Investment Strategies for Rising and Volatile Rates

Kevin T. Lynch
Managing Director – Investments

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Are you ready for Rising Rates?

The new
Tighting Cycle is 150 BPS in…

More to come?

Different reasons for joining me today…

- My CU doesn’t invest much, but I am curious about another outlook on interest rates.
- Cash is still too high, but I’m not sure what to do when rates are moving around so much.

- I still need yield/earnings, but interest-rate risk is starting to get uncomfortable….
- My unrealized loss $’s are crazy, and my Board won’t stop asking me about it.

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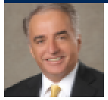
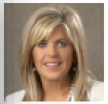
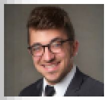
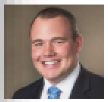
The Credit Union Investment Strategy Group

Credit Union Team w/ over 100 years Combined Experience

- Fixed Income Professionals (9 person Team) – Offering full service regulatory reporting and 3rd party bond accounting service
- Team works with credit unions across the country - Providing on-site visits with management and the Board regarding their investment portfolio / Provides ongoing investment education to management and the Board

Investment Yield

- Focusing on Investment Yield can make a critical difference in the portfolio
- Innovative Investment Strategies – We act as a strategic partner with our clients, who commit to a once per month strategy call. No constant solicitations via email/phone.
- Addressing Investment Portfolio Yield has put some CU's in the top tier for their respective state, as captured by NCUA.gov. (public data)

TEAM MEMBER RESPONSIBILITIES		
	**Mark B. Wickard** Managing Director – Investments mark.wickard@opco.com **(517) 333-7762**	• Managing Director and Head of the Credit Union Investment Strategy Group • Director of Product & Business Development • Provides Economic & Market Commentary • Portfolio Strategist
	**Tobias E. Timm** Executive Director – Investments tobias.timm@opco.com **(517) 333-7791**	• Portfolio Evaluation, Fixed Income & Credit Analysis • Strategy & Trade Execution • Product Origination/Trading Desk Liaison (Internal and External) • Portfolio Strategist
	**Regina Wickard** Managing Director – Investments regina.wickard@opco.com **(517) 333-7760**	• Director of Business Development • Director of Operations for Team & Clients – Lines of Credit, Due Diligence, etc. • Regulatory Oversight including Investment Policy Statements • Client and Prospect Development
	**Kevin T. Lynch** Managing Director – Investments kevin.lynch@opco.com **(517) 333-7761**	• Oversees the Technical Aspect of all Analytics • Bond Accounting Inquiries • Develop & Implement Pre / Post Purchase Fixed Income & Credit Analysis, Strategy & Trade Execution
	**Elizabeth L. Duncan** Group Analytical Associate – Director elizabeth.duncan@opco.com **(517) 333-7764**	• Responsible for Customized Client Reports, Valuation and Analytics • Regulatory Mandated Reporting and Analytics – §703 Quarterly Report, Monthly Pricing, HTR (Historic Total Return), Credit Surveillance • Pre-Analysis Portfolio Preparatory Work
	**Bryan L. Bell** Group Analytical Associate bryan.bell@opco.com **(517) 333-7759**	• Account Management & Administration • Prospect, Marketing & New Client Acquisition • Customized Client Reporting • Client Support / Legal Documentation / Asset Protection
	**Isaiah J. Timm** Senior Director – Investments isaiah.timm@opco.com **(517) 333-7765**	• Portfolio Management • Risk Management Strategies • Asset Preservation and Growth • Coordinate work with Directors
	**Seth A. Kellicut** Group Marketing Associate seth.kellicut@opco.com **(517) 333-7769**	• New Business Development • Relationship and Account Management • Event Coordination • Marketing and Educational Materials
	**Noah E. Timm** Associate Director – Investments noah.timm@opco.com **(517) 333-7763**	• Portfolio Management • New Business Development • Risk Management Strategies • Coordinate with Directors
	**Amanda B. Wickard** Financial Consultant amanda.wickard@opco.com **(517) 333-7767**	• New Business Development • Event Coordination • Credit Union League Outreach-Sponsorship / Speaking • Ongoing Client & Prospect Communication

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Today’s Topics

The FED Tightening Cycle began in March and has seen +150bps of HIKES so far. The impact has already been felt by Credit Unions nationwide. This will likely persist as the current interest rate cycle continues to play out…

I. Interest rates… Where are we and where we might be headed going in 2022 and beyond?

II. How are Rising Rates affecting my credit union?

III. What can I do now…Can the investment portfolio help?

IV. Practical application of a Floating-Rate Investment Strategy

SECTION I

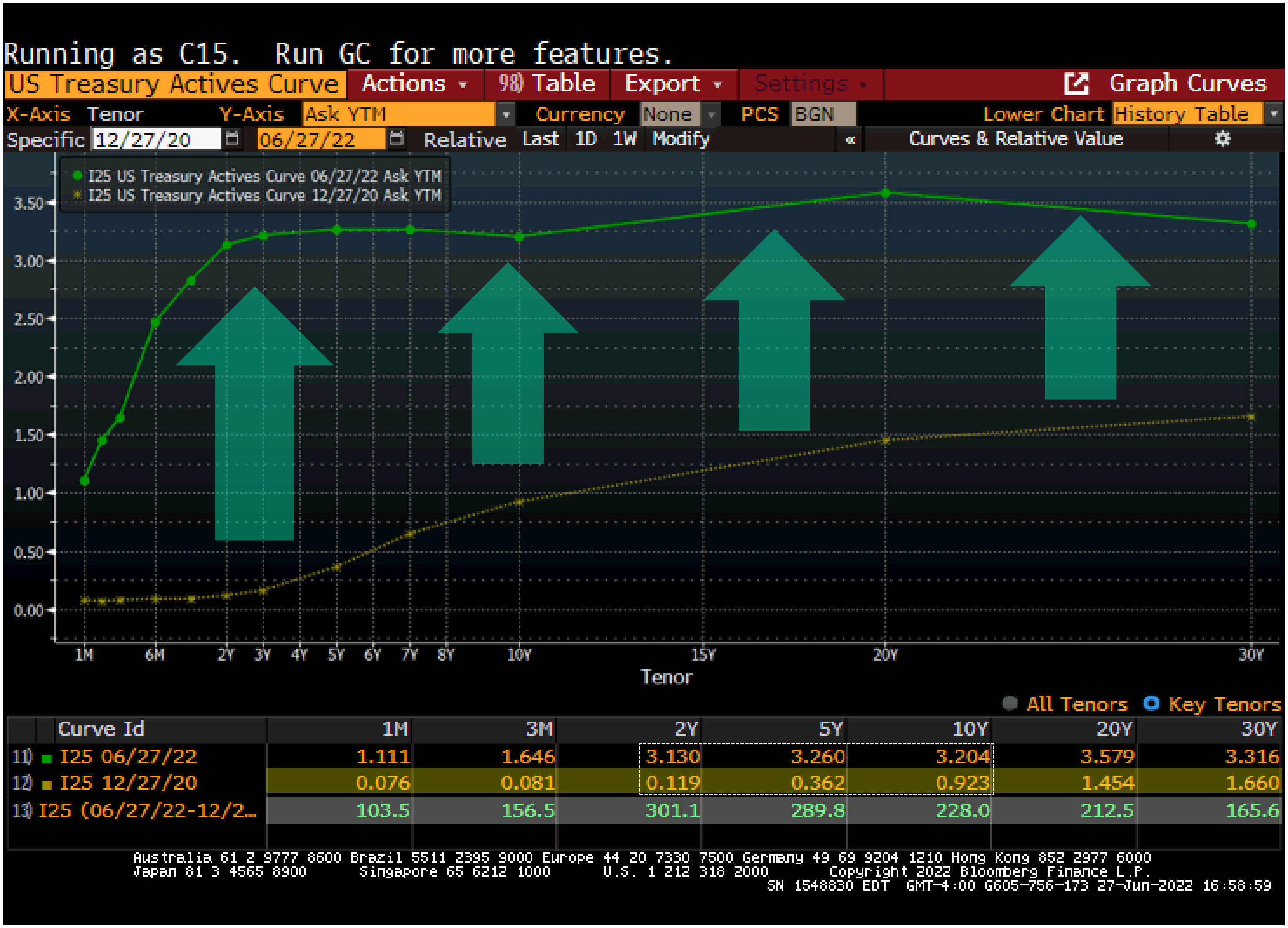
Where are we now?

And

Where are Interest Rates going in 2022 and beyond?

Yield Curve

Today Vs. 18-Months Ago



	Curve Id	1M	3M	2Y	5Y	10Y	20Y	30Y
11)	I25 06/27/22	1.111	1.646	3.130	3.260	3.204	3.579	3.316
12)	I25 12/27/20	0.076	0.081	0.119	0.362	0.923	1.454	1.660
13)	I25 (06/27/22-12/2...	103.5	156.5	301.1	289.8	228.0	212.5	165.6

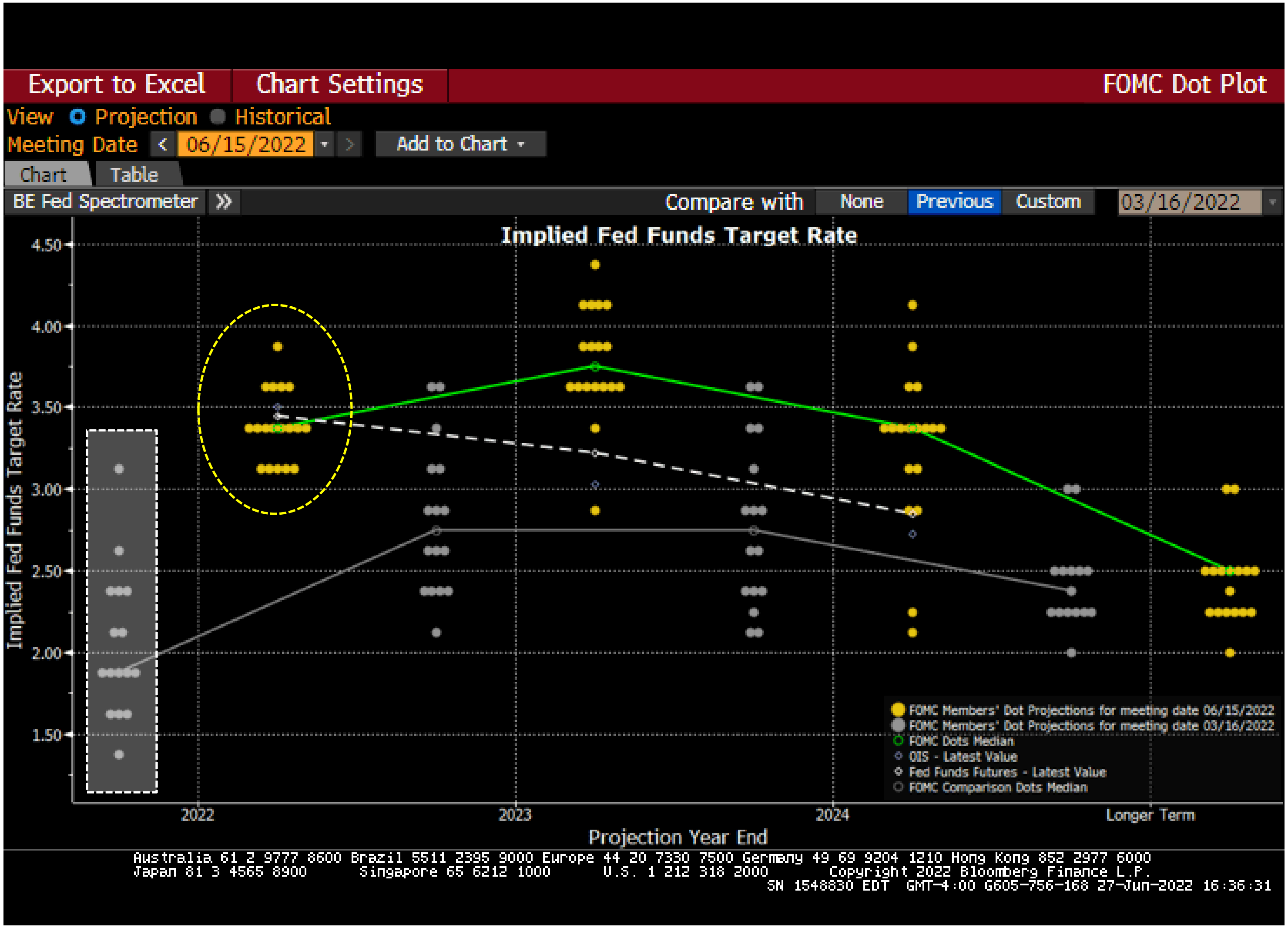
Source: Bloomberg

Interest-Rate Expectations From the FED

The JUNE 2022 **DOT PLOT** indicates a steeper rate path than previously anticipated…

FED FUNDS = 1.75%

- Y/E 2022 3.40%
- Y/E 2022 3.80%
- Y/E 2022 3.40%



Source: Bloomberg

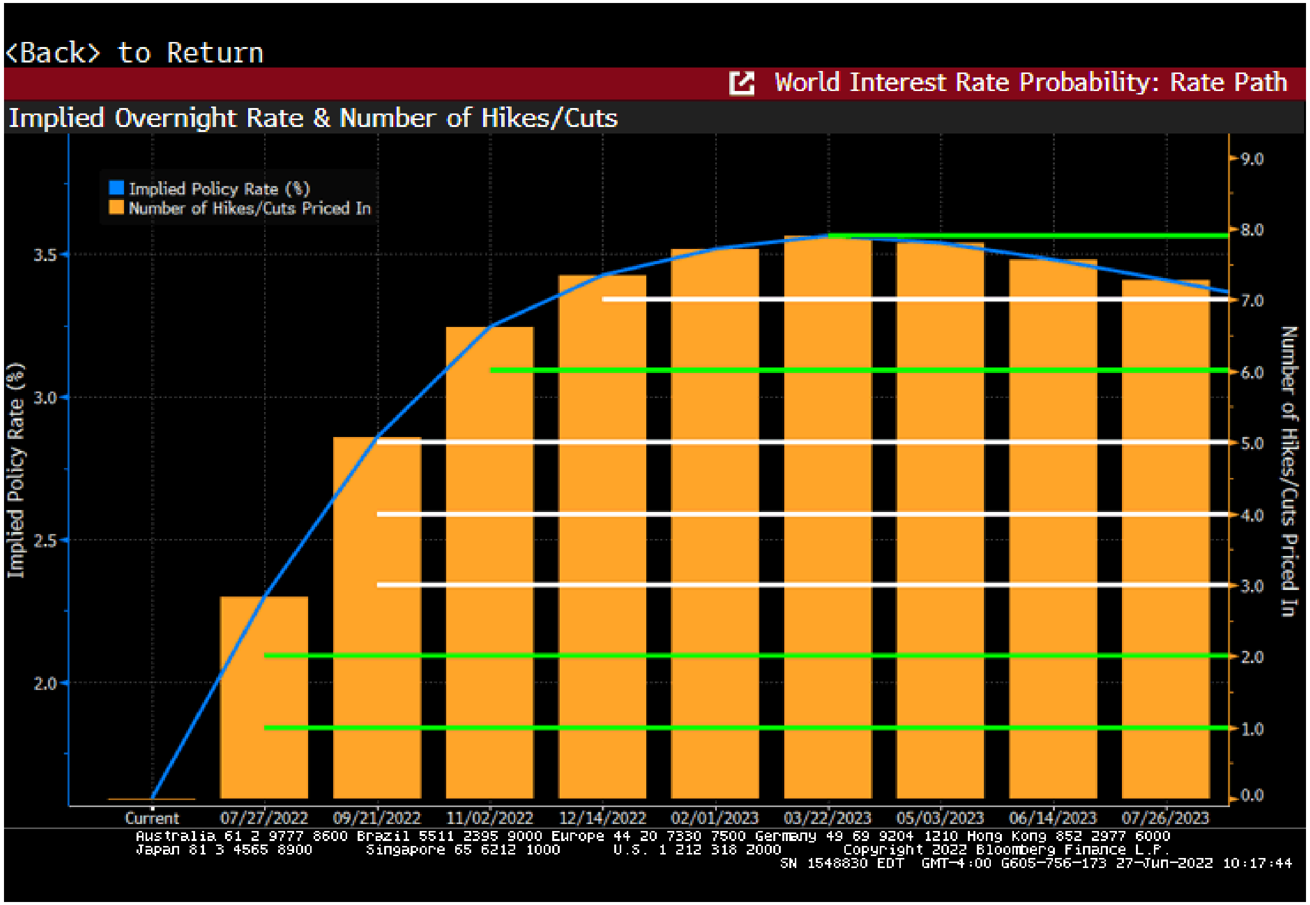
Bloomberg World Interest Rate Probability (WIRP)

JULY 2022 - **~2.83 Rate Hike**(s) priced in (Right Axis) | **2.297% Implied Rate** (Left Axis)

DEC 2022 **~7.35 Rate Hike**(s) priced in (Right Axis) | **3.427% Implied Rate** (Left Axis)

JUL 2023 **~7.28 Rate Hike**(s) priced in (Right Axis) | **3.41% Implied Rate** (Left Axis)

***This graph can change daily depending on Fed Funds Futures activity*



Source: Bloomberg

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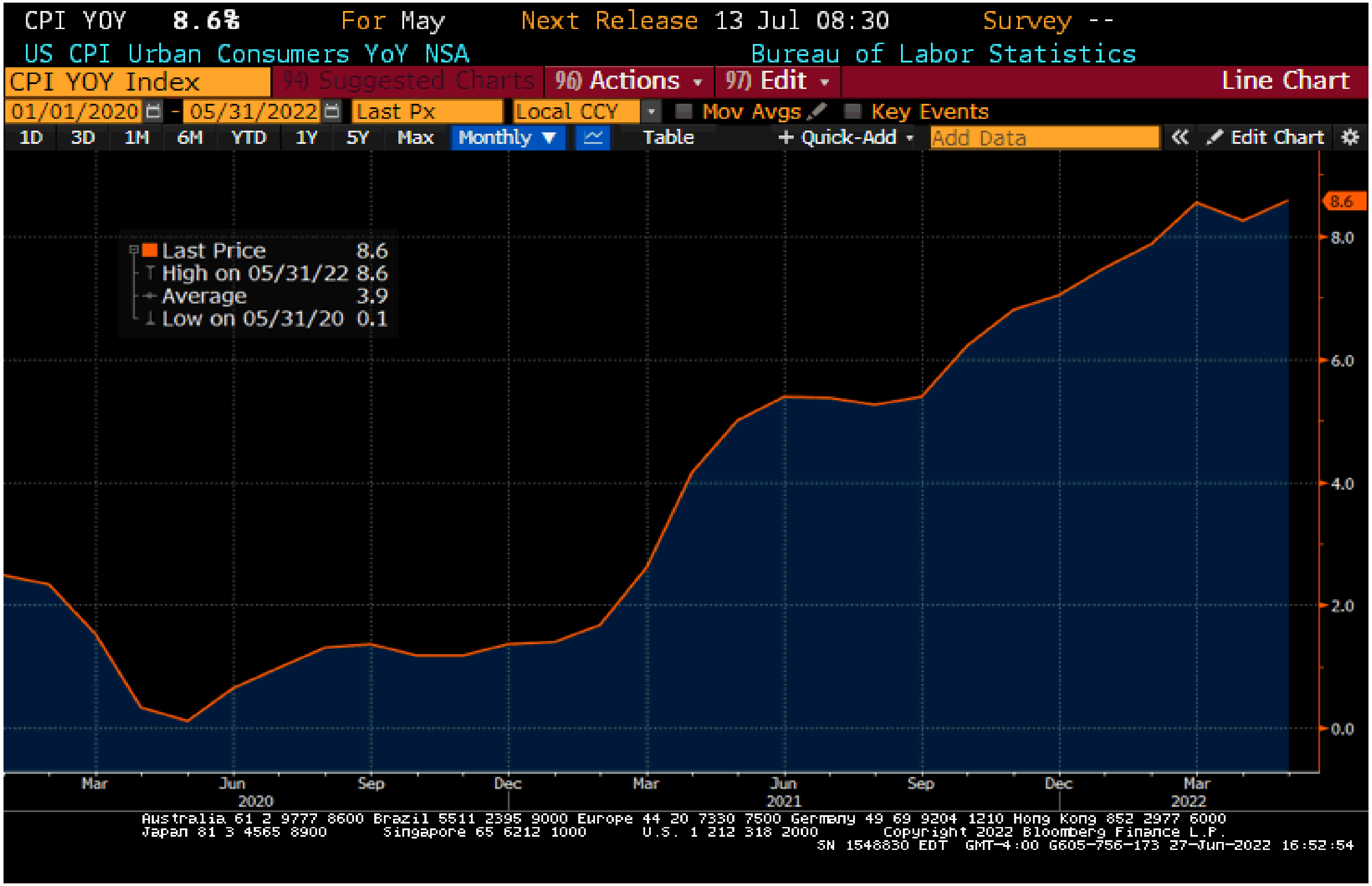
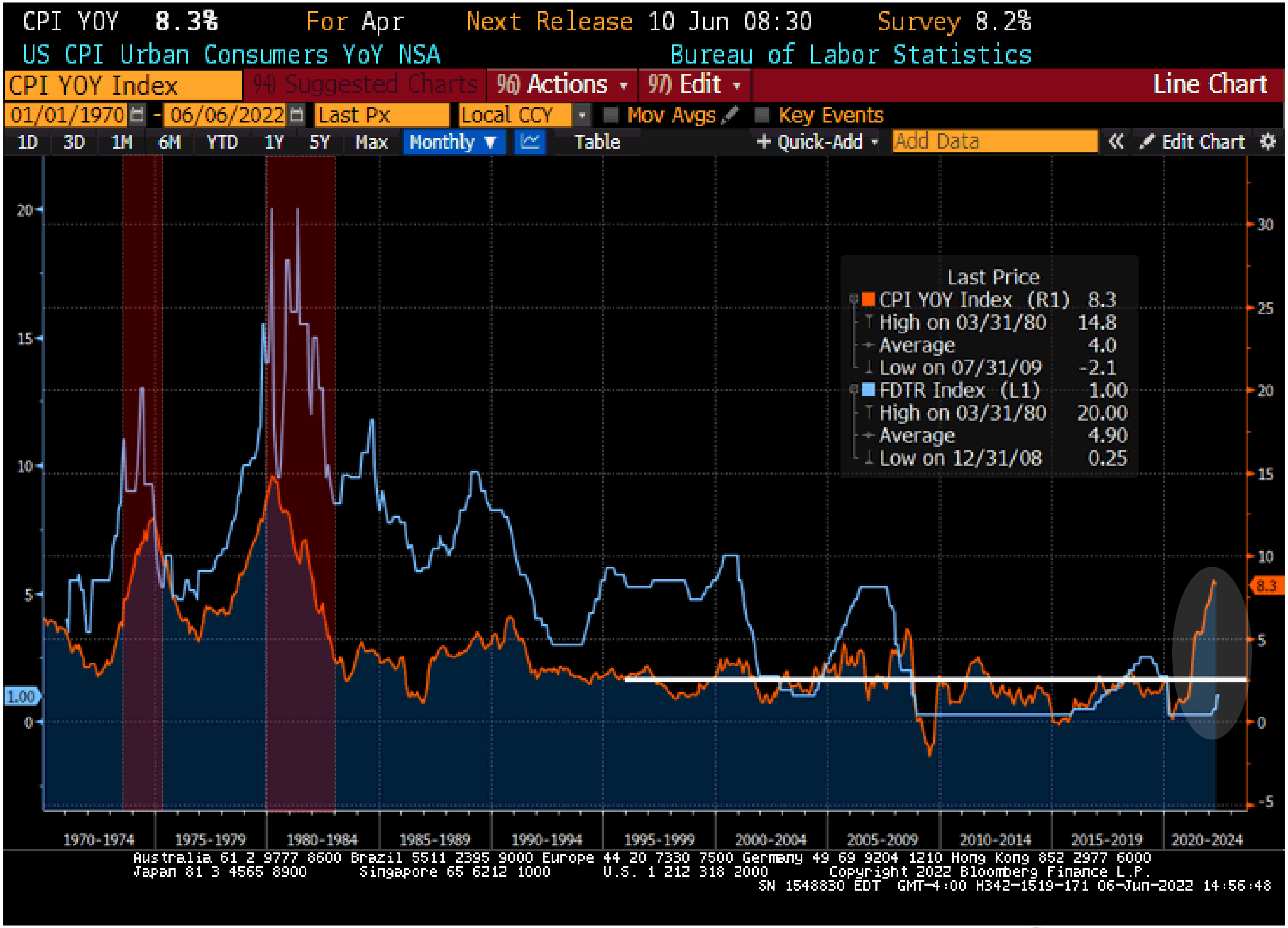
Inflation



Source: Bloomberg

Historical CPI YoY Vs FED FUNDS

MAR 1980 CPI HIGH = 14.8% | FED FUNDS = 20.0% (Upper)



Source: Bloomberg

SECTION II

How are Rising Rates affecting my Credit Union?

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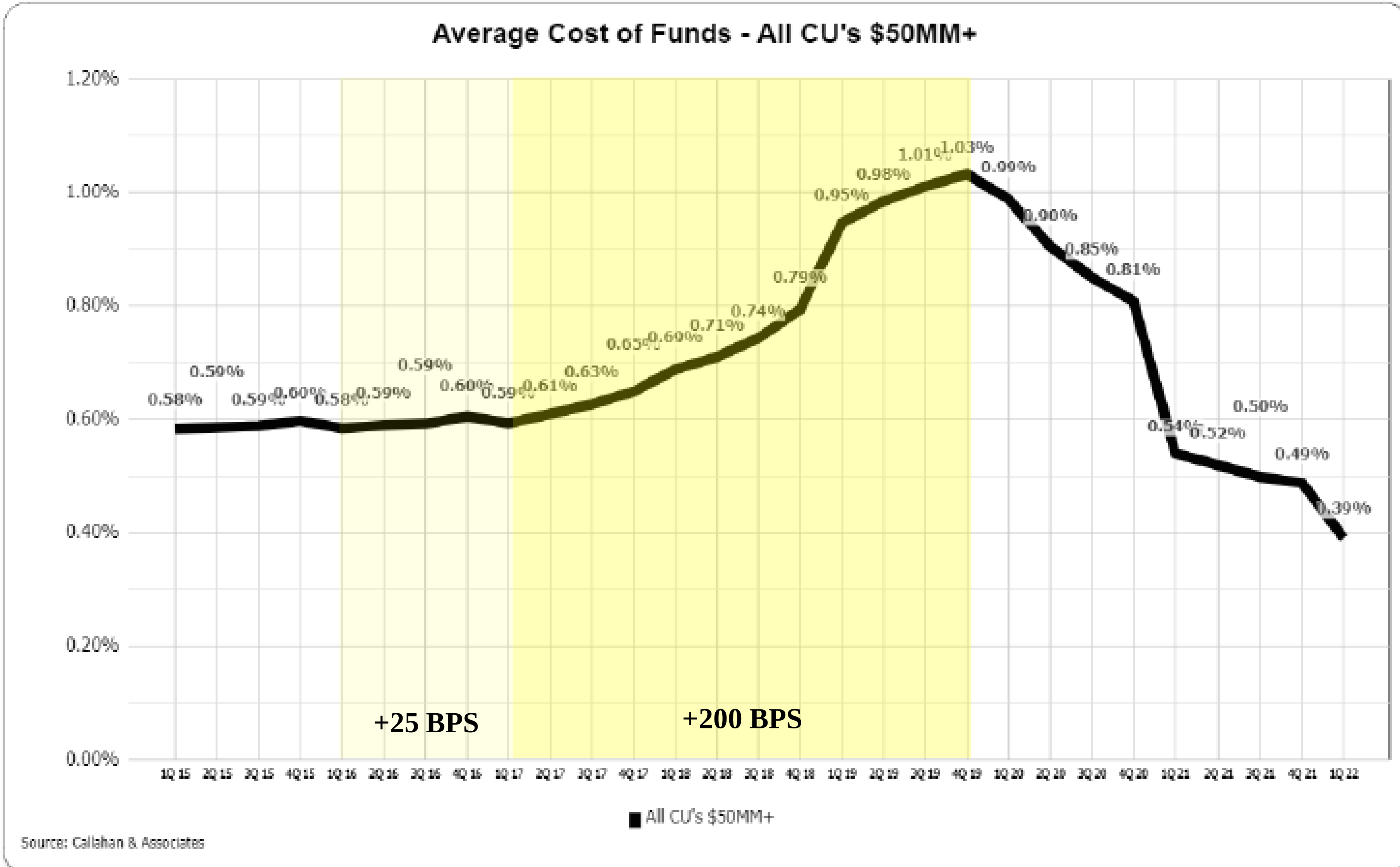
A Tightening Cycle can put pressure on Net-Interest Margin

Overview of the CU Balance Sheet

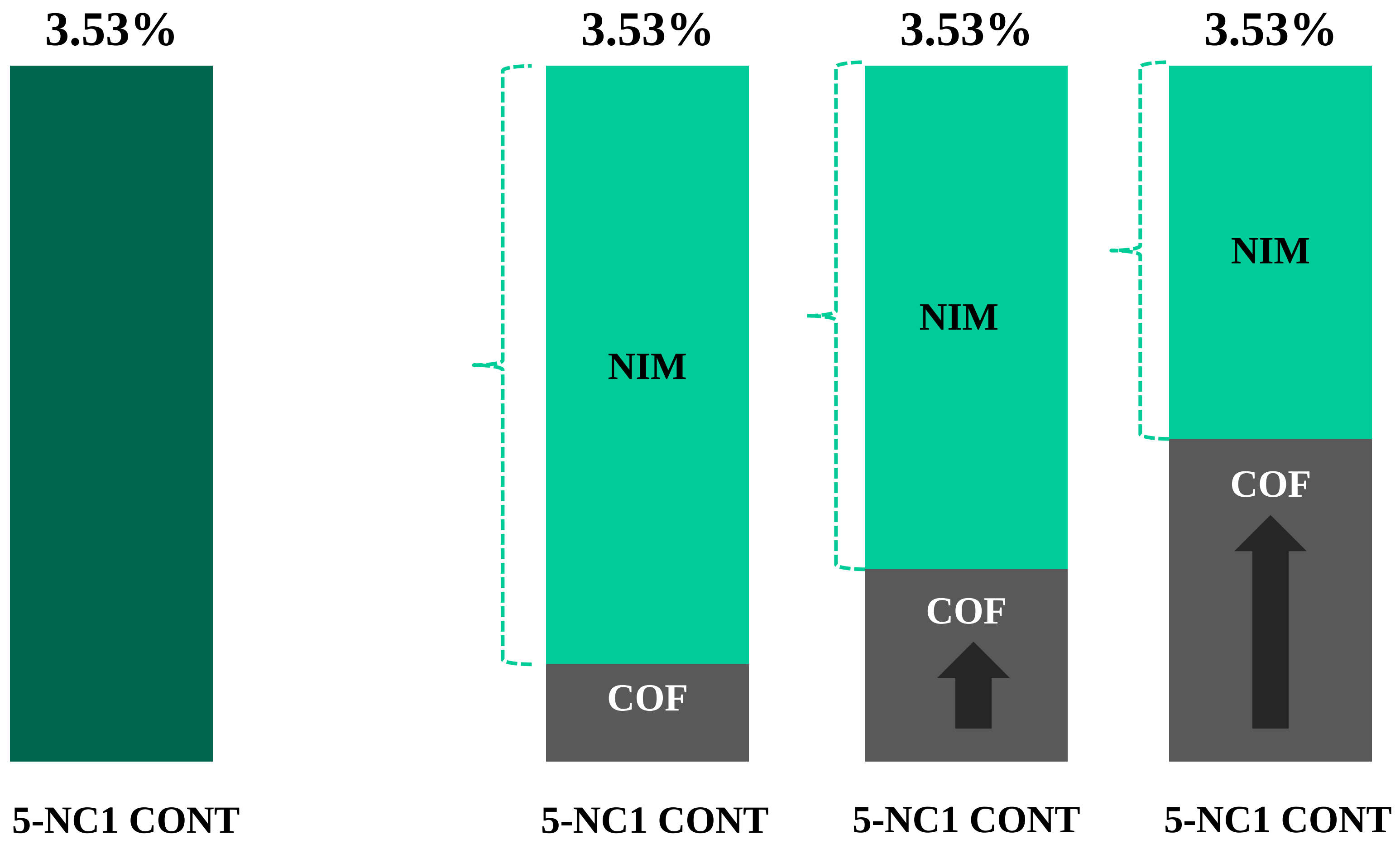
Where is the Balance Sheet Susceptible to Rising Rates

ASSETS (Interest Income)	LIABILITIES (Interest Expenses - COF)
LOANS:	
RE LOANS - FIXED-RATE (15YR-30YR)	**SHARES**
AUTO LOANS FIXED-RATE	**SHARE** DRAFTS
	SHARES MONEY MARKET
RE LOANS FLOATING RATE (HELOC's)	
CC LOANS Tied to PRIME	**SHARES** CERTIFICATES
INVESTMENTS:	
INVESTMENTS FIXED-RATE	**BORROWINGS** FIXED-RATE
INVESTMENTS FLOATING-RATE	**BORROWINGS** FLOATING-RATE



Tightening Cycle ***technically*** started DEC 2015 with a 25BP Hike.. Then re-starts in earnest in DEC 2016 until reaching 2.50% in DEC 2018. COF goes from a low of 58BPS to a high of 103 BPS, a ~***77.5% increase***.

Example of How Margin Compression Works In A Rising Rate Environment



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Rising Interest Rates are causing uncomfortable Unrealized Losses in my AFS Investments

=

Interest-Rate Risk

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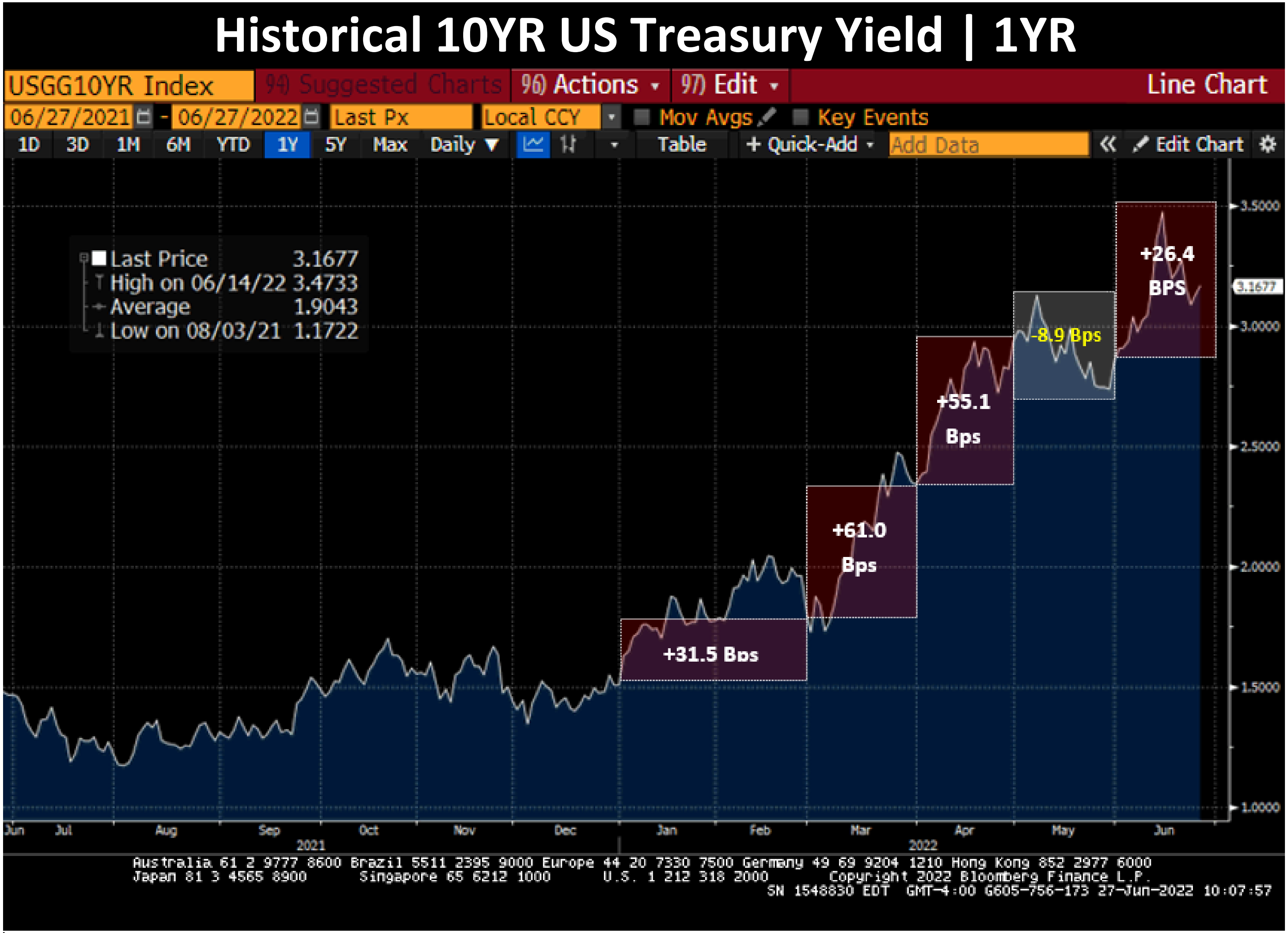
Historical 10YR US Treasury Yield | 1YR



Source: Bloomberg

~+165.9bps increase from Jan-Jun

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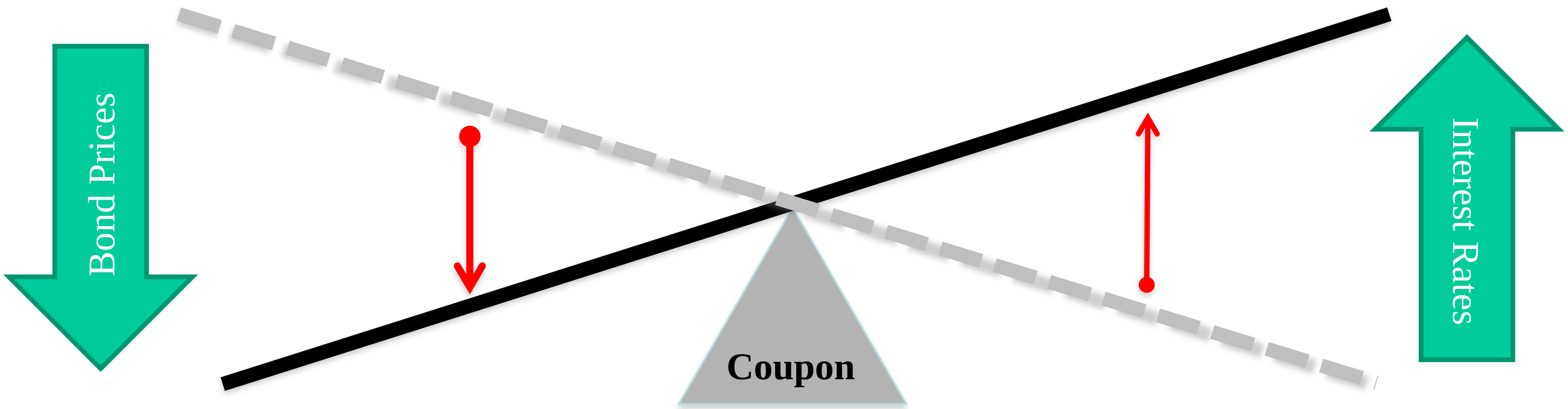
A Basic Understanding of How Devaluation (Market Value Decline) Works with **Fixed** Rate Investments



The Bond Devaluation "Teeter Totter"

Modified Duration is the approximate percent change in a bond's price for a 100 BP change in yield assuming that the bond's cash does not change when yields change.

(Fabozzi, F. J., & Wickard, M. B. (1997). Measuring Interest Rate Risk. In *Credit Union Investment Management* (pp. 186–186). essay, Frank J. Fabozzi Associates.)

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CPN = 3.15%

Px = **$100.00**

YIELDS

+200Bps

CPN = 5.15%

Px = **$91.360**

Source: Bloomberg

Example of the Impact of Coupon on Price

US Treasury Bonds | 15YR+

United States | 1) Actions | 3) Settings | Fixed Income Trading

15:59 Outright Switch Bfly

4) Actives 5) Bills 6) Notes 7) TIPS 8) Strips 9) Sprds 10) Curves 11) FRN 12) Bfly 13) WI

21) T/0-1 22) T/1-2 23) T/2-4 24) T/4-7 25) T/7-10 26) T/10-30

31)	4 ½ 236	118-19 / 118-27+	2.835	+ 27
32)	4 ¾ 237	121-21 / 121-29	2.913	+ 31+
33)	5 537	124-19+ / 124-26	2.943	+ 31+
34)	4 ⅜ 238	117-10+ / 117-17+	2.972	+ 31+
35)	4 ½ 538	118-28+ / 119-06+	2.983	+1-00+
36)	3 ½ 239	105-19 / 105-28+	3.048	+1-00
37)	4 ¼ 539	115-17 / 115-28	3.047	+1-03+
38)	4 ½ 839	118-30+ / 119-10	3.052	+1-04+
39)	4 ⅜ N39	117-02 / 117-12	3.083	+1-05
40)	4 ⅝ 240	120-21+ / 121-01	3.079	+1-07
41)	4 ⅜ 540	117-00 / 117-11	3.110	+1-08
42)	1 ⅛ 540	71-07 / 71-12	3.235	+ 31
43)	3 ⅞ 840	109-18+ / 109-28	3.159	+1-07+
44)	1⅛ 840	70-24 / 70-30	3.247	+ 30+
45)	4 ¼ N40	114-19+ / 114-31+	3.173	+1-09
46)	1⅜ N40	73-28 / 74-01+	3.252	+1-00+
47)	1⅞ 241	80-19+ / 80-24+	3.252	+1-02
48)	4 ¾ 241	122-04 / 122-14+	3.155	+1-11
49)	2¼ 541	85-20 / 85-24	3.262	+1-04
50)	4 ⅜ 541	116-12 / 116-21	3.199	+1-11
51)	1¾ 841	78-07+ / 78-11+	3.273	+1-04+
52)	3 ¾ 841	107-09 / 107-17+	3.221	+1-09
53)	3 ⅛ N41	98-05 / 98-13	3.236	+1-09
66)	3 ⅛ 844	97-08+ / 97-17+	3.281	+1-13
67)	3 N44	95-04+ / 95-13+	3.289	+1-13
68)	2 ½ 245	87-04+ / 87-14	3.288	+1-11+
69)	3 545	95-09+ / 95-18	3.276	+1-15
70)	2 ⅞ 845	93-11+ / 93-20+	3.267	+1-14+
71)	3 N45	95-18 / 95-26	3.256	+1-16
72)	2 ½ 246	87-08+ / 87-15+	3.261	+1-14
73)	2 ½ 546	87-08+ / 87-16	3.254	+1-15
74)	2 ¼ 846	83-01+ / 83-09	3.251	+1-13+
75)	2 ⅞ N46	93-23+ / 93-30+	3.234	+1-17
76)	3 247	95-28+ / 96-02+	3.231	+1-19
77)	3 547	96-00+ / 96-06+	3.222	+1-20
78)	2 ¾ 847	91-31 / 92-04	3.207	+1-18+
79)	2 ¾ N47	92-02 / 92-08	3.197	+1-19+
80)	3 248	96-26+ / 97-00+	3.170	+1-21
81)	3 ⅛ 548	99-10+ / 99-16	3.153	+1-22+
82)	3 848	96-30 / 97-04	3.162	+1-22+
83)	3 ⅜ N48	104-09 / 104-14+	3.127	+1-26
84)	3 249	97-22+ / 97-27+	3.118	+1-23+
85)	2 ⅞ 549	95-15+ / 95-20+	3.115	+1-22
86)	2 ¼ 849	84-05 / 84-10	3.107	+1-19
87)	2 ⅜ N49	86-19 / 86-23+	3.095	+1-20
88)	2 250	79-13 / 79-17	3.105	+1-19

Source: Bloomberg

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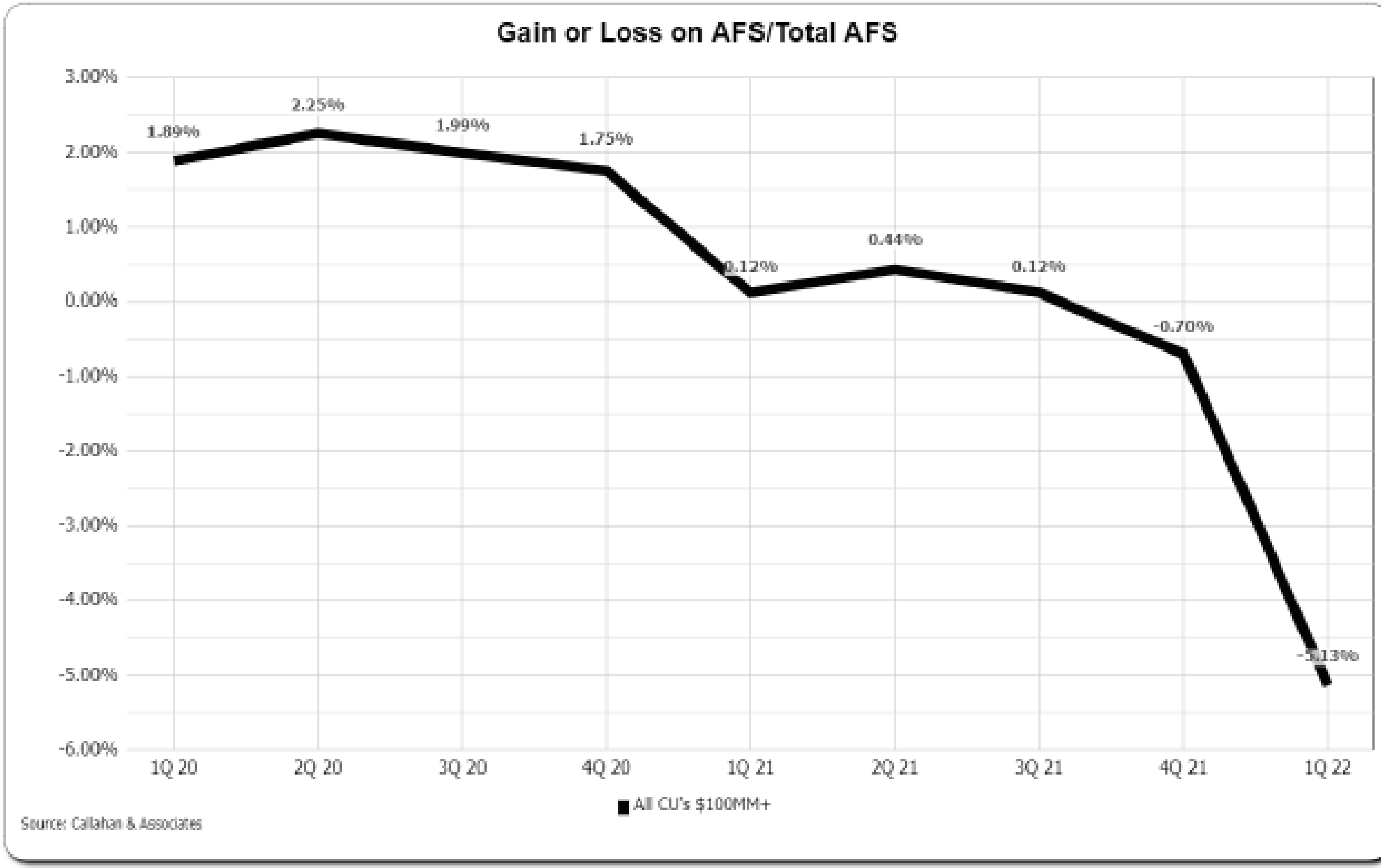

Gain or Loss on AFS/Total AFS
3.00%
2.00%
1.00%
0.00%
-1.00%
-2.00%
-3.00%
-4.00%
-5.00%
-6.00%
1.89%
2.25%
1.99%
1.75%
0.12%
0.44%
0.12%
-0.70%
-5.13%
1Q 20
2Q 20
3Q 20
4Q 20
1Q 21
2Q 21
3Q 21
4Q 21
1Q 22
All CU's $100MM+
Source: Callahan & Associates

Bond Market "Deli-Tray" (JUNE 28TH)

US TREASURY		CPN	MTY		YTM			M.DUR	+300 DVAL
2 YEAR		2.250	4/30/2024		3.086			-1.78	-5.34
5 YEAR		0.500	4/30/2027		3.294			-4.70	-14.10
10 YEAR		**1.875**	**2/15/2032**		3.216			-8.59	-25.78
30 YEAR		**2.250**	**2/15/2052**		3.336			-20.13	-60.39
AGCY BULLETS		**CPN**	**MTY**		**YTM**			**M.DUR**	**+300 DVAL**
1.9 YEAR		2.500	5/31/2024		3.126			-1.86	-5.57
3 YEAR		2.875	6/15/2025		3.217			-2.81	-8.44
4.9 YEAR		2.625	5/31/2027		3.265			-4.56	-13.69
9.9 YEAR		**2.875**	**5/15/2032**		3.213			-8.48	-25.45
INSURED BANK CD's			**MTY**	**CALL**	**YTM**			**M.DUR**	**+300 DVAL**
1 YEAR	BEAL BANK - PLANO TX	2.650	7/5/2023	Bullet	2.650			-1.00	-2.99
2 YEAR	ALLY BANK	3.150	6/28/2024	Bullet	3.150			-1.98	-5.93
3 YEAR	CAPITAL ONE NA	3.350	6/30/2025	Bullet	3.350			-2.93	-8.79
5 YEAR	FIRST CAPITAL BK SC	3.500	6/30/2027	9/30/2022	3.500			-4.85	-14.54
AGCY CALLABLES		**CPN**	**MTY**	**Call Protection**	**YTM**			**M.DUR**	**+300 DVAL**
2.1 YEAR	2-NC1 1X	3.430	7/19/2024	1.1 YRS	3.430			-1.93	-5.80
3.1 YEAR	3-NC1 1X	3.650	7/21/2025	1.1 YRS	3.650			-2.84	-8.53
5.1 YEAR	5-NC3MO BERM	4.500	7/26/2027	0.3 YRS	4.500			-4.44	-13.33
10 YEAR	10-NC1 CONT	4.740	7/6/2032	1 YRS	4.740			-7.89	-23.67
MBS		**CPN**	**WAL | WAL +300**	**WAC**	**BASE**	**-100**	**+300**	**M.DUR**	**+300 DVAL**
15 YEAR	15YR MBS Pool	3.500	5.6 | 6.3	4.18	3.650	3.670	3.640	-4.76	-14.28
15 YEAR	15YR MBS Pool	4.000	5.3 | 6.1	4.75	3.740	3.700	3.770	-4.54	-13.63
20 YEAR	20YR MBS Pool	3.500	7.1 | 8.1	4.05	4.000	4.100	3.950	-5.75	-17.26
20 YEAR	20YR MBS Pool	4.000	6.2 | 8.1	4.75	3.900	3.915	3.950	-5.14	-15.42

Source: Bloomberg

For Illustrative Purpose Only

22-CU-02 / January 2022

NCUA's 2022 Supervisory Priorities

To	Federally Insured Credit Unions
Subject	Examination Program
Status	Active

Interest Rate Risk

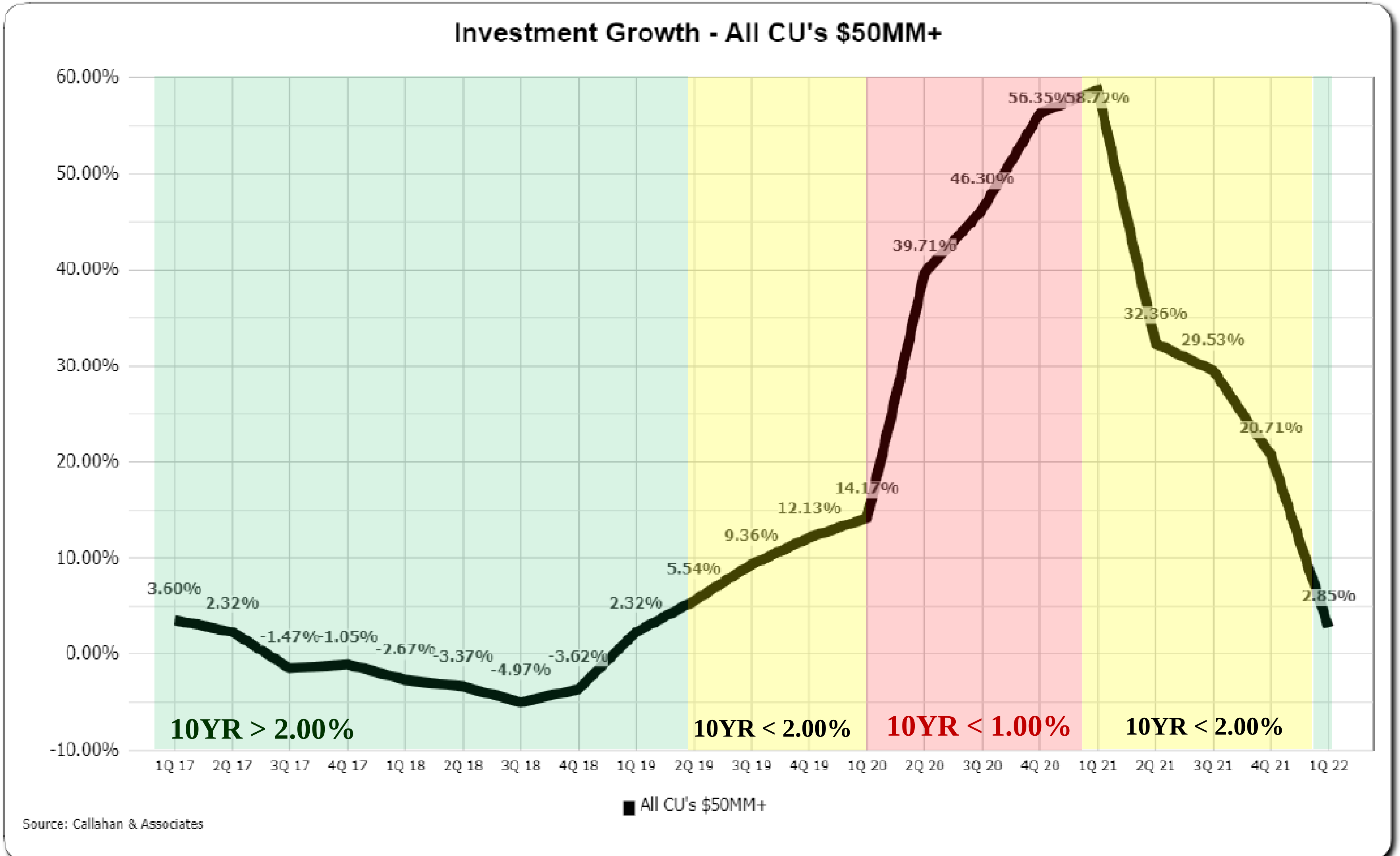
Credit unions have experienced high share growth over the last two years. If credit unions invested surplus funds in longer duration assets, this could result in greater sensitivity to market risk, and therefore increased interest rate risk. Conversely, keeping all assets short-term can impact current period earnings. Credit unions should continue to carefully model and manage interest rate risk using a broad range of scenarios that include various prepayment speed and yield curve assumptions.

CAMELS Update

In October 2021, the NCUA Board finalized a rule that added the "S" component (for Market Sensitivity) to the existing CAMEL rating system and redefined the "L" component, thus updating the CAMEL rating system to CAMELS. Adoption of CAMELS allows the NCUA, state supervisory authorities, and federally insured credit unions to achieve greater transparency in the ratings and clearly distinguish between liquidity risk in the "L" component and sensitivity to market risk captured in the "S" component. The final rule is effective for examinations starting on or after April 1, 2022.

The evaluation of the "S" component reflects the credit union's exposure to changes in its earnings and capital position arising from changes in market prices and interest rates. Effective risk management programs include comprehensive interest rate risk policies, appropriate and identifiable risk limits, clearly defined risk mitigation strategies, and a suitable governance framework.

In evaluating the "L" component to determine the adequacy of a credit union's liquidity profile, examiners will consider the current and prospective sources of liquidity compared to funding needs. The adequacy of liquidity risk management is also evaluated relative to a credit union's size, complexity, and risk profile.



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SECTION III

What can I do now…

Can the investment portfolio actually help?

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Yes… The Investment Portfolio Can Help

ASSETS (Interest Income)	LIABILITIES (Interest Expenses - COF)
LOANS:	
RE LOANS - FIXED-RATE (15YR-30YR)	**SHARES**
AUTO LOANS FIXED-RATE	**SHARE** DRAFTS
	SHARES MONEY MARKET
RE LOANS FLOATING RATE (HELOC's)	
CC LOANS Tied to PRIME	**SHARES** CERTIFICATES
INVESTMENTS:	
INVESTMENTS FIXED-RATE	**BORROWINGS** FIXED-RATE
INVESTMENTS FLOATING-RATE	**BORROWINGS** FLOATING-RATE

Rate-sensitive Assets… *more important than ever during a FED Tightening Cycle*

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Why Differentiate Between Floating Rate & Adjustable-Rate Assets?

Floating Rate Bonds/ Loans:

- **Frequent resetting coupon rate under 1-year (preferably 1-3 months)**
- **Will react positively/ quickly to rising rates and benefit your CU from an income and earnings perspective.**
- **Frequent (1-3 months) reset = ALM (low IRR risk) friendly**

Adjustable Rate Bonds/ Loans

- Infrequent and/ or Irregular Resetting Coupon Rate – Typically 3-7 years, but not more often than 1x per year
- Will **NOT react quickly to Rising Rates**

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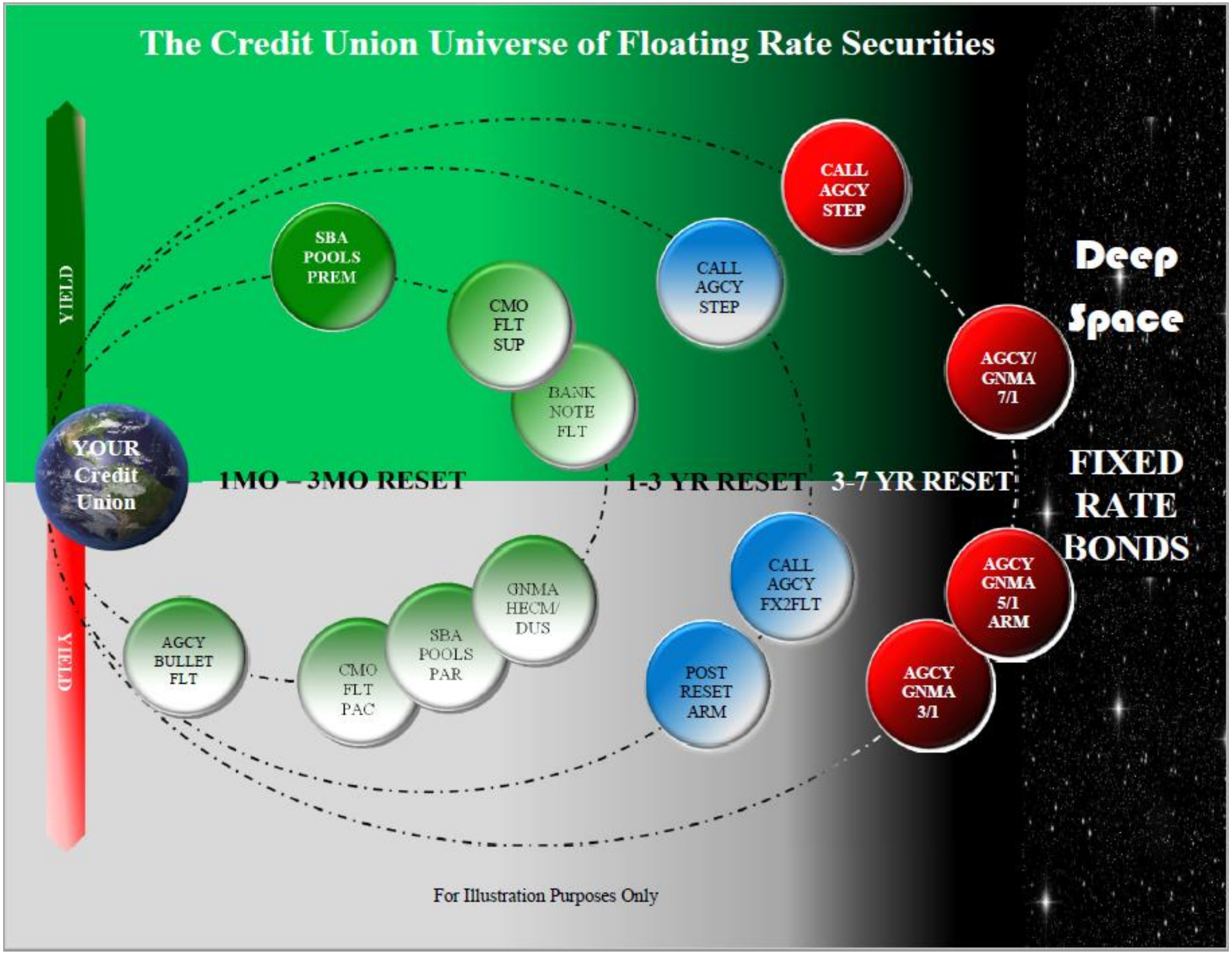
SECTION IV

Practical Application of a Floating Rate Investment Strategy

Floating Rate SBA Pools


The Credit Union Universe of Floating Rate Securities
YIELD
YIELD
YOUR Credit Union
1MO – 3MO RESET
1-3 YR RESET
3-7 YR RESET
SBA POOLS PREM
CMO FLT SUP
BANK NOTE FLT
CALL AGCY STEP
CALL AGCY STEP
AGCY/ GNMA 7/1
Deep Space
FIXED RATE BONDS
AGCY BULLET FLT
CMO FLT PAC
SBA POOLS PAR
GNMA HECM/ DUS
CALL AGCY FX2FLT
POST RESET ARM
AGCY GNMA 5/1 ARM
AGCY GNMA 3/1
For Illustration Purposes Only

Bond Market "Deli-Tray" (JUNE 28TH)

AGCY BULLET FLOATER		CPN			BASE		-100	+300	CAP	FREQ	M.DUR	+300 DVAL
AGCY	FFCB	1.550	BULLET	6/26/2024	1.500		0.430	4.900	N	3M	-0.003	-0.01

SBA FLTR		CPN	WAL 2 | 8 | V	WAC	2CPR	10CPR	-100	+300	CAP	FREQ	OAS DUR	+300 DVAL
10 YEAR	10-YR SBA Floater	4.375	5.4 | 4.4 | 4.3	4.38	3.050	2.430	2.120	5.800	NO	3M	-0.39	-0.93
SBA FLTR		**CPN**	**WAL 0 | 7 | V**	**WAC**	**0CPR**	**8CPR**	**-100**	**+300**	**CAP**	**FREQ**	**OAS DUR**	**+300 DVAL**
25 YEAR	25-YR SBA Floater	3.825	15 | 8.7 | 6.8	3.83	3.700	2.800	2.780	6.510	NO	3M	-0.88	-2.64

CMO FLOATER		CPN	WAL | WAL +300	WAC	BASE		-100	+300	CAP	FREQ	OAS DUR	+300 DVAL
EXCH,FLT,AD,PAC	Agncy CMO FLT	1.376	4 | 5.4	5.18	1.400		0.400	4.400	Y	1M	-0.30	-0.90

HECM FLOATER		CPN	WAL | WAL +300	WAC	BASE		-100	+300	CAP	FREQ	OAS DUR	+300 DVAL
FLT,HZ,W,PT	Agncy CMO FLT	1.271	NA	3.32	1.425		0.420	4.260	Y	18.000	-0.30	-0.90

AGCY CALLABLES-STEP UP		CPN	MTY	To Next STEP	YTC		STEP CPN	YTM	CAP	FREQ	M.DUR	+300 DVAL
5 YEAR	5-NC1.5 1X	2.850	6/29/2027	1.5 YRS	2.850		4.250	3.802	Y	1.6YR	-4.55	-13.65

AGCY ARM - SEASONED		CPN	WAL | WAL +300	WAC	BASE	Nxt Reset	-100	+300	CAP	FREQ	OAS DUR	+300 DVAL
5/2/5	MBS ARM	2.062	NA	2.80	3.500	10M	2.850	4.950	Y	12M	-1.15	-3.45

Source: Bloomberg

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Single Best Risk/ Reward/ Quick Implementation Idea for 2022

Potential Benefits of Floating Rate SBA's in a Rising Rate Environment

Characteristics	Benefits
• Coupon Resets Quarterly	• 4 Opportunities for the Floating Rate coupon to reset upward in 2022 and beyond = increased income • Great ALM performer • Classified in the "0-1YR" maturity bucket for 5300 purposes • Typically < 3% +300 BP DVAL (0.75 -0.90 duration)
• **Tied to Prime**	• The PRIME rate moves in a one to one correlation with Fed Funds
• **100% Full Faith and Credit of the US Government**	• Considered a 0% Risk-Based Asset for RBS calculation (JAN. 2022) • Not subject to credit risk (losses/ ALLL) like member loans
• Frequent Coupon Resets plus the **Coupon is Uncapped**	• Low IRR… No matter how what happens with rates

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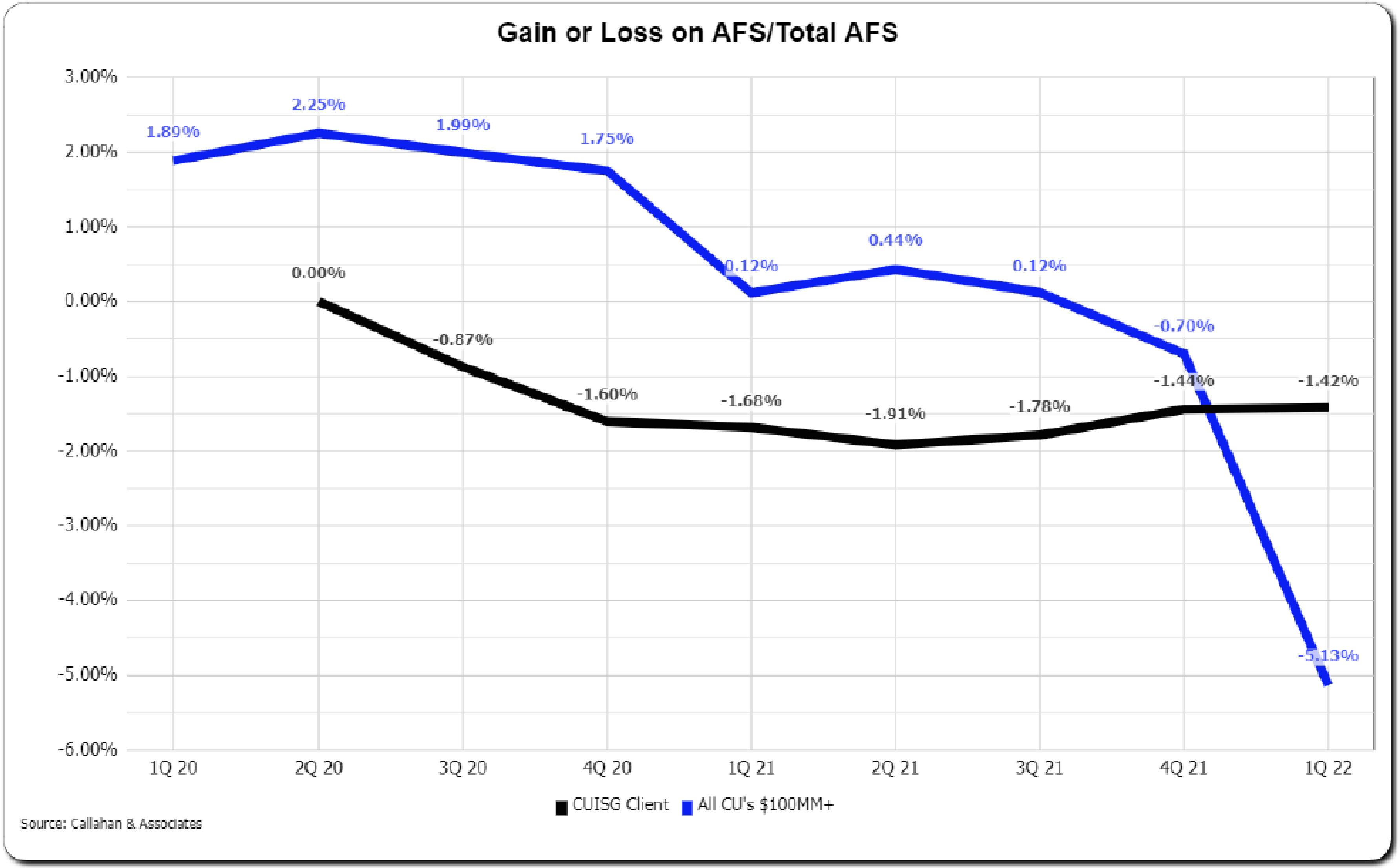
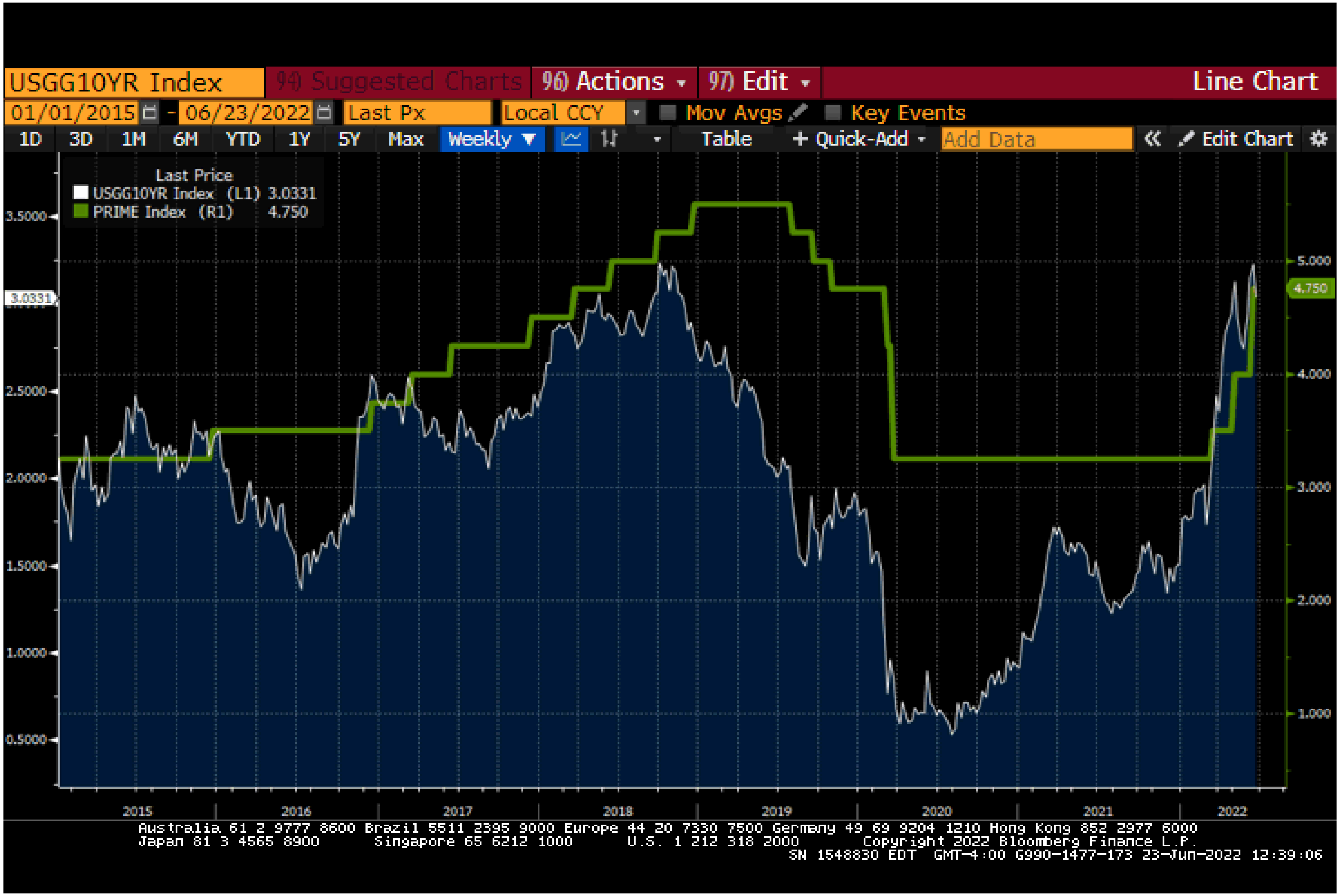

Gain or Loss on AFS/Total AFS
3.00%
2.00%
1.00%
0.00%
-1.00%
-2.00%
-3.00%
-4.00%
-5.00%
-6.00%
1.89%
2.25%
1.99%
1.75%
0.12%
0.44%
0.12%
-0.70%
-5.13%
0.00%
-0.87%
-1.60%
-1.68%
-1.91%
-1.78%
-1.44%
-1.42%
1Q 20
2Q 20
3Q 20
4Q 20
1Q 21
2Q 21
3Q 21
4Q 21
1Q 22
CUISG Client
All CU's $100MM+
Source: Callahan & Associates

PRIME Rate Vs. FED Funds Target Rate

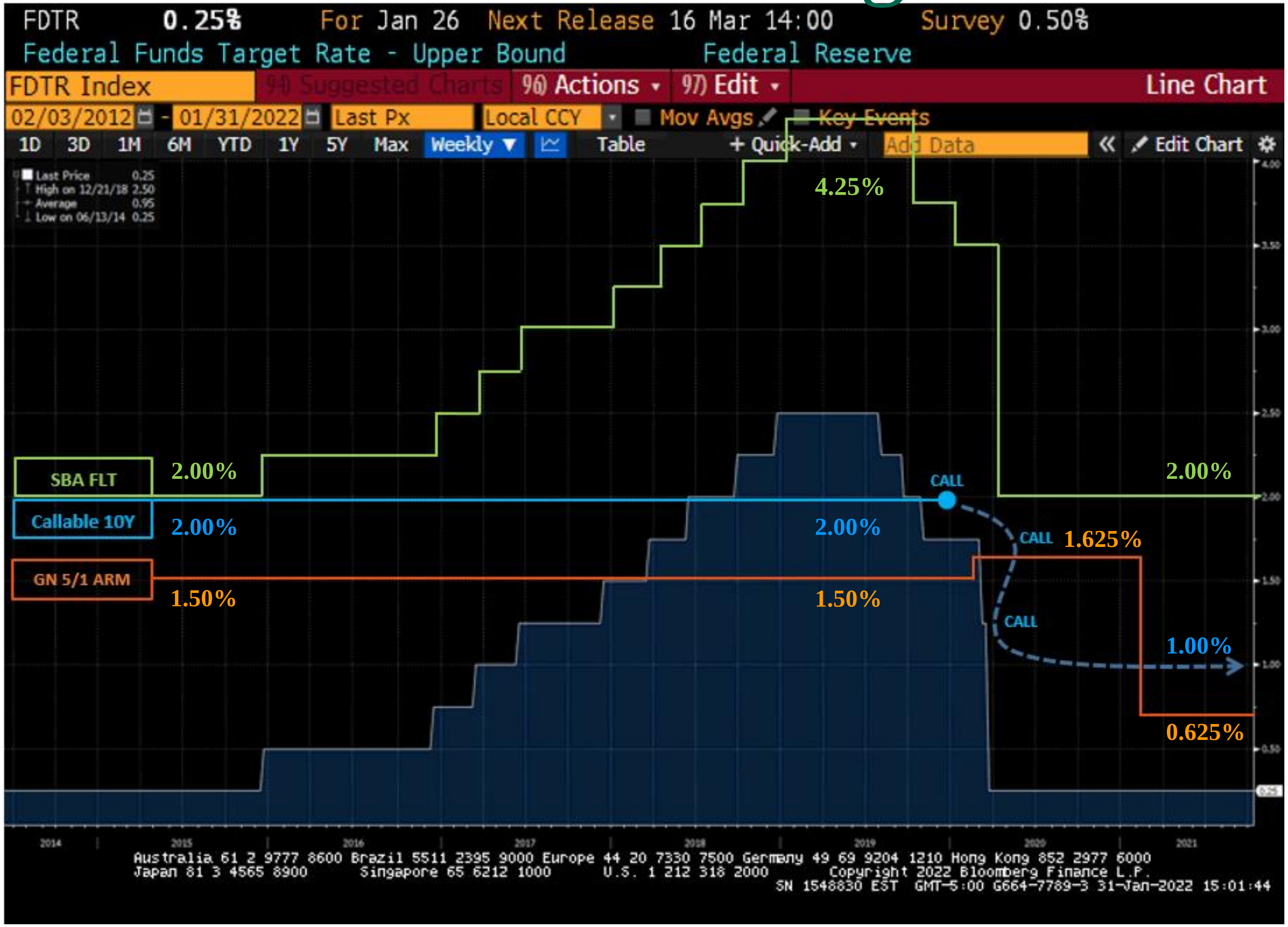
Source: Bloomberg

PRIME Rate Vs. 10YR UST Yield



Source: Bloomberg

Looking into the "Crystal Ball" …10 Years Ago



Source: Bloomberg

Potential Benefits of Floating Rate SBA's in a Rising Rate Environment – *Sample SBA Floating Rate Pool*

SBA 530140 Mtge | Actions | Export | Settings | Yield Table

US POOL 4.100(298)1 CUSIP 8316A0EN6 Pool Level As of 06/2022

6/2022	0P	0.0C	B	Traits	STANDARD, 30/360	Coupon	4.1%	Maturity	5/25/47	
3Mo	--	--	--	05/01/2022	43,008,794	LTV/HLTV	--/--	Accrual	7/1-7/31	
6Mo	--	--	--	07/25/2022	42,925,903	MAXLS	--	Next Pay	9/25/22	
12Mo	--	--	--	Factor	0.99807268	WACLS	--			
Life	0	0.0	--	# Loans	39	PRIME	+0.600%	Cap Flr		Mths to Reset 1

1) PRIME-to-Yield Current PRIME 4.7500(

Settle	07/20/22	CF	CF	CF	CF	CF	CF	CF
Vary	50	0 CPR	5 CPR	7 CPR	10 CPR	100 V11	100 V12	100 V13
C-150		2.417	1.850	1.599	1.197	1.152	0.519	0.319
C-100		2.883	2.308	2.054	1.648	1.605	0.967	0.768
C-50		3.348	2.766	2.508	2.099	2.057	1.414	1.218
PRIME	C	3.813	3.223	2.962	2.548	2.508	1.861	1.667
C+50		4.277	3.679	3.415	2.998	2.959	2.307	2.115
C+100		4.741	4.135	3.868	3.446	3.410	2.753	2.564
C+150		5.205	4.590	4.320	3.894	3.860	3.199	3.012
Avg Life		15.16	10.01	8.64	7.06	6.89	5.34	4.96
Spread Duration		10.41	7.72	6.94	5.97	5.85	4.80	4.49
Prin Win	Date	9/22-5/47	9/22-5/47	9/22-5/47	9/22-5/47	9/22-5/47	9/22-5/47	9/22-5/47
	Price	116-14	116-14	116-14	116-14	116-14	116-14	116-14

Jun22	May	Apr	Mar	Feb	Jan	Dec	Nov	Oct	Sep	Aug	Jul
0P	--	--	--	--	--	--	--	--	--	--	--
0.0C	--	--	--	--	--	--	--	--	--	--	--

GOVT(I)	6M	1Y	2Y	3Y	5Y	7Y	10Y	30Y
11:10	2.47	2.78	3.08	3.17	3.21	3.23	3.18	3.31

Disc 30/360 7Y 97-00+ 10Y 97-14+

CPR VECTOR 11

0 CPR | 12MOS
5 CPR | 12MOS
12 CPR | 12MOS
18 CPR | 12MOS
20 CPR | 24MOS
15 CPR | 12MOS
8 CPR…

CPR VECTOR 12

0 CPR | 12MOS
7 CPR | 12MOS
18 CPR | 12MOS
30 CPR | 36MOS
18 CPR | 12MOS
15 CPR | 12MOS
8 CPR…

CPR VECTOR 13

0 CPR | 12MOS
8 CPR | 12MOS
20 CPR | 24MOS
30 CPR | 48MOS
25 CPR | 12MOS
18 CPR | 12MOS
15 CPR | 12MOS
10 CPR…

Source: Bloomberg

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The Potential Impact of Rising Rates on Coupon Income

25,000,000 **Assumes the current SBA portfolio balance is maintained**

Current PRIME rate = 4.75%

2022		Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
25BP HIKE 3/16	0.25%	0	0	0	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208
25BP HIKE 5/4	0.25%	0	0	0	0	0	0	5,208	5,208	5,208	5,208	5,208	5,208
25BP HIKE 5/4	0.25%	0	0	0	0	0	0	5,208	5,208	5,208	5,208	5,208	5,208
25BP HIKE 6/15	0.25%	0	0	0	0	0	0	5,208	5,208	5,208	5,208	5,208	5,208
25BP HIKE 6/15	0.25%	0	0	0	0	0	0	5,208	5,208	5,208	5,208	5,208	5,208
25BP HIKE 6/15	0.25%	0	0	0	0	0	0	5,208	5,208	5,208	5,208	5,208	5,208
25BP HIKE 1	0.25%	0	0	0	0	0	0	0	0	0	5,208	5,208	5,208
25BP HIKE 2	0.25%	0	0	0	0	0	0	0	0	0	5,208	5,208	5,208
25BP HIKE 3	0.25%	0	0	0	0	0	0	0	0	0	5,208	5,208	5,208
25BP HIKE 4	0.25%	0	0	0	0	0	0	0	0	0	5,208	5,208	5,208
25BP HIKE 5	0.25%	0	0	0	0	0	0	0	0	0	5,208	5,208	5,208
		0	0	0	5,208	5,208	5,208	31,250	31,250	31,250	57,292	57,292	57,292

Total Potential Incremental Coupon Income for 2022 281,250

2023		Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
25BP HIKE 3/16	0.25%	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208
25BP HIKE 5/4	0.25%	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208
25BP HIKE 5/4	0.25%	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208
25BP HIKE 6/15	0.25%	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208
25BP HIKE 6/15	0.25%	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208
25BP HIKE 6/15	0.25%	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208
25BP HIKE 1	0.25%	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208
25BP HIKE 2	0.25%	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208
25BP HIKE 3	0.25%	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208
25BP HIKE 4	0.25%	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208
25BP HIKE 5	0.25%	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208
25BP HIKE 6	0.25%	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208
25BP HIKE 7	0.25%	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208
25BP HIKE 8	0.25%	0	0	0	5,208	5,208	5,208	5,208	5,208	0	0	0	0
		67,708	67,708	67,708	72,917	72,917	72,917	72,917	72,917	67,708	67,708	67,708	67,708

Total Potential Incremental Coupon Income for 2023 838,542

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Actual interest accrual can be impacted by changes in the PAR balance caused by transactions and/or principal paydowns.
The potential timing of those hikes would result in coupon resets on the first day of JUL 22, OCT 22 & JAN 23.

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Potential Benefits of Floating Rate SBA's in a Rising Rate Environment

Compared to other Potential Investment Alternatives

RATE SCENARIO	SBA Floater	Projected Returns: Floating Rate SBA Pools Vs. Fixed-Rate Alternatives										CMO Floater	
		3YR AGCY Bullet		*5YR AGCY Bullet*		*5YR Bank CD*		*5-NC1 AGCY Call*		*15YR AGCY MBS*			
	0 CPR	YTM	Vs. SBA	YTM	Vs. SBA	YTM	Vs. SBA	YTM	Vs. SBA	YTM	Vs. SBA	YTM	Vs. SBA
CURRENT	**3.70%**	3.20%	**0.50%**	3.28%	**0.43%**	3.50%	**0.20%**	4.40%	**-0.70%**	3.80%	**-0.10%**	1.40%	**2.30%**
+50 BPS	**4.18%**	3.20%	**0.98%**	3.28%	**0.91%**	3.50%	**0.68%**	4.40%	**-0.22%**	3.80%	**0.38%**	1.89%	**2.29%**
+100 BPS	**4.65%**	3.20%	**1.45%**	3.28%	**1.38%**	3.50%	**1.15%**	4.40%	**0.25%**	3.80%	**0.85%**	2.38%	**2.27%**
+125 BPS	**4.88%**	3.20%	**1.68%**	3.28%	**1.61%**	3.50%	**1.38%**	4.40%	**0.48%**	3.80%	**1.08%**	2.63%	**2.25%**
+150BPS	**5.11%**	3.20%	**1.91%**	3.28%	**1.84%**	3.50%	**1.61%**	4.40%	**0.71%**	3.80%	**1.31%**	2.88%	**2.23%**
+200BPS	**5.58%**	3.20%	**2.38%**	3.28%	**2.31%**	3.50%	**2.08%**	4.40%	**1.18%**	3.80%	**1.78%**	3.37%	**2.21%**
+400BPS	**7.45%**	3.20%	**4.25%**	3.28%	**4.17%**	3.50%	**3.95%**	4.40%	**3.05%**	3.80%	**3.65%**	5.36%	**2.09%**

SBA YTM based on the Bloomberg IPY CPR scenario

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Potential Benefits of Floating Rate SBA's in a Rising Rate Environment

Compared to other Potential Investment Alternatives

RATE SCENARIO	SBA Floater	Projected Returns: Floating Rate SBA Pools Vs. Fixed-Rate Alternatives										CMO Floater	
		3YR AGCY Bullet		5YR AGCY Bullet		5YR Bank CD		5-NC1 AGCY Call		15YR AGCY MBS			
	0 CPR	YTM	Vs. SBA	YTM	Vs. SBA	YTM	Vs. SBA	YTM	Vs. SBA	YTM	Vs. SBA	YTM	Vs. SBA
CURRENT	3.18%	3.20%	-0.02%	3.28%	-0.09%	3.50%	-0.32%	4.40%	-1.22%	3.80%	-0.62%	1.40%	1.78%
+50 BPS	3.64%	3.20%	0.44%	3.28%	0.37%	3.50%	0.14%	4.40%	-0.76%	3.80%	-0.16%	1.89%	1.75%
+100 BPS	4.10%	3.20%	0.90%	3.28%	0.83%	3.50%	0.60%	4.40%	-0.30%	3.80%	0.30%	2.38%	1.72%
+125 BPS	4.33%	3.20%	1.13%	3.28%	1.06%	3.50%	0.83%	4.40%	-0.07%	3.80%	0.53%	2.63%	1.70%
+150BPS	4.56%	3.20%	1.36%	3.28%	1.29%	3.50%	1.06%	4.40%	0.16%	3.80%	0.76%	2.88%	1.68%
+200BPS	5.02%	3.20%	1.82%	3.28%	1.75%	3.50%	1.52%	4.40%	0.62%	3.80%	1.22%	3.37%	1.65%
+400BPS	6.85%	3.20%	3.65%	3.28%	3.58%	3.50%	3.35%	4.40%	2.45%	3.80%	3.05%	5.36%	1.49%

SBA YTM based on the Bloomberg IPY CPR scenario

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Kevin Lynch, Managing Director

(517) 333 -7790 | Kevin.Lynch@opco.com

The Credit Union Investment Strategy Group of Oppenheimer & Co. Inc.

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Q&A

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