$	5,635
Consumer Loans	\$	2,412	\$	2,308	\$	2,435
Commercial Loans	\$	5,290	\$	6,300	\$	7,603
<b>Borrowing Capacity</b>	<b>\$</b>	<b>273,230</b>	<b>\$</b>	<b>269,696</b>	<b>\$</b>	<b>274,960</b>
<b>Global Discount</b>		<b>10.0%</b>		<b>10.0%</b>		<b>10.0%</b>
<b>Total Borrowing Capacity</b>	<b>\$</b>	<b>245,907</b>	<b>\$</b>	<b>242,727</b>	<b>\$</b>	<b>247,464</b>
<b>Total Borrowing Policy Limit Threshold</b>	<b>\$</b>	<b>187,654</b>	<b>\$</b>	<b>188,459</b>	<b>\$</b>	<b>195,116</b>
<b>Less</b>						
<b>Total Outstanding Borrowings</b>	<b>\$</b>	<b>19,000</b>	<b>\$</b>	<b>19,000</b>	<b>\$</b>	<b>19,000</b>
<b>Total Borrowing Capacity</b>	<b>\$</b>	<b>168,654</b>	<b>\$</b>	<b>169,459</b>	<b>\$</b>	<b>176,116</b>

In order to properly manage liquidity, management needs to monitor, evaluate, and prioritize the various sources of liquidity to meet each of its liquidity stage needs . . .



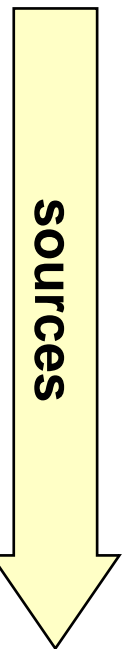
**Other Funding Sources:** Could be costly, Difficult to predict, Could be limited

The Bank may also look at other funding sources to fill liquidity needs. However, these forms of funding are more difficult to project and should projected volume should be stress tested . . .



Other Funding Sources	Immediate			Intermediate			Long		
	Potential	Volume Sensitivity	Total Funding	Potential	Volume Sensitivity	Total Funding	Potential	Volume Sensitivity	Total Funding
Current Branch Network Deposits	\$ 1,000	100%	\$ 1,000	\$ 6,000	80%	\$ 4,800	\$ 12,000	70%	\$ 8,400
Internet Deposits	\$ -	100%	\$ -	\$ -	100%	\$ -	\$ -	100%	\$ -
CDARS	\$ -	100%	\$ -	\$ -	100%	\$ -	\$ -	100%	\$ -
Brokered Deposits	\$ -	100%	\$ -	\$ -	100%	\$ -	\$ -	100%	\$ -
De Novo Branch Deposits	\$ 2,000	100%	\$ 2,000	\$ 5,000	90%	\$ 4,500	\$ 15,000	75%	\$ 11,250
Other Non Pledged Borrowings	\$ -	100%	\$ -	\$ -	90%	\$ -	\$ -	75%	\$ -
Open Funding Strategy 7	\$ -	100%	\$ -	\$ -	90%	\$ -	\$ -	75%	\$ -
Open Funding Strategy 8	\$ -	100%	\$ -	\$ -	90%	\$ -	\$ -	75%	\$ -
Open Funding Strategy 9	\$ -	100%	\$ -	\$ -	90%	\$ -	\$ -	75%	\$ -
Open Funding Strategy 10	\$ -	100%	\$ -	\$ -	90%	\$ -	\$ -	75%	\$ -
Open Funding Strategy 11	\$ -	100%	\$ -	\$ -	90%	\$ -	\$ -	75%	\$ -
Open Funding Strategy 12	\$ -	100%	\$ -	\$ -	90%	\$ -	\$ -	75%	\$ -
<b>Total Other Funding Sources</b>	<b>\$ 3,000</b>		<b>\$ 3,000</b>	<b>\$ 11,000</b>		<b>\$ 9,300</b>	<b>\$ 27,000</b>		<b>\$ 19,650</b>

In order to properly manage liquidity, management needs to monitor, evaluate, and prioritize the various sources of liquidity to meet each of its liquidity stage needs . . .



**Readily Marketable Securities:** Less liquid, tax implications, possible loss on sale.

The sale of securities can also be a source of liquidity, but securities are subject to market pricing and could be sold at a loss. Additionally, the Bank may give up yield as proceeds from investments are moved into shorter term, lower yielding assets . . .

Readily Marketable Assets	Immediate			
	Month 1 Book Value	Pledged Balance	Market Price	Market Value
MBS-AFS	\$ 59,904	\$ 20,000	100.0%	\$39,904
INV-AFS	\$ 36,780	\$ -	100.0%	\$36,780
MBS-HTM		\$ -	100.0%	\$0
INV-HTM	\$ 18,699	\$ -	98.0%	\$18,325
Res 1-4	\$ 152,818	\$ -	98.0%	\$149,762
HELOC	\$ 23,757	\$ -	98.0%	\$23,282
Multifamily/Commercial Real Estate	\$ 30,632	\$ -	100.0%	\$30,632
Construction Loans	\$ 11,406	\$ -	100.0%	\$11,406
Consumer Loans	\$ 4,824	\$ -	100.0%	\$4,824
Commercial Loans	\$ 10,580	\$ -	100.0%	\$10,580
<b>Total Readily Marketable Assets</b>	<b>\$ 349,401</b>			<b>\$325,495</b>

# Intermediate term value of readily marketable assets . . .

Readily Marketable Assets	Intermediate			Market Value
	Month 6 Book Value	Pledged Balance	Market Price	
MBS-AFS	\$ 54,693	\$ 20,000	100.0%	\$34,693
INV-AFS	\$ 33,148	\$ -	100.0%	\$33,148
MBS-HTM	\$ -	\$ -	100.0%	\$0
INV-HTM	\$ 16,852	\$ -	96.5%	\$16,263
Res 1-4	\$ 158,489	\$ -	97.5%	\$154,527
HELOC	\$ 24,792	\$ -	97.5%	\$24,172
Multifamily/Commercial Real Estate	\$ 33,506	\$ -	98.0%	\$32,836
Construction Loans	\$ 11,645	\$ -	100.0%	\$11,645
Consumer Loans	\$ 4,616	\$ -	100.0%	\$4,616
Commercial Loans	\$ 12,727	\$ -	99.0%	\$12,600
<b>Total Readily Marketable Assets</b>	<b>\$ 350,469</b>			<b>\$324,500</b>

# Long term value of readily marketable assets . . .

Readily Marketable Assets	Long			
	Month 12 Book Value	Pledged Balance	Market Price	Market Value
MBS-AFS	\$ 50,737	\$ 20,000	100.0%	\$30,737
INV-AFS	\$ 32,461	\$ -	100.0%	\$32,461
MBS-HTM		\$ -	100.0%	\$0
INV-HTM	\$ 16,503	\$ -	97.0%	\$16,008
Res 1-4	\$ 164,378	\$ -	97.5%	\$160,269
HELOC	\$ 26,507	\$ -	96.0%	\$25,447
Multifamily/Commercial Real Estate	\$ 37,376	\$ -	98.0%	\$36,629
Construction Loans	\$ 12,523	\$ -	100.0%	\$12,523
Consumer Loans	\$ 4,871	\$ -	100.0%	\$4,871
Commercial Loans	\$ 15,359	\$ -	99.0%	\$15,205
<b>Total Readily Marketable Assets</b>	<b>\$ 360,716</b>			<b>\$334,150</b>

# Readily Marketable Assets Summary . . .



Readily Marketable Assets	Immediate- 1 Month	Intermediate- 6 Months	Long- 12 Months
	<i>Market Value</i>	<i>Market Value</i>	<i>Market Value</i>
MBS-AFS	\$39,904	\$34,693	\$30,737
INV-AFS	\$36,780	\$33,148	\$32,461
MBS-HTM	\$0	\$0	\$0
INV-HTM	\$18,325	\$16,263	\$16,008
Res 1-4	\$149,762	\$154,527	\$160,269
HELOC	\$23,282	\$24,172	\$25,447
Multifamily/Commercial Real Estate	\$30,632	\$32,836	\$36,629
Construction Loans	\$11,406	\$11,645	\$12,523
Consumer Loans	\$4,824	\$4,616	\$4,871
Commercial Loans	\$10,580	\$12,600	\$15,205
<b>Total Readily Marketable Assets</b>	<b>\$325,495</b>	<b>\$324,500</b>	<b>\$334,150</b>

## A summary of key ratios based on projected liquidity . . .

<b>LIQUIDITY RATIOS: As of The Period Ended</b>	<b>Actual</b>	<b>Immediate 30 days</b>	<b>Intermediate 6 months</b>	<b>Long 12 Months</b>
Cash Liquidity	7.21%	3.01%	3.27%	3.74%
Total Liquidity	37.88%	36.47%	33.60%	32.05%
Total Deposits/Assets	84.88%	84.73%	84.96%	85.54%
Total Borrowings/Assets	5.04%	5.06%	5.04%	4.87%
Total Borrowings/Liabilities	5.54%	5.57%	5.53%	5.32%
Regulatory Total Liquidity	40.70%	39.38%	36.05%	33.71%
Core Deposit %	72.03%	72.04%	72.06%	72.04%
Reliance on Wholesale Funding %	5.61%	5.64%	5.60%	5.39%
On Hand Liquidity %	32.15%	30.86%	27.80%	25.92%
Net Short-term Liabilities %	19.47%	19.52%	19.49%	19.13%
Net NonCore Funding Dependence (%)	10.98%	10.94%	10.97%	10.99%
Non-maturity Deposit %	76.42%	76.30%	76.53%	77.02%

## Liquidity providers . . .

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- Current branch network
- FHLB
- Federal Reserve
- Correspondent Banks
- De Novo branch
- Internet
- CDARS
- Deposit brokers
- Investment banks
- Investors/ Hedge funds



# Ongoing Monitoring

## Proper management of liquidity risk includes . . .

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- A well written and sound liquidity policy
  - The Board of Directors has the ultimate responsibility for the adequacy of liquidity policies and procedures.
  - Senior management has responsibility for policy design
- A sound Contingency Funding Plan that has been stress tested under a multitude of variables.
- Assignment of responsibilities
  - Senior management has responsibility for implementing and monitoring liquidity guidelines established in the liquidity policy.
- Proper data systems

## Stress Testing and Contingency Funding planning . . .

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- Asset Liability Management reports should have multiple scenarios that stress test the speed at which liquidity can evaporate. A proper ALM report should determine
  - How fast will your liquidity evaporate.
  - How long and how much can your Bank continue to outflow if the funding faucet is turned off?
- Contingency planning will identify, analyze, and monitor alternative funding sources and their economic impact on the Bank in various rate scenarios.

Scenario testing should be handled in two forms, Normal Conditions and Stressful Conditions . . .

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- **Normal Conditions** would include the Bank's typical cash flow and projected growth or decline over periods of time and under various rate scenarios.
- **Stressful Conditions** would include both bank specific and systemic stress testing.
  - An example of a Bank Specific stress test would be a decline in the asset quality of the Bank's loan portfolio; reducing the availability of wholesale borrowings from the FHLB as they increase the "haircut" of pledged assets as collateral.
  - An example of a Systemic stress test would be the deterioration of the mortgage-backed securities market and the unwillingness of the market to purchase these securities in the open market, making them illiquid and unable to sell to fill a liquidity need (ala Bear Stearns).
  - Regulatory agencies may also impose higher liquidity or capital regulations that could impact liquidity.

## Liquidity and Funds Management Policy . . .

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- Should be based upon the cash flow sources and uses
- Identify the Bank's immediate, intermediate, and long term liquidity needs.
- Liquidity forecasting methodology should also be defined within the policy.
- Senior officer responsibility for monitoring and reporting should be assigned within the policy.
- Key static and forward looking ratios/thresholds should be defined and assessed based on the Bank's risk tolerance established in the IRR policy.
- A Contingency Funding Action Plan should also be defined in the event of unforeseen liquidity events.

Liquidity management goes hand in hand with strategic planning and by developing a sound and detailed strategic plan, management should be prepared to make the most profitable liquidity decisions when they arise . . .

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- Properly calculating liquidity needs and capacity is just the first step in managing liquidity.
- Armed with this information, bank managers can now make informed decisions regarding liquidity in the overall context of its strategic plan.

As such, FinPro is currently developing a liquidity/ funds management profitability model exclusively for our Partnership clients that will allow management to evaluate and compare the profitability of each liquidity and funds management strategy.

For information about joining the FinPro Partnership Package, please contact our office.