

CU*Answers Regional Training 2014



Charles N. McQueen

McQueen
Financial Advisors

April 2014

Outline

- Introduction
- Liquidity reporting & new regulations
- Assumption stress testing
- Prepayment speed analysis
- Core deposit study
- ALM back testing



Introduction

- **Regulatory view**
 - Interest rates are rising
 - Members will borrow funds
 - Members will withdrawal funds
 - Members will move from money market accounts to CD's
- **Liquidity Event – Are you ready?**

Liquidity Reporting

Goal:

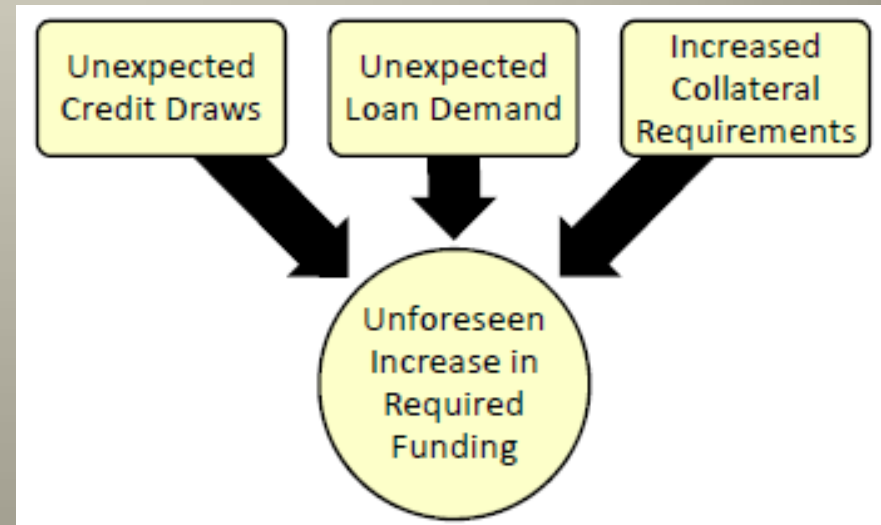
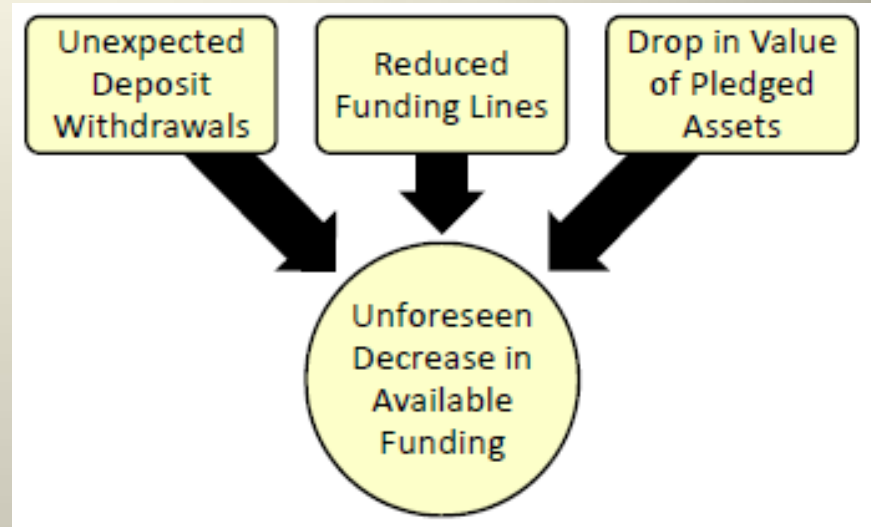
- View the steps to be prepared for examination
- Be prepared for potential higher interest rates



Liquidity Reporting Updated Regulations

New Liquidity Regulations:

- Policy
- Sources
- Monitoring



Liquidity Reporting: Cumulative Pro-Forma Cash Flow

Available Funding: Start		1 to 30 Days	1 to 60 Days	1 to 90 Days
Cash		9,031	9,031	9,031
Marketable Securities		23,179	23,179	23,179
Total Available Funding		32,211	32,211	32,211
Sources of Funds				
Loan Amortization/Payoffs		651	1,305	1,962
Non-Maturity Deposit Growth		254	507	761
Term Deposit Growth		-	-	-
Total Sources of Funds		904	1,812	2,723
Uses of Funds				
New Loans		(575)	(1,154)	(1,736)
Non-Maturity Deposit Run-Off		-	-	-
Term Deposit Run-Off		(11)	(23)	(34)
Unanticipated Borrower Draws		-	-	-
Cash Required to Meet Expenses		(200)	(400)	(600)
Total Uses of Funds		(787)	(1,577)	(2,370)
Net Sources & Uses of Funds		118	235	353
Projected Available Cash		32,328	32,446	32,563
Plus: Available Borrowings		4,000	4,000	4,000
Available Funding: End		36,328	36,446	36,563
Assumptions	Annual Rate	1 to 30 Days	1 to 60 Days	1 to 90 Days
Loan Growth	-3.1%	-0.26%	-0.52%	-0.78%
Non-Maturity Deposit Growth	5.8%	0.48%	0.97%	1.45%
Term Deposit Run-Off	-2.6%	-0.22%	-0.43%	-0.65%
Unanticipated Borrower Draws		None		
Borrowing Restrictions		None		

Liquidity Reporting: 90 Day Stress Summary

Scenario	Non-Stressed	Mild	Moderate	Severe
Available Funding: Start	32,211	32,211	32,211	32,211
Total Sources of Funds	2,723	1,962	1,962	1,962
Total Uses of Funds	(2,370)	(3,978)	(5,407)	(5,350)
Net Sources & Uses	353	(2,016)	(3,445)	(3,388)
Projected Available Funding	32,563	30,195	28,766	28,823
Plus: Available Borrowings [1]	4,000	4,000	3,000	-
Available Funding: End	36,563	34,195	31,766	28,823
Scenario Assumptions (Annualized)				
Loans	3.1% Run-Off	7.5% Growth	15.0% Growth	Lending Curtailed
Non-Maturity Deposits	5.8% Growth	5.0% Run-Off	10.0% Run-Off	25.0% Run-Off
Term Deposits	2.6% Run-Off	7.0% Run-Off	15.0% Run-Off	20.0% Run-Off
Unanticipated Borrower Draws (% of outstanding amount)	None	10%	20%	100%
Borrowing Restrictions	None	None	Line of Credit Reduced 25%	Line of Credit Eliminated

Assumption Stress Testing

- **The ALM report is a combination of math and assumptions.**
 - Deposit assumptions
 - Loan assumptions
 - Current replacement rate
 - +/- 100, 200, 300, 400, 500 replacement rates
 - Credit tiring
 - Investment assumptions



Assumption Stress Testing

Repricing/Growth Assumptions: Deposits

Deposit Type	Booked Rate	-100	Repl. Rates	+100	+200	+300	+400	+500
NIB Deposits	-	-	-	-	-	-	-	-
Shares	0.18	0.15	0.15	0.35	0.55	0.75	0.95	1.15
Money Market	0.61	0.30	0.30	0.50	0.70	0.90	1.10	1.30
Share Drafts	0.11	0.05	0.05	0.25	0.45	0.65	0.85	1.05
IRA Shares	1.00	1.00	1.00	1.20	1.40	1.60	1.80	2.00
Club Accounts	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
6 Mo CD	0.35	0.35	0.35	1.10	1.85	2.60	3.35	4.10
Jumbo 6 Mo CD	0.46	0.60	0.60	1.35	2.10	2.85	3.60	4.35
12 Mo CD	0.60	0.50	0.50	1.25	2.00	2.75	3.50	4.25
Jumbo 12 Mo CD	0.81	0.75	0.75	1.50	2.25	3.00	3.75	4.50
18 Mo CD	4.44	0.50	0.50	1.25	2.00	2.75	3.50	4.25
24 Mo CD	1.09	0.60	0.60	1.35	2.10	2.85	3.60	4.35
Jumbo 24 Mo CD	1.23	0.85	0.85	1.60	2.35	3.10	3.85	4.60
36 Mo CD	1.73	1.00	1.00	1.75	2.50	3.25	4.00	4.75
Jumbo 36 Mo CD	1.82	1.25	1.25	2.00	2.75	3.50	4.25	5.00
48 Mo CD	1.75	1.25	1.25	2.00	2.75	3.50	4.25	5.00
Jumbo 48 Mo CD	1.74	1.50	1.50	2.25	3.00	3.75	4.50	5.25
60 Mo CD	2.83	1.50	1.50	2.25	3.00	3.75	4.50	5.25
Jumbo 60 Mo CD	2.39	1.75	1.75	2.50	3.25	4.00	4.75	5.50
IRA CD	1.58	0.50	0.50	1.25	2.00	2.75	3.50	4.25
FHLB Borrowed Funds	2.68	2.68	2.68	3.68	4.68	5.68	6.68	7.68

Assumption Stress Testing

Loan Repricing Assumptions

Loan Type	Booked Rate	-100	Base	+100	+200	+300	+400	+500
Closed End Loans	6.46	5.50	5.50	6.00	6.50	7.00	7.50	8.00
Fixed Home Equity	6.36	6.57	6.57	7.57	8.57	9.57	10.57	11.57
Mortgage Fixed	5.12	3.62	3.62	4.12	4.62	5.12	5.62	6.12
Balloon Mtg	5.61	3.62	3.62	4.12	4.62	5.12	5.62	6.12
Commercial Alliance Loans	6.18	5.82	5.82	6.82	7.82	8.82	9.82	10.82
VISA	10.00	10.95	10.95	10.95	10.95	10.95	10.95	10.95
Dealer Loans	6.83	6.52	6.52	6.52	8.52	9.52	10.52	11.52
Other Loans	14.33	14.97	14.97	14.97	15.97	16.47	16.97	17.47
HELOC - 1	3.33	3.33	3.33	3.33	5.33	6.33	7.33	8.33
Mortgage Floating	4.88	6.75	6.75	6.75	8.75	9.75	10.75	11.75

Assumption Stress Testing

Loan Prepayment Assumptions Cont.

Constant Prepayment Rate (CPR)

Loan Type	Booked Rate	-100	Base CPR	+100	+200	+300	+400	+500
Closed End Loans	6.46	8.00	7.00	6.00	5.00	4.00	3.00	2.00
Fixed Home Equity	6.36	14.33	11.44	9.72	8.58	7.44	6.86	5.72
Mortgage Fixed	5.12	17.87	15.12	12.85	11.34	9.83	9.07	7.56
Balloon Mtg	5.61	18.50	27.68	23.53	20.76	17.99	16.61	13.84
Commercial Alliance Loans	6.18	13.20	12.00	11.04	9.60	8.64	7.80	6.96
VISA	10.00	8.50	8.00	7.50	6.50	5.00	4.00	3.00
Dealer Loans	6.83	8.00	7.00	6.00	5.00	4.00	3.00	2.00
Other Loans	14.33	8.00	7.00	6.00	5.00	4.00	3.00	2.00
HELOC - 1	3.33	24.00	14.58	12.09	10.44	8.78	7.95	6.29
Mortgage Floating	4.88	20.00	18.00	16.00	14.00	12.00	10.00	8.00
Weighted Average Prepayment Rate		11.87	10.44	9.05	7.84	6.64	5.78	4.64

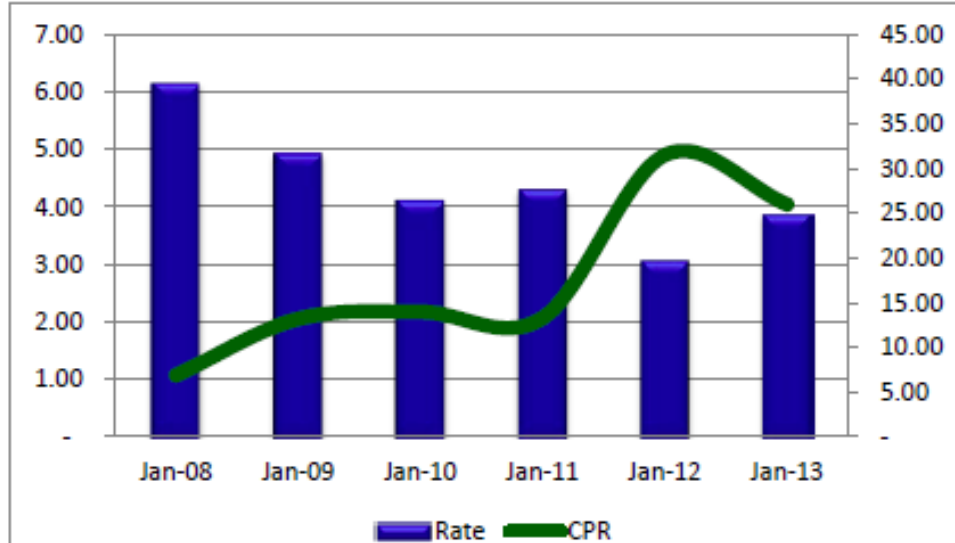
Prepayment Speed Analysis

- **Prepayment Speed Analysis**
 - Market rates vs. your rates
 - Unique situation
 - Car loans in Michigan
 - What is unique in your portfolio?

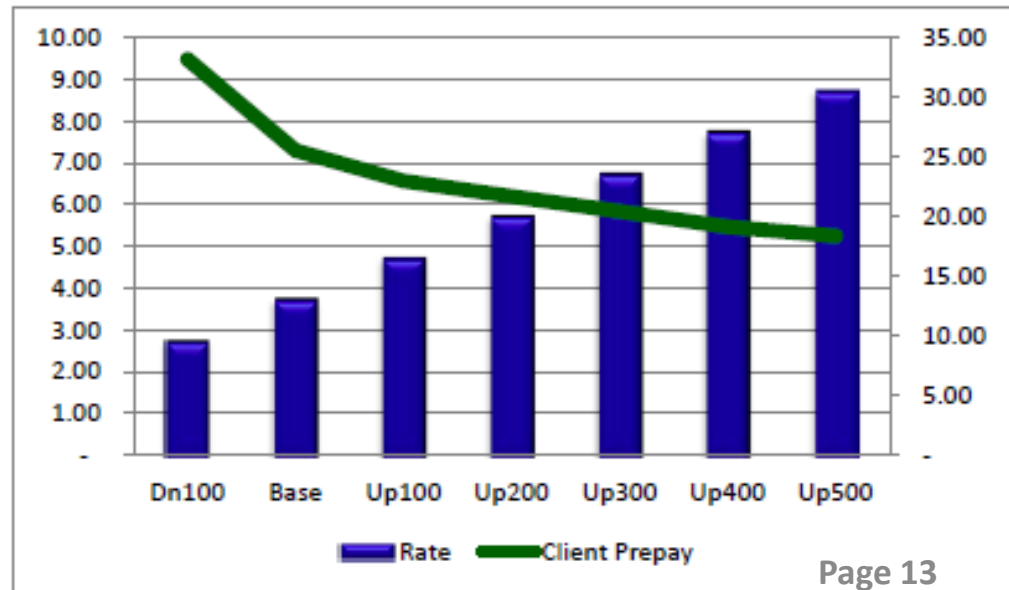


Prepayment Speed Analysis Cont.

Historical 30 Yr FNMA Commitment Rate & Prepay Speeds



30 Year Mortgages and Prepay



Prepayment Speed Analysis Cont.

Category	Prior Year Rate	Prior Year Balance (000)	Total Prepay/Paid Off (000)	Prepay Percentage
Mtg Fx 10 Yr	3.19	9,251	1,798	19.44
Mtg Fx 15 Yr	3.45	21,409	4,565	21.32
Mtg Fx 30 Yr	5.30	42,934	9,667	22.52
Mortgage Floating	3.78	28,164	4,714	16.74
Comm/BusLoans Fx 5 Yr	6.06	43,825	8,213	18.74
Comm/BusLoans Fx 7 Yr	5.80	938	56	5.97
Comm/BusLoans Fx 10 Yr	5.15	4,025	601	14.94
Comm Alliance Floating	5.83	5,563	1,083	19.46
Auto Loans	3.81	41,120	9,775	23.77
Indirect - Used Auto	6.11	28,328	6,259	22.09
Indirect - New Auto	6.27	16,414	3,801	23.16
Indirect - Driving Sense	5.84	4,053	1,164	28.72
Indirect - HIP	12.03	4,123	622	15.08
Indirect - RV	5.65	5,202	648	12.46
Fixed Home Equity	5.72	20,392	3,756	18.42
Signature Fixed	12.16	7,845	1,889	24.08
Recreational	5.49	4,838	949	19.61
Other Loans	4.58	515	134	26.01
Total Loans	5.56	347,301.09	59,695	21.10

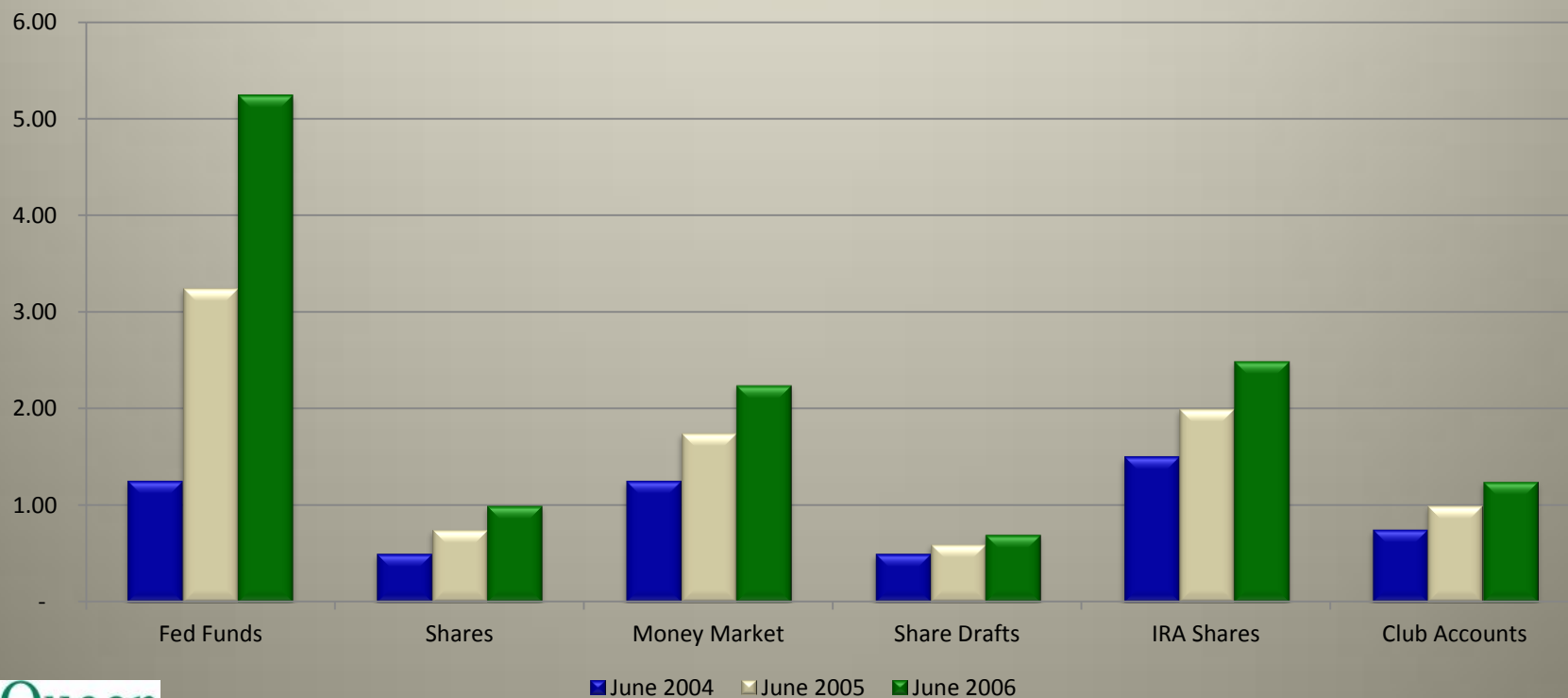
Core Deposit Study

- **Core Deposit Study**
 - Sets the duration (term) of your non-maturity deposits
 - Significant component of NEVE analysis
- **Other components**
 - Surge deposits
 - Disintermediation



Core Deposit Study

	Fed Funds	Shares	Money Market	Share Drafts	IRA Shares	Club Accounts
June 2004	1.25	0.50	1.25	0.50	1.50	0.75
June 2005	3.25	0.75	1.75	0.60	2.00	1.00
June 2006	5.25	1.00	2.25	0.70	2.50	1.25
Total Change	4.00	0.50	1.00	0.20	1.00	0.50
Per 100	1.00	0.13	0.25	0.05	0.25	0.13



Core Deposit Study Cont.

Category	2013 Count	Decay Rate	Retention Rate	Per Core Deposit Study		Current ALM Term in Months	Suggested Term in Months
				Term in Years	Term in Months		
NIB Deposits	102	19.9%	80.1%	3.1 Yrs	37	36	36
Shares	16,855	8.5%	91.5%	7.8 Yrs	94	36	72
Money Market	649	7.9%	92.1%	8.4 Yrs	101	36	60
Share Drafts	6,908	7.9%	92.1%	8.4 Yrs	101	36	60
IRA Shares	586	10.1%	89.9%	6.5 Yrs	78	36	50
Club Accounts	1,552	10.9%	89.1%	6.0 Yrs	72	12	24

[1] We recommend a retention rate of no more than 10 years.

ALM Back Testing

- **Goal** – Determine if our ALM report is accurate
- **How?**
 - Compare actual results to projected results
 - Net-interest income vs. net income
 - Annual frequency

ALM Back Testing Cont.

Rate Variance Analysis:

<i>Interest Rates</i>	Actual 12/31/2012	Unchanged Projected	Actual 12/31/2013	Average Rate	Average Balance	Rate Variance	Effect to Income
Loans	5.22%	4.88%	4.76%	4.87%	33,031	-0.01%	(4)
Investments	1.39%	1.39%	1.22%	1.31%	49,795	-0.09%	(42)
Fed Funds	0.20%	0.20%	0.20%	0.20%	7,177	0.00%	-
Non Maturity Deposits	0.16%	0.16%	0.15%	0.16%	7,177	0.00%	-
Term Deposits	0.82%	0.74%	0.78%	0.80%	16,283	0.06%	(10)
							(56)

Volume Variance Analysis:

<i>Balance</i>	Actual 12/31/2012	Unchanged Projected	Actual 12/31/2013	Average Rate	Variance Balance	Average Rate	Effect to Income
Loans	31,897	31,897	34,165	33,031	1,134	4.87%	55
Investments	50,024	50,024	49,567	49,795	(228)	1.31%	(3)
Fed Funds	6,677	6,677	7,678	7,177	501	0.20%	1
Non Maturity Deposits	66,361	66,361	69,425	67,893	1,532	0.16%	(2)
Term Deposits	16,947	16,947	15,619	16,283	(664)	0.80%	5
							56

ALM Back Testing Cont.

Federal Funds Rate	
12/31/2012	0.25
12/31/2013	0.25
Change	-

Rate and Volume Summation:

Differences due to Rates:	(56)
Differences due to Volumes:	56
Change Related to Rate and Volume	-

Net Interest Income Projected vs. Actual

Net Interest Income Projected 12/31/12	2,036
Net Interest Income Actual 12/31/13	1,998
Difference Actual to Projected	(38)
Difference Actual to Projected %	-1.85%

Comparison

Net Interest Income Projected vs Actual	(38)
Explained Variance	-
Unexplained Variance	(38)

-1.8%

Summary

- **Steps to ensure ALM reporting:**
 - Liquidity reporting & new regulations
 - Assumption stress testing
 - Prepayment speed analysis
 - Core deposit study
 - ALM back testing

Questions?

McQueen Financial Advisors, Inc.

Charles N. McQueen

26676 Woodward Avenue

Royal Oak, MI 48067

248-548-8400

Charley@m-f-a.com