

Effective Liquidity Management for Credit Unions



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Federal Financial Institutions Examination Council Interagency Policy Statement on Funding and Liquidity Risk Management

“Liquidity is a financial institution’s capacity to meet its cash and collateral obligations at a reasonable cost.”

“Liquidity risk is the risk that an institution’s financial condition or overall safety and soundness is adversely affected by an inability (or perceived inability) to meet its obligations.”

In particular, the guidance re-emphasizes the importance of the primary tools for measuring and managing liquidity risk:

- 1. Cash flow projections**
- 2. Diversified funding sources**
- 3. Stress testing**
- 4. A cushion of liquid assets**
- 5. A formal well-developed contingency funding plan (CFP)**

“Failure to maintain an adequate liquidity risk management process will be considered an unsafe and unsound practice.”

Source: FFIEC Interagency Policy Statement on Funding and Liquidity Risk Management (March 2010)

<http://www.ncua.gov/Resources/Documents/LCU2010-14Encl.pdf>

NCUA AIRES Examination Questionnaire – Liquidity

NCUA has published on their website a copy of the **AIRES Examination Questionnaire**. The questionnaire is an Excel workbook containing over one hundred worksheets/questionnaires the examiner may use in the course of their examination. These questionnaires cover every aspect of the exam, including liquidity.

In the three liquidity questionnaires there are nine liquidity ratios the examiner will calculate as well as 137 questions the examiner may ask as part of the examination.

In addition, many of these questions also have an “embedded comment” attached to the cell. These comments provide additional guidance from NCUA to the examiner, often describe “best practices,” and highlight various red flags or potential problems.

Liquidity Examination Ratios

NCUA Liquidity Examination Questionnaire Ratios		Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22
1	Period-Ending Loan to Asset Ratio	61.00%	61.39%	61.74%	65.04%	67.88%	69.54%
2	Period-Ending Loan to Share Ratio	70.39%	70.71%	70.61%	74.90%	78.47%	81.47%
3	Borrowing+Non-Member Deposits/ Shares and Liabilities	3.02%	3.04%	3.14%	4.29%	5.24%	6.38%
4	Cash & Short Term Assets-to-Total Assets	17.89%	17.16%	16.25%	12.95%	11.30%	10.14%
5	Regular Shares & Drafts / Total Shares and Borrowings	55.59%	55.90%	56.65%	55.88%	55.11%	53.41%
6	Contingent Liabilities/Cash and Investments	47.51%	47.45%	55.73%	55.66%	62.94%	68.10%
7	Net Liquid Assets / Total Liabilities & Shares	47.53%	47.82%	45.94%	40.97%	36.53%	33.40%
8	Volatile Liabilities/ Cash+Investments <1yr	168.09%	176.05%	187.12%	244.63%	284.68%	326.22%
9	Year-over-Year Growth in Volatile Liabilities/ Assets	2.54%	2.61%	2.53%	3.00%	2.33%	1.93%
10	Investment Loss Ratio	0.00%	-0.37%	-2.68%	-4.09%	-5.93%	-5.87%
11	Estimated Loan Maturity	23 Mo	24 Mo	30 Mo	29 Mo	37 Mo	41 Mo

NCUA AIRES Examination Questionnaire

<http://www.ncua.gov/DataApps/Documents/AIRES/question.zip>

NCUA Rules and Regulations Part 741.12 Liquidity and Contingency Funding Plans

“It is essential for every credit union, regardless of size and complexity, to have a management process for identifying, measuring, monitoring, and controlling liquidity risk that is commensurate with its respective needs.”

Effective March 31, 2014

Credit Unions <\$50 Million in Total Assets Must Have:

1. a written Liquidity Policy that provides a framework for managing liquidity.
2. a list of “contingent liquidity sources” that can be employed under adverse circumstances.

Credit Unions \$50 Million <> \$250 Million in Total Assets Must Have:

1. a written Liquidity Policy that provides a framework for managing liquidity.
2. a “**formal**” written Contingency Funding Plan (CFP).

Credit Unions >\$250 Million in Total Assets Must Have:

1. a written Liquidity Policy that provides a framework for managing liquidity.
2. a “**formal**” written Contingency Funding Plan (CFP).
3. **access to an established line of credit with either the Federal Reserve Discount Window or the Central Liquidity Facility.**

Source: NCUA Rules and Regulations Part 741.12
<http://www.ncua.gov/Legal/Documents/Regulations/FIR20131024LiquidityContingencyFunding.pdf>

NCUA Rules and Regulations Part 741.12 Contingency Funding Plans

The Contingency Funding Plan must address, at a minimum, the following:

1. The sufficiency of the institution's liquidity sources to meet normal operating requirements as well as contingent events.
2. The identification of contingent liquidity sources.
3. Policies to manage a range of stress environments:
 - identification of some possible stress events, and
 - identification of likely liquidity responses to such events.
4. Lines of responsibility within the institution to respond to liquidity events.
5. Management processes that include clear implementation and escalation procedures for liquidity events.
6. The frequency that the institution will test and update the plan.

Source: NCUA Rules and Regulations Part 741.12
<http://www.ncua.gov/Legal/Documents/Regulations/FIR20131024LiquidityContingencyFunding.pdf>

Sources and Uses of Funds

Comprehensive liquidity risk measurement and monitoring systems (including assessments of the current and prospective cash flows **(or sources and uses of funds)** that are commensurate with the complexity and business activities of the institution.

SOURCES OF FUNDS	USES OF FUNDS
New Shares and Deposits	Share and Deposit Withdrawals
Loan Principal Payments and Cashflow	New Loan Originations
Investment Maturities and Cashflows	Dividends on Shares and Deposits
Interest Income	Interest Expense on Borrowings
Non-interest Income	Operating Expenses
Corp CU Overnights or Fed Funds Sold	NCUSIF Deposit & Assessments
Sales of Securities, Loans, Other Assets	Pay-off of Existing Borrowings
Sale of Loan Participations	Fixed Asset Purchases or Expenditures
Early Withdrawal of Investment CDs	Investment Purchases
Non-member Deposits or Brokered CDs	Purchase of Loans or Loan Participations
Corp CU Lines of Credit	
FHLB Advances	
Repurchase Agreements (Repo of Securities)	
Other Lines of Credit (Correspondent Banks)	
Federal Reserve Advances	
Central Liquidity Facility	

Contingent Liquidity: Regulatory Limits

1. The Federal Credit Union Act, Paragraph 107.9 permits a Federal Credit Union to borrow an amount up to 50% of member shares + undivided earnings.

http://www.ncua.gov/RegulationsOpinionsLaws/fcu_act/fcu_act.pdf

2. NCUA Rules and Regulations Part 701.32(a) allow a Federal Credit Union to accept non-member deposits from other credit unions and public funds in an amount also not to exceed 50% of member shares + undivided earnings

<https://www.ecfr.gov/current/title-12/chapter-VII/subchapter-A/part-701/section-701.32>

3. NCUA Rules and Regulations Part 701.32 (b)(2) also includes an additional “implied” limitation that COMBINED borrowings and non-member deposits should not exceed 70% of paid-in and unimpaired capital and surplus:

(2) Required due diligence. Before receiving public unit or nonmember shares that, taken together with any borrowings, exceed 70 percent of paid-in and unimpaired capital and surplus, the board of directors must adopt a specific written plan concerning the intended use of these funds that is consistent with prudent risk management principles.

Also Note: The regulations above apply to all federally chartered credit unions. Some states may have different regulatory limits for state chartered credit unions!

Contingent Liquidity and Contingent Liabilities

Current Contingent Liquidity	As of: Dec-22
Overnight Funds, Cash Equivalents, Cash , Coin and Currency ¹	\$131,532,204
Net Securities Available for Liquidation ²	\$257,210,214
Investment CDs Net of 6-mo Early Withdrawal Penalty ³	\$38,659,953
Available Lines of Credit: ⁴	\$270,363,508
Available Net Non-member Deposits: ⁵	\$385,389,143
Estimated Total Available Contingent Liquidity	\$1,083,155,022
As a % of Total Assets	49.45%

(1) Source for Data: NCUA Call Report

(4) Securities' portfolio assumed as collateral for Lines of Credit.

(3) BSMS ALM Analysis net of assumed 6-month early withdrawal penalty

(4) Data provided by the credit union

(5) Assumed maximum equal to 20% of member shares + undivided earnings.

Contingent Liabilities	As of: Dec-22
Total Unfunded Loan Commitments ¹	\$367,541,471
Pending Bond Claims ¹	\$0
Loans Transferred with Recourse ¹	\$674,066
Other Contingent Liabilities ¹	\$314,964
Total Contingent Liabilities	\$368,530,501
As a % of Total Assets	16.83%

(1) Source for Data: NCUA Call Report

Amount of Uninsured Shares and Deposits:	\$165,753,282
As a % of Total Shares and Deposits	8.87%

Source: BSMS Sample Credit Union Liquidity and Funding Risk Analysis

- **A critical element of a Contingency Funding Plan is the quantitative projection and evaluation of expected funding needs.**
- **Measuring liquidity risk should include robust methods for comprehensively projecting cash flows arising from assets, liabilities, and off-balance-sheet items over an appropriate set of time horizons.**
 - Cash flow projections can range from simple spreadsheets to very detailed reports depending upon the complexity and sophistication of the institution and its liquidity risk profile.

Source: FFIEC Interagency Policy Statement on Funding and Liquidity Risk Management (March 2010)
<http://www.ncua.gov/Resources/Documents/LCU2010-14Encl.pdf>

Cashflow Forecasting – Developing Assumptions

Historical Net “Core” Liquidity

Total Member Shares				Total Loans			Net Core Cashflow Liquidity		
Date	Period Ending Balance	Net Member Share Growth	Annualized Growth Rate	Period Ending Balance	Net Loan Growth	Annualized Growth Rate	Excess (Needed) Funding	Avg. Monthly Excess (Needed) Funding	Annualized Net Liquidity as % Total Assets
Dec-11	\$836,178,157			\$582,287,640					
Dec-12	\$887,175,335	\$50,997,178	6.10%	\$610,290,341	\$28,002,701	4.81%	\$22,994,477	\$1,916,206	2.36%
Dec-13	\$918,971,737	\$31,796,402	3.58%	\$655,006,161	\$44,715,820	7.33%	(\$12,919,418)	(\$1,076,618)	-1.25%
Dec-14	\$958,194,721	\$39,222,984	4.27%	\$723,431,574	\$68,425,414	10.45%	(\$29,202,430)	(\$2,433,536)	-2.72%
Dec-15	\$1,022,329,123	\$64,134,402	6.69%	\$799,270,608	\$75,839,034	10.48%	(\$11,704,632)	(\$975,386)	-1.03%
Dec-16	\$1,098,240,926	\$75,911,803	7.43%	\$883,762,182	\$84,491,574	10.57%	(\$8,579,771)	(\$714,981)	-0.70%
Dec-17	\$1,163,339,765	\$65,098,839	5.93%	\$972,365,672	\$88,603,489	10.03%	(\$23,504,650)	(\$1,958,721)	-1.80%
Dec-18	\$1,222,728,722	\$59,388,957	5.11%	\$1,058,922,483	\$86,556,811	8.90%	(\$27,167,854)	(\$2,263,988)	-1.95%
Dec-19	\$1,322,247,198	\$99,518,476	8.14%	\$1,127,363,411	\$68,440,928	6.46%	\$31,077,548	\$2,589,796	2.11%
Dec-20	\$1,594,172,477	\$271,925,279	20.57%	\$1,187,321,082	\$59,957,671	5.32%	\$211,967,608	\$17,663,967	13.38%
Dec-21	\$1,797,720,987	\$203,548,510	12.77%	\$1,279,074,919	\$91,753,838	7.73%	\$111,794,672	\$9,316,223	5.99%
YTD 2022	\$1,847,978,801	\$50,257,814	2.80%	\$1,522,976,702	\$243,901,783	19.07%	(\$193,643,969)	(\$16,136,997)	-9.29%
		\$1,011,800,644	7.58%		\$940,689,062	9.20%	\$6,464,689	\$538,724	0.46%
Last 90 Days		(\$13,096,667)	-2.81%	Last 90 Days	\$48,227,022	13.08%	(\$61,323,689)	(\$20,441,230)	-11.29%

Worst Year for Liquidity: 2022	
Net Share Growth	\$50,257,814
vs Net Loan Growth	\$243,901,783
Net Liquidity Needed	(\$193,643,969)
Total Assets at Beginning of the Year	\$2,083,382,027
Net Liquidity needed as % of Total Assets	-9.29%

Cashflow Forecasting – Developing Assumptions

Developing Assumptions

In a larger or more complex operation, the credit union may require a more sophisticated liquidity analysis, including a more detailed projection of cash needs. This projection or cash flow budget can take a variety of forms, but normally, a formal analysis of historical sources and uses of funds serves as the basis for the projection.

Historical Member Share Growth

Total Member Shares								
Calendar Year	Beginning Balance	Q1 Growth	Q2 Growth	Q3 Growth	Q4 Growth	Period Ending Balance	Net Growth	Annualized Growth Rate
2012	\$836,178,157	\$39,202,416	\$2,700,957	\$899,945	\$8,193,860	\$887,175,335	\$50,997,178	6.10%
2013	\$887,175,335	\$32,467,522	(\$825,198)	(\$3,937,505)	\$4,091,583	\$918,971,737	\$31,796,402	3.58%
2014	\$918,971,737	\$32,993,064	(\$3,341,052)	(\$1,836,982)	\$11,407,954	\$958,194,721	\$39,222,984	4.27%
2015	\$958,194,721	\$33,473,101	\$2,090,651	\$5,207,752	\$23,362,898	\$1,022,329,123	\$64,134,402	6.69%
2016	\$1,022,329,123	\$34,780,520	\$7,703,646	\$18,502,680	\$14,924,957	\$1,098,240,926	\$75,911,803	7.43%
2017	\$1,098,240,926	\$45,862,219	\$6,407,789	\$4,731,198	\$8,097,633	\$1,163,339,765	\$65,098,839	5.93%
2018	\$1,163,339,765	\$44,290,324	\$3,739,687	\$176,741	\$11,182,205	\$1,222,728,722	\$59,388,957	5.11%
2019	\$1,222,728,722	\$53,163,472	\$6,959,109	\$12,455,442	\$26,940,453	\$1,322,247,198	\$99,518,476	8.14%
2020	\$1,322,247,198	\$56,261,131	\$116,023,476	\$38,979,490	\$60,661,182	\$1,594,172,477	\$271,925,279	20.57%
2021	\$1,594,172,477	\$107,848,469	\$21,548,001	\$34,032,506	\$40,119,534	\$1,797,720,987	\$203,548,510	12.77%
2022	\$1,797,720,987	\$61,449,437	\$687,216	\$1,217,828	(\$13,096,667)	\$1,847,978,801	\$50,257,814	2.80%
TOTAL/AVG.		\$541,791,675	\$163,694,282	\$110,429,095	\$195,885,592		\$1,011,800,644	7.58%

Quarterly Total Member Share Growth				
Since December	Q1	Q2	Q3	Q4
Maximum	6.77%	8.42%	2.61%	3.96%
Avg Quarter	4.09%	1.17%	0.77%	1.39%
Minimum	3.40%	-0.35%	-0.43%	-0.70%

Cashflow Forecasting – Developing Assumptions

Developing Assumptions

In a larger or more complex operation, the credit union may require a more sophisticated liquidity analysis, including a more detailed projection of cash needs. This projection or cash flow budget can take a variety of forms, but normally, a formal analysis of historical sources and uses of funds serves as the basis for the projection.

Historical Loan Portfolio Cashflow Analysis

Calendar Year	Beginning Balance	Loan Payments & Prepayments	Loan Originations	Loans and Participations Purchased	Loans Sold	Net Loan Growth	Ending Balance
2012	\$582,287,640	\$238,893,977	\$329,340,351	\$7,492,296	\$69,935,969	\$28,002,701	\$610,290,341
2013	\$610,290,341	\$254,564,139	\$349,338,945	\$9,508,418	\$59,567,403	\$44,715,820	\$655,006,161
2014	\$655,006,161	\$264,544,355	\$357,866,820	\$12,971,345	\$37,868,397	\$68,425,414	\$723,431,574
2015	\$723,431,574	\$292,540,167	\$410,587,850	\$13,998,910	\$56,207,560	\$75,839,034	\$799,270,608
2016	\$799,270,608	\$326,406,113	\$461,175,986	\$16,420,486	\$66,698,785	\$84,491,574	\$883,762,182
2017	\$883,762,182	\$355,266,201	\$485,491,997	\$18,590,544	\$60,212,851	\$88,603,489	\$972,365,672
2018	\$972,365,672	\$385,077,128	\$511,515,090	\$16,838,102	\$56,719,253	\$86,556,811	\$1,058,922,483
2019	\$1,058,922,483	\$424,718,957	\$550,847,671	\$16,830,189	\$74,517,974	\$68,440,928	\$1,127,363,411
2020	\$1,127,363,411	\$510,976,060	\$677,865,252	\$27,697,761	\$134,629,283	\$59,957,671	\$1,187,321,082
2021	\$1,187,321,082	\$622,603,384	\$796,285,086	\$51,206,920	\$133,134,785	\$91,753,838	\$1,279,074,919
YTD 2022	\$1,279,074,919	\$480,881,291	\$767,994,688	\$46,275,491	\$89,487,105	\$243,901,783	\$1,522,976,702
Last 90 Days	\$1,474,749,680	\$106,713,129	\$159,754,623	\$6,406,194	\$11,220,666	\$48,227,022	\$1,522,976,702
Last 12 Months	\$1,279,074,919	\$480,881,291	\$767,994,688	\$46,275,491	\$89,487,105	\$243,901,783	\$1,522,976,702

Cashflow Forecasting – Developing Assumptions

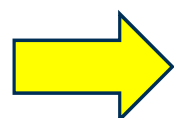
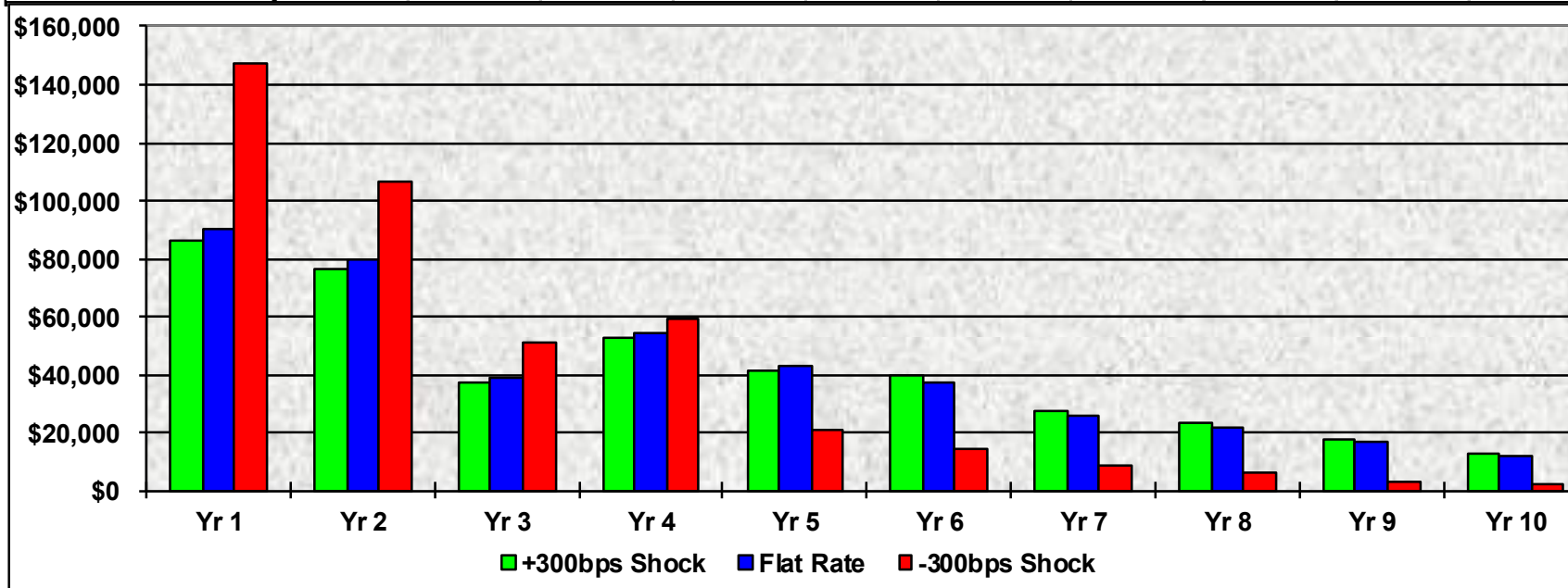
Historical Loan Portfolio Cashflow Analysis

Calendar Year	Annualized Loan Payments as a % Total Loans	Annualized Loan Originations as a % Total Loans	Annualized Loan Purchases as a % Total Loans	Loans Sold as % Loan Originations & Purchases	Annualized Net Loan Growth
2012	41.03%	56.56%	1.29%	20.76%	4.81%
2013	41.71%	57.24%	1.56%	16.60%	7.33%
2014	40.39%	54.64%	1.98%	10.21%	10.45%
2015	40.44%	56.76%	1.94%	13.24%	10.48%
2016	40.84%	57.70%	2.05%	13.97%	10.57%
2017	40.20%	54.93%	2.10%	11.95%	10.03%
2018	39.60%	52.61%	1.73%	10.74%	8.90%
2019	40.11%	52.02%	1.59%	13.13%	6.46%
2020	45.32%	60.13%	2.46%	19.08%	5.32%
2021	52.44%	67.07%	4.31%	15.71%	7.73%
YTD 2022	37.60%	60.04%	3.62%	10.99%	19.07%
Average	41.79%	57.25%	2.24%	14.22%	9.20%
Last 90 Days	28.94%	43.33%	1.74%	6.75%	13.08%
Last 12 Months	37.60%	60.04%	3.62%	10.99%	19.07%

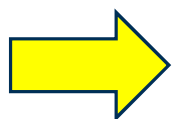
Cashflow Forecasting – Developing Assumptions

Investment Principal Cashflow Forecast and Rate-Shocks

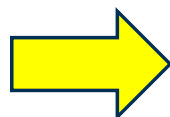
Scenario	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
+300bps Shock	\$86,560	\$76,180	\$37,520	\$52,532	\$41,267	\$40,038	\$27,112	\$23,513	\$17,913	\$12,851
Flat Rate	\$90,167	\$79,354	\$39,083	\$54,721	\$42,986	\$37,215	\$25,460	\$21,527	\$17,030	\$12,218
-300bps Shock	\$146,972	\$106,176	\$51,199	\$59,646	\$21,063	\$14,514	\$8,656	\$6,243	\$3,236	\$2,056



Overnight Funds, Cash , Coin and Currency **\$131,532,205**

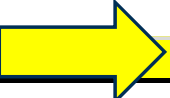



Investment Securities:	+300bps	Flat Rate	-300bps
Securities at Appraised Market Value	\$336,870,558	\$379,644,745	\$422,418,933



Investment CDs and Other Time Deposits	Balance	Avg Rate	*6 month EWD Penalty	Net Liquidity
Investment CDs and Other Time Deposits	\$38,659,953	2.00%	\$386,600	\$38,659,953

Cash Flow Forecasting Assumptions

Scenario Assumptions		
"Target" Minimum Cash Liquidity (as % Total Assets)	3.00%	Next 12-month Minimum Target \$65.706 Million
Assumed Interest Rate Scenario	Flat Rate Scenario	
Forecast Annualized Net Non-Maturity Deposit Growth	\$15,402,516	At the assumed +1% annualized rate of non-maturity deposit growth.
Forecast Annualized Net Member Time Deposit Growth	\$30,772,740	At the assumed +10% annualized rate of member time deposit growth.
 Forecast Annualized Net Member Share Growth	2.50%	\$46,175,256 over the next 12 months
Forecast Monthly Loan Originations (Year 1 Avg)	\$46,968,817	At the assumed 35% annualized loan originations as a % of total loans.
Forecast Monthly Loan Purchases (Year 1 Avg)	\$4,857,918	3.62% ~ to the average annualized percentage of total loans purchased in the prior 12 months
Forecast Monthly Loans Sold in Secondary Mkt (Year 1 Avg)	\$2,036,791	3.93% ~ to the average annualized percentage of loan originations sold in the prior 12 months
 Forecast Annualized Net Loan Growth	12.80%	\$194,889,470 over the next 12 months
Assume the Rollover of Maturing Investments?	No. Assume maturing investments are rolled into overnight funds	
Assume the Rollover of Existing Non-member Time Deposits?	Yes	
Assume the Rollover of Maturing Borrowings?	Yes	
Historical Core Cashflow Annual or Quarterly Growth Rates?	Use Annual Growth Rates	
Non-interest Income, Expenses, Provision for Loan Loss etc.	Average of the prior 3 months	

Cashflow Forecasting

Forecast Cashflow Liquidity:

	Liquidity Analysis:	Dec-22	90-days	12-months	24-months	
1	Forecast Loan (P+I) Cashflow		\$112,281,871	\$470,727,571	\$532,571,970	(2)
2	Forecast Investment (P+I) Cashflow		\$26,023,267	\$104,143,911	\$74,371,291	(3)
3	Forecast Net Share Growth		\$11,543,814	\$46,175,256	\$49,406,544	(2)
4	Forecast Rollover of Maturing Borrowings		\$26,792,950	\$61,362,724	\$7,578,612	(5)
5	Forecast Loan Sales		\$5,837,282	\$24,441,488	\$27,569,170	-2
6	Non-Interest Income		\$6,081,480	\$24,325,920	\$24,325,920	(5)
7	Forecast Cashflow In		\$188,560,665	\$731,176,869	\$715,823,507	
8	Forecast Loan Originations		\$134,608,938	\$563,625,806	\$635,750,830	(2)
9	Forecast Loan and Loan Participation Purchases		\$13,922,410	\$58,295,012	\$65,754,800	-4
10	Assumed Investment Purchases		\$0	\$0	\$0	(8)
11	Forecast Net Share Withdrawals		\$0	\$0	\$0	(2)
12	Maturing Borrowings		\$26,792,950	\$61,362,727	\$7,578,614	(5)
13	Forecast Dividend and Interest Expense		\$3,693,023	\$19,393,807	\$32,385,680	(5)
14	Operating Expenses, NCUSIF, Other Cashflow Out		\$16,038,963	\$64,305,241	\$64,586,525	(5)
15	Forecast Cashflow Out		\$195,056,284	\$766,982,592	\$806,056,449	
16	Net Core Cashflow		-\$6,495,620	-\$35,805,723	-\$90,232,942	
17	New Borrowings		\$0	\$0	\$65,876,667	
18	Ending Balance Cash + Cash Equivalents	\$131,532,204	\$125,036,584	\$95,726,481	\$71,370,206	(1)
19	Total Lines of Credit and Other Borrowing Capacity	\$366,548,973	\$366,548,973	\$366,548,973	\$366,548,973	(6)
20	Less Outstanding Borrowings	\$96,185,465	\$96,185,465	\$96,185,465	\$162,062,132	(5)
21	Net Available LOC and Other Borrowing Capacity	\$270,363,508	\$270,363,508	\$270,363,508	\$204,486,841	
22	Securities (Net of Forecast Cashflows) at 94% Current Market Value	\$353,395,679	\$337,968,326	\$291,686,266	\$249,826,863	-3
23	Less Securities Pledged as Collateral	\$96,185,465	\$96,185,465	\$96,185,465	\$162,062,132	
24	Net Securities Available for Liquidation	\$257,210,214	\$241,782,861	\$195,500,801	\$87,764,731	-3
25	Investment CDs Net of 6 Month Early Withdrawal Penalty	\$38,659,953	\$34,457,555	\$21,850,361	\$10,836,791	(5)
26	Net Available Non-Member Deposits	\$385,389,143	\$387,708,962	\$397,971,655	\$411,738,548	(7)
27	Additional Sources of Funds	\$681,259,310	\$663,949,378	\$615,322,817	\$510,340,070	
28	Total Contingent Liquidity	\$951,622,818	\$934,312,886	\$885,686,325	\$714,826,911	
29	Total Liquidity	\$1,083,155,022	\$1,059,349,470	\$981,412,806	\$786,197,117	

Forecast Cashflow: Liquidity Ratios

Liquidity Ratios	Dec-22	90-days	12-months	24-months
Forecast Cashflow In as % Total Assets		8.54%	32.37%	29.90%
Forecast Cashflows Out as % Total Assets		8.84%	33.95%	33.67%
Net Cashflow Liquidity % Total Assets		-0.29%	-1.59%	-3.77%
Cash & Cash Equivalents as % of Total Assets	6.01%	5.66%	4.24%	2.98%
Available Lines of Credit as % Total Assets	12.34%	12.25%	11.97%	8.54%
Additional Sources of Funds as % Total Assets	31.11%	30.08%	27.24%	21.32%
Total Contingent Liquidity as % of Total Assets	43.45%	42.32%	39.21%	29.86%
Total Liquidity as % of Total Assets	49.45%	47.99%	43.45%	32.84%



Typically we recommend a policy limit be set for the “current ” liquidity ratio and also for the forecast liquidity ratio at the 12-month horizon.

NCUA AIRES Questionnaire: Liquidity – Part C, Cell A61, embedded comment:

“It is important that a CU not assume that business will always continue as normal. Stress conditions would include credit deterioration, unusually high interest rate volatility, reputation risk, and systemic events (e.g., Y2K and anti-inflationary monetary policies). These conditions could arise from rising unemployment, increases in equity investments, or member dissatisfaction with the CU's services. The liquidity pressure may be sufficient to extend beyond what the CU has available to it through "normal" liquidity sources (e.g., lines of credit). Therefore, the CU may need to explore emergency sources of funds such as loan sales or a liquidation of other assets”.

Risks and Stress Events

- Credit: deterioration in asset quality
- Interest Rate Volatility: rapid change in rates
- Reputation: negative press coverage
- Regulatory: PCA capital categories and CAMELS ratings downgrades or changes
- Market: changes in agency credit ratings or widening of credit default spreads
- Earnings: operating losses
- Competition from equity markets or others
- Other events that may call into question an institution's ability to meet its obligations

Level of Severity and Timing

- Short-term funding crisis
- Long-term funding crisis

Liquidity Stress Testing

Contingency Funding Stress Testing

Total Contingent Liabilities	\$368,530,501			
Amount of Uninsured Shares and Deposits:	\$165,753,282			
Total Assets	\$2,190,185,663			
	Stress # 1 Short-term Mild % Curtailment	Stress # 2 Short-term Moderate % Curtailment	Stress # 3 Long-term Severe % Curtailment	
Fund Current Unfunded Commitments	10%	15%	20%	
\$ Amount Assumed to Fund Commitments	\$36,853,050	\$55,279,575	\$73,706,100	
Uninsured Share Run-off	10%	20%	30%	
\$ Amount of Shares Assumed Withdrawn	\$16,575,328	\$33,150,656	\$49,725,985	
Additional Cash and Cash Equivalents Curtailment	-10%	-15%	-25%	
Securities Curtailment	-5%	-20%	-50%	
Available Lines of Credit Curtailment	-10%	-30%	-50%	
Available Brokered Deposits Curtailment	-20%	-50%	-100%	
	Current Actual	Level 1 Stress	Level 2 Stress	Level 3 Stress
Cash + Cash Equivalent Balance	\$131,532,204	\$91,257,046	\$62,831,803	\$40,983,170
Total Lines of Credit and Other Borrowing Capacity	\$366,548,973	\$329,894,076	\$311,566,627	\$274,911,730
Less Outstanding Borrowings	\$96,185,465	\$96,185,465	\$96,185,465	\$96,185,465
Net Available LOC and Other Borrowing Capacity	\$270,363,508	\$233,708,611	\$215,381,162	\$178,726,265
Securities at 94% Current Market Value	\$353,395,679	\$335,725,895	\$282,716,543	\$176,697,840
Less Securities Pledged as Collateral	\$96,185,465	\$96,185,465	\$96,185,465	\$96,185,465
Net Securities Available for Liquidation	\$257,210,214	\$239,540,430	\$186,531,078	\$80,512,375
Investment CDs Net of 6 Month Early Withdrawal Penalty	\$38,659,953	\$38,659,953	\$38,659,953	\$38,659,953
Net Available Non-Member Deposits	\$385,389,143	\$308,311,314	\$192,694,572	\$0
Total Contingent Liquidity	\$1,083,155,022	\$911,477,355	\$696,098,568	\$338,881,763
Total Liquidity as % of Total Assets	49.45%	41.62%	31.78%	15.47%
Policy Guidelines	30%	25%	20%	15%

Other Considerations – Rate Surveys

Product	Credit Union Average	Credit Union High	Credit Union Low
3 Mo CD – \$10k	1.97	7.49	0.01
6 Mo CD – \$10k	2.88	6.00	0.01
9 Mo CD – \$10k	3.48	5.70	0.01
1 Yr CD – \$10k	3.38	6.17	0.02
18 Mo CD – \$10k	3.24	5.75	0.01
2 Yr CD – \$10k	3.06	5.64	0.02
30 Mo CD – \$10k	2.99	5.41	0.01
3 Yr CD – \$10k	2.94	5.90	0.02
4 Yr CD – \$10k	2.92	5.64	0.02
5 Yr CD – \$10k	3.01	5.55	0.02
3 Mo CD – \$100k	2.03	7.49	0.01
6 Mo CD – \$100k	2.92	6.00	0.01
9 Mo CD – \$100k	3.55	5.70	0.01
1 Yr CD – \$100k	3.43	6.17	0.02
18 Mo CD – \$100k	3.28	5.65	0.01
2 Yr CD – \$100k	3.11	18.00	0.02
30 Mo CD – \$100k	3.02	5.41	0.01
3 Yr CD – \$100k	2.98	5.90	0.02
4 Yr CD – \$100k	2.95	5.64	0.02
5 Yr CD – \$100k	3.05	5.40	0.02
Youth/Student Checking	0.10	0.10	0.10
High Rate Checking	1.68	6.00	0.05
Basic Checking	0.22	7.00	0.01

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survey of 297,208
financial institution
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markets across the
United States as of
02/01/2024.**

Other Considerations: Marginal Cost of “CD Specials”

When comparing wholesale versus retail funding strategies you should consider **the marginal cost** of acquiring new deposits when running a “CD Special”.

Total Deposits Generated at the "CD Special" Rate:	\$10,000,000
Term of the CD Special	3 Year
Rate offered on CD special:	5.00%
Rate Currently Paid on Core Savings:	1.38%

% of Deposits "Cannibalized" from Core Savings:	10.00%	20.00%	30.00%	40.00%	50.00%
Total Deposits "Cannibalized" from Core Savings:	\$1,000,000	\$2,000,000	\$3,000,000	\$4,000,000	\$5,000,000
Total New Money Acquired:	\$9,000,000	\$8,000,000	\$7,000,000	\$6,000,000	\$5,000,000
Annual Interest Expense on Core Savings @ 0.91%	\$9,100	\$18,200	\$27,300	\$36,400	\$45,500
Annual Interest Expense on Core Savings @ 2.50%	\$25,000	\$50,000	\$75,000	\$100,000	\$125,000
Net Interest Expense <i>Increase</i> on Core Savings:	\$15,900	\$31,800	\$47,700	\$63,600	\$79,500
Annual Interest Expense on New Time Deposits @: 2.50%	\$225,000	\$200,000	\$175,000	\$150,000	\$125,000
PLUS Net Interest Expense Increase on Core Savings:	\$15,900	\$31,800	\$47,700	\$63,600	\$79,500
TOTAL INTEREST EXPENSE TO GENERATE NEW MONEY:	\$240,900	\$231,800	\$222,700	\$213,600	\$204,500
EFFECTIVE COST OF NEW TIME DEPOSITS:	2.68%	2.90%	3.18%	3.56%	4.09%

By Comparison: 3-year FHLB Advance Rate = 4.30% (as of February 1, 2024 FHLB Boston)

Other Considerations: Non-member or Brokered Deposits

