



Northern California Power Agency

February 2022

Finance Committee Materials

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LLC

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Report on Current Financial Market Conditions or Issues

Data, rates, and related statistics and charts are as of February 1, 2022, unless otherwise indicated



Market Overview – November 16th to Year End

Date	DJIA	10-Yr MMD	10-Yr Tsy	30-Yr MMD	30-Yr Tsy
16-Nov	36,142	1.11%	1.63%	1.56%	2.02%
31-Dec	36,338	1.03%	1.52%	1.49%	1.90%
Δ	196	-0.08%	-0.11%	-0.07%	-0.12%

- From mid-November to the end of the year, Treasuries and MMD saw minimal change, decreasing moderately over the course of the last one and a half months of the year.
- The Federal Reserve announced at its December meeting it would end its pandemic-era bond purchases in March, in response to persistent inflation and steady recovery in the labor market.
 - The Fed doubled its pace of taper to \$30 billion a month, putting it on track to conclude tapering in March 2022 and paving the way for three interest rate hikes by the end of 2022.
 - The central bank noted that risks to the economic outlook remain due to the uncertainty around the Omicron coronavirus variant and its impact on the economy, while reiterating that interest rates will be held at record-low levels until maximum employment is achieved .
 - Officials revised the 2022 inflation forecast to 2.6% from 2.2% projected in September, and the unemployment rate is predicted to fall to 3.5%.



Market Overview – Start of 2022

Date	DJIA	10-Yr MMD	10-Yr Tsy	30-Yr MMD	30-Yr Tsy
31-Dec	36,338	1.03%	1.52%	1.49%	1.90%
1-Feb	35,405	1.50%	1.81%	1.91%	2.12%
Δ	-933	0.47%	0.29%	0.42%	0.22%

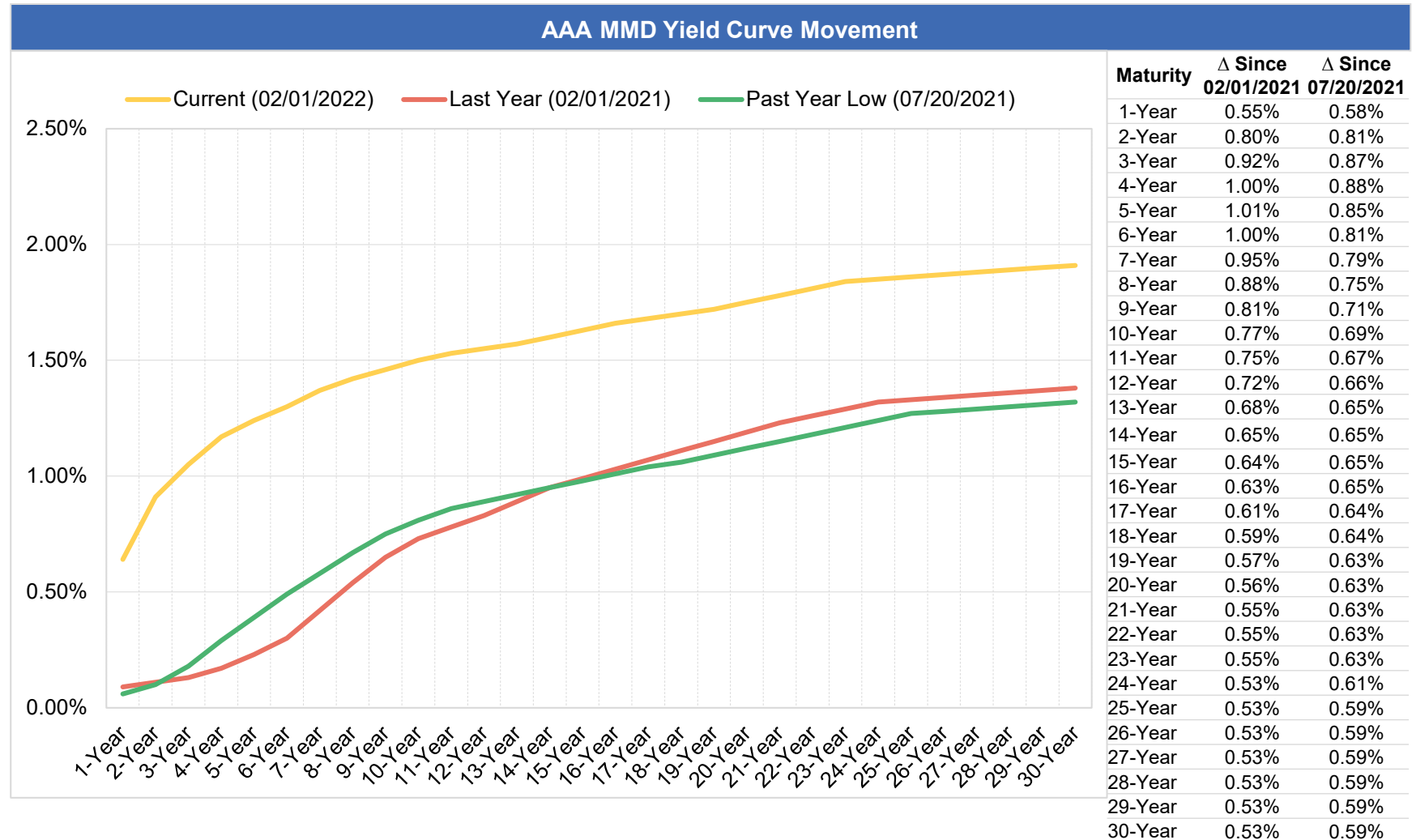
- In the first week of 2022, Treasuries rose noticeably, and the curve steepened; AAA MMD saw more moderate increases, shadowing Treasury rate movement.
- AAA MMD made more dramatic increases in the following weeks, catching up to Treasury increases and responding to the Federal Reserve's affirmation that they will raise rates "soon" at the January 26th meeting
- The market currently anticipates a rate hike in Q1 and significant rate hikes each quarter through the end of 2023.
- Some market analysts predict that 2022 long-term municipal issuance will outpace 2021 volume
 - Delayed projects will only become more expensive with growing inflation.
 - Federal aid for COVID impacts will provide issuers additional flexibility to move forward with capital projects.
 - Preliminary estimates have ranged from \$400 billion (Vanguard)⁽¹⁾ to \$520 billion (Citigroup)⁽²⁾.

(1) Source: <https://www.marketwatch.com/story/record-breaking-or-austere-what-to-expect-from-the-municipal-bond-market-in-2022-11639584391>

(2) Source: <https://www.bloomberg.com/news/articles/2022-01-03/muni-market-opens-2022-with-calls-for-third-year-of-record-sales>



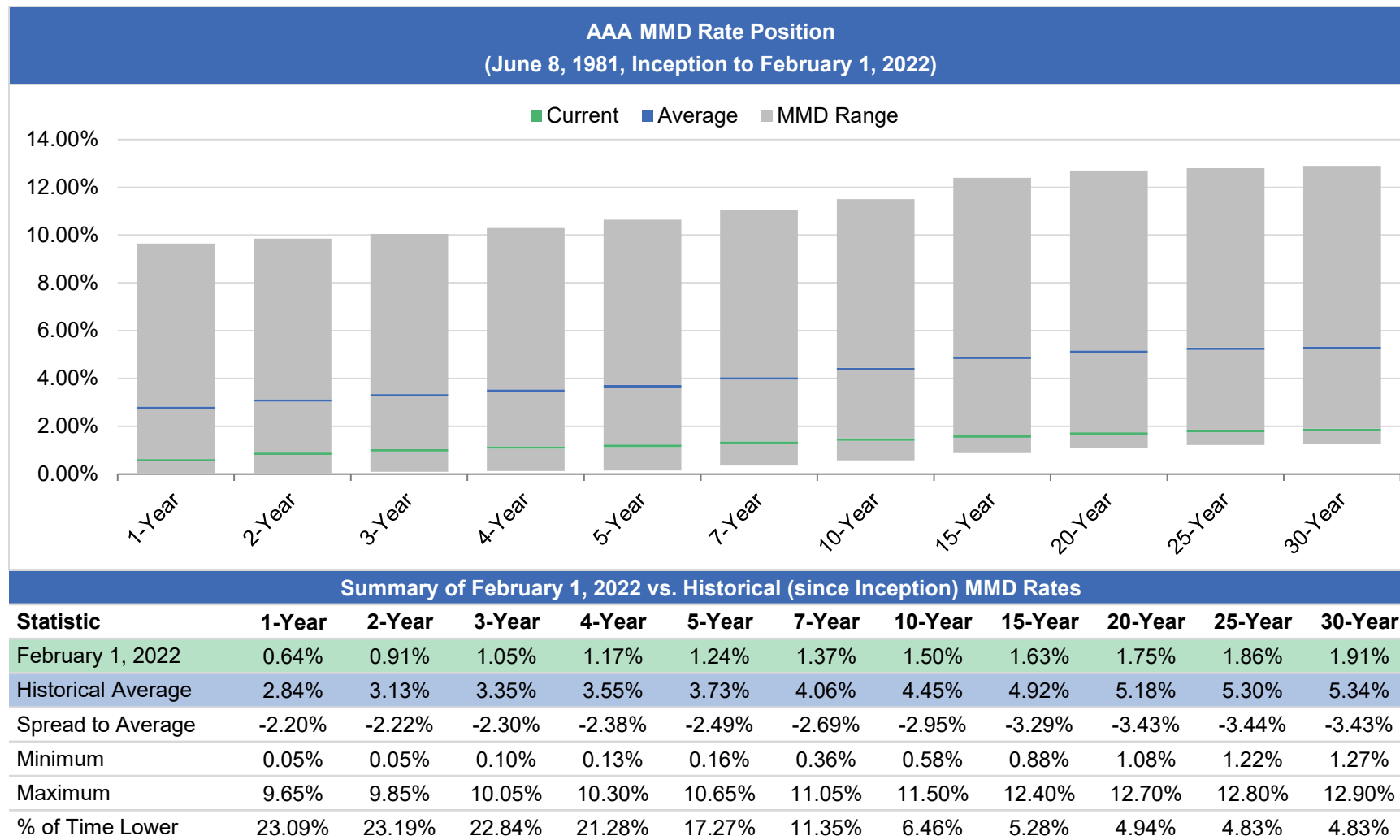
Recent AAA MMD Yield Curve Movement



Source: Refinitiv TM3



AAA MMD Position Since Inception

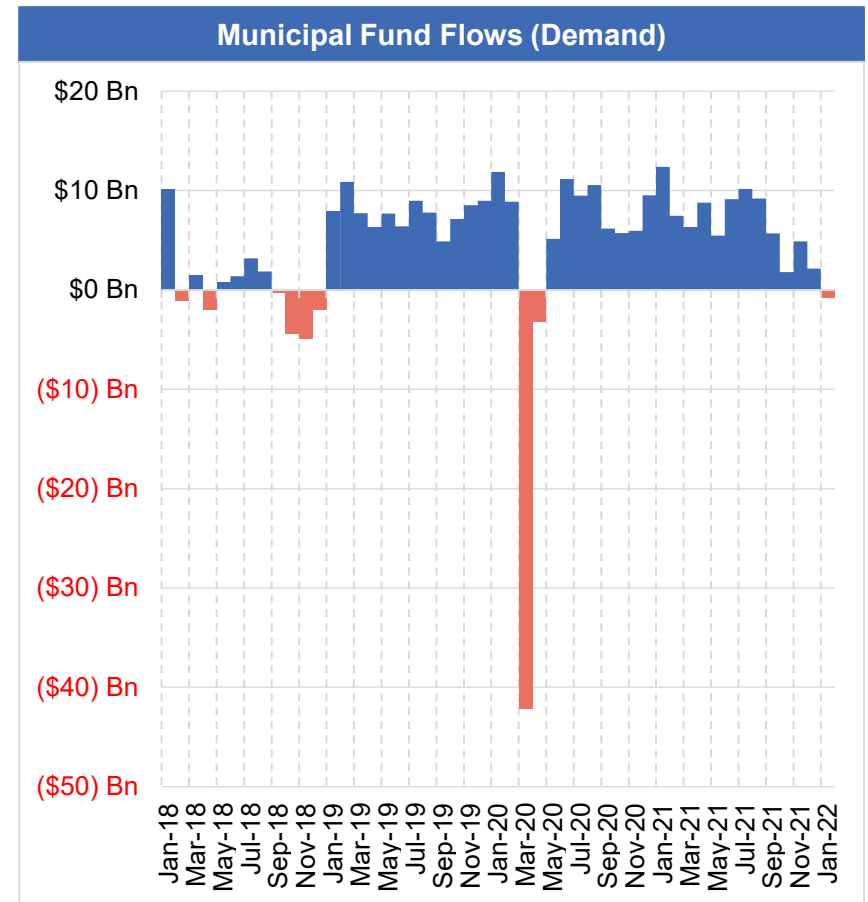
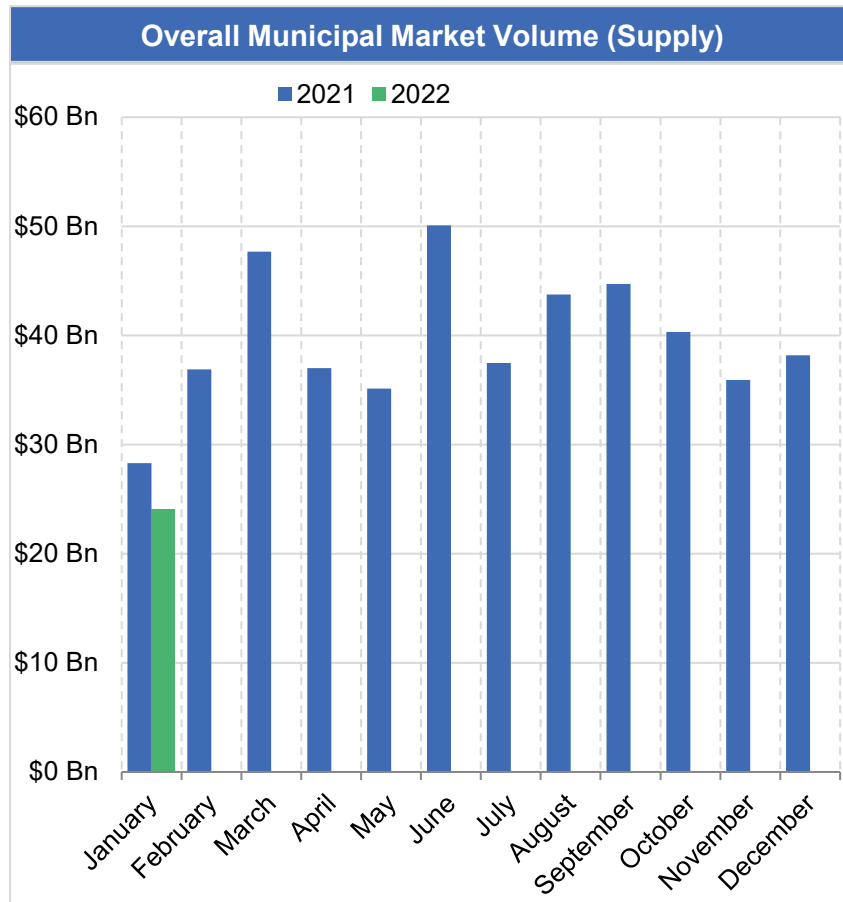


Source: Refinitiv TM3



Municipal Market Supply & Demand

- For the week ending January 19th, municipal bond funds saw the first outflows since March 2021. Outflows continued into the following week, totaling \$1.43 billion the week ending January 26th. New issuance volume was down 15% year-over-year in January.



Source: Bond Buyer, Investment Company Institute



Interest Rate Forecasts

- According to effective Fed funds futures, the market expects a rate hike in Q1 and subsequent rate hikes each following quarter

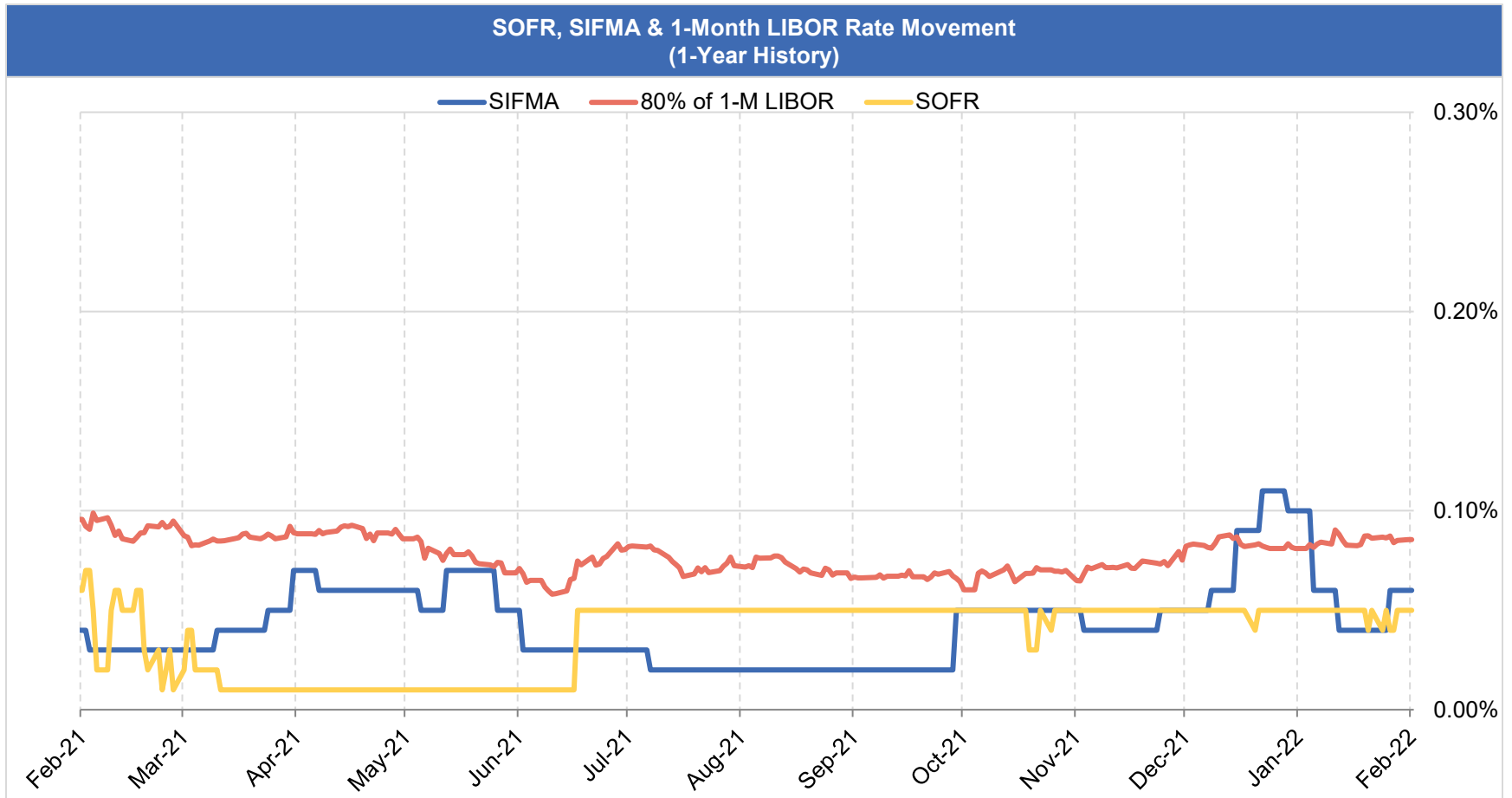
The Street's Interest Rate Forecast (As of February 1, 2022)								
Average Forecasts	Current	Q1 22	Q1 Δ vs. Current	Q2 22	Q3 22	Q4 22	Q1 23	Q2 23
30-Year UST	2.12%	2.21%	0.09%	2.35%	2.44%	2.53%	2.59%	2.66%
10-Year UST	1.79%	1.84%	0.05%	1.97%	2.06%	2.15%	2.21%	2.30%
2-Year UST	1.17%	0.98%	-0.19%	1.13%	1.29%	1.43%	1.56%	1.68%
3M LIBOR	0.31%	0.39%	0.08%	0.62%	0.80%	1.01%	1.17%	1.38%
Fed Funds Target Rate (Lower)	0.00%	0.20%	0.20%	0.45%	0.69%	0.89%	1.09%	1.28%
<i>Fed Funds Δ Since November Meeting</i>	<i>0.00%</i>	<i>0.20%</i>	<i>0.20%</i>	<i>0.44%</i>	<i>0.67%</i>	<i>0.85%</i>	<i>0.94%</i>	<i>0.98%</i>

Source: Bloomberg



SOFR, SIFMA & 1-Month LIBOR Rate Movement

- In January SIFMA returned to sub-0.10% levels, hovering close to SOFR. Both SOFR and 1-M LIBOR remained relatively stable throughout the month, continuing at December levels.

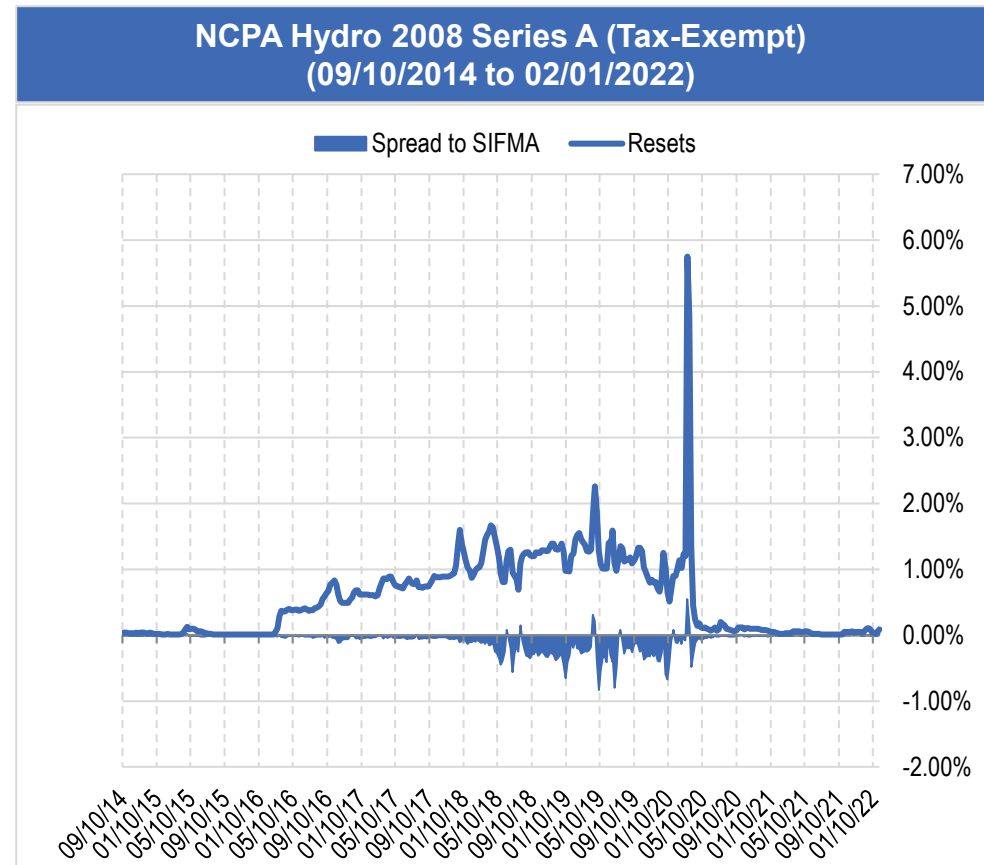


Source: Refinitiv TM3



NCPA's Hydroelectric Project 2008 Series A Bonds

- Since the November meeting, 2008A Bond resets have ranged from 0.03% to 0.11%
- Variable rate resets have been in line with SIFMA; over the past three months resets have been within a basis point of SIFMA
- The 2008A bonds are hedged with an interest rate swap and backed by a direct-pay letter of credit agreement with Bank of America, N.A.



Key Takeaway: *The 2008A Bonds continue to reset in line with SIFMA*

Source: Thomson Reuters, EMMA



Hydroelectric Bonds, 2022 Refunding Series A and B



Proposed Schedule

October							November							December							January							February							March						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S							
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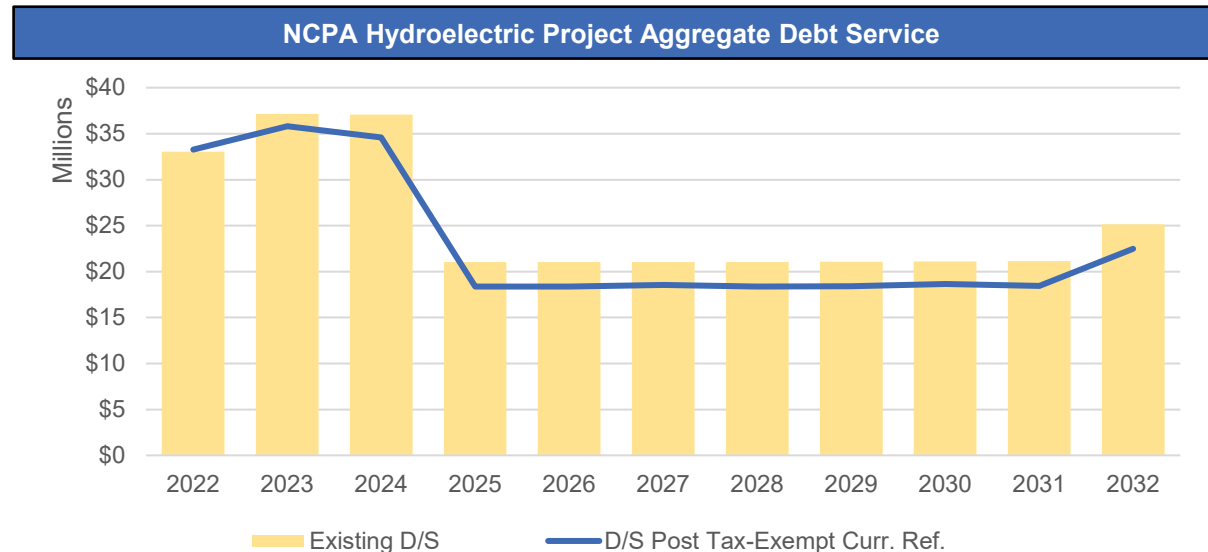
Timing	Activity
Mid October, 2021	• Send out underwriter RFP
Mid November, 2021	• Select Underwriter(s)
Early December, 2021	• Kick-off call
February 8 th , 2022	• Finance Committee recommendation of Commission Approval
February 24 th , 2022	• NCPA Commission Approval
Week of February 28 th , 2022	• Post POS
Week of March 7 th , 2022	• Pricing
April 5 th , 2022	• Closing
July 1 st , 2022	• Redemption of the 2012A Bonds



2022 Financing Overview

- \$76,665,000 of NCPA's Series 2012A is outstanding, all of which is callable on 7/1/2022
- \$79,220,000 of NCPA's Series 2008A VRDOs is outstanding, all of which is callable on any date
- The 2008A VRDOs are hedged with an interest rate swap
- NCPA is looking to current refund the 2012A bonds for NPV savings
- NCPA is also considering refunding the 2008A VRDOs, and issuing taxable bonds to terminate the associated swap, to de-risk the Hydroelectric portfolio

	Aggregate Refunding	2012A Tax-Exempt Current Refunding
Delivery Date	4/5/2022	4/5/2022
First Interest Payment Date	7/1/2022	7/1/2022
Par	132,325,000	62,685,000
Total Escrow Deposit	157,801,625	78,581,625
NPV Savings (\$)	12,826,915	13,516,263
NPV Savings (%)	8.23%	17.63%
Average Annual D/S Savings	1,485,333	1,486,366
Negative Arbitrage	208,702	208,702
TIC	1.68%	1.58%



COI of \$500,000 and UD of \$2.15/bond. ~12.2M contributed as additional source from prior bond funds. NPV Savings discounted to delivery at arbitrage yield. Rates as of 02/01/2022.



2008A Refunding and Swap Termination – Preliminary Results

- The economics of the 2008A refunding and swap de-risking have seen dramatic swings over the last few weeks given market volatility

2008A Refunding & Swap Termination	Rates as of 12/29/2021	Rates as of 1/14/2022	Rates as of 2/1/2022
Delivery Date	4/5/2022	4/5/2022	4/5/2022
First Interest Payment Date	7/1/2022	7/1/2022	7/1/2022
Par	67,105,000	67,480,000	69,640,000
Total Escrow Deposit	79,220,000	79,220,000	79,220,000
NPV Savings (\$)	2,858,345	2,329,147	-689,348
NPV Savings (%)	3.61%	2.94%	-0.87%
Average Annual D/S Savings	339,975	290,044	-1,032
Arbitrage Yield	1.02%	1.11%	1.64%
TIC	1.16%	1.24%	1.74%



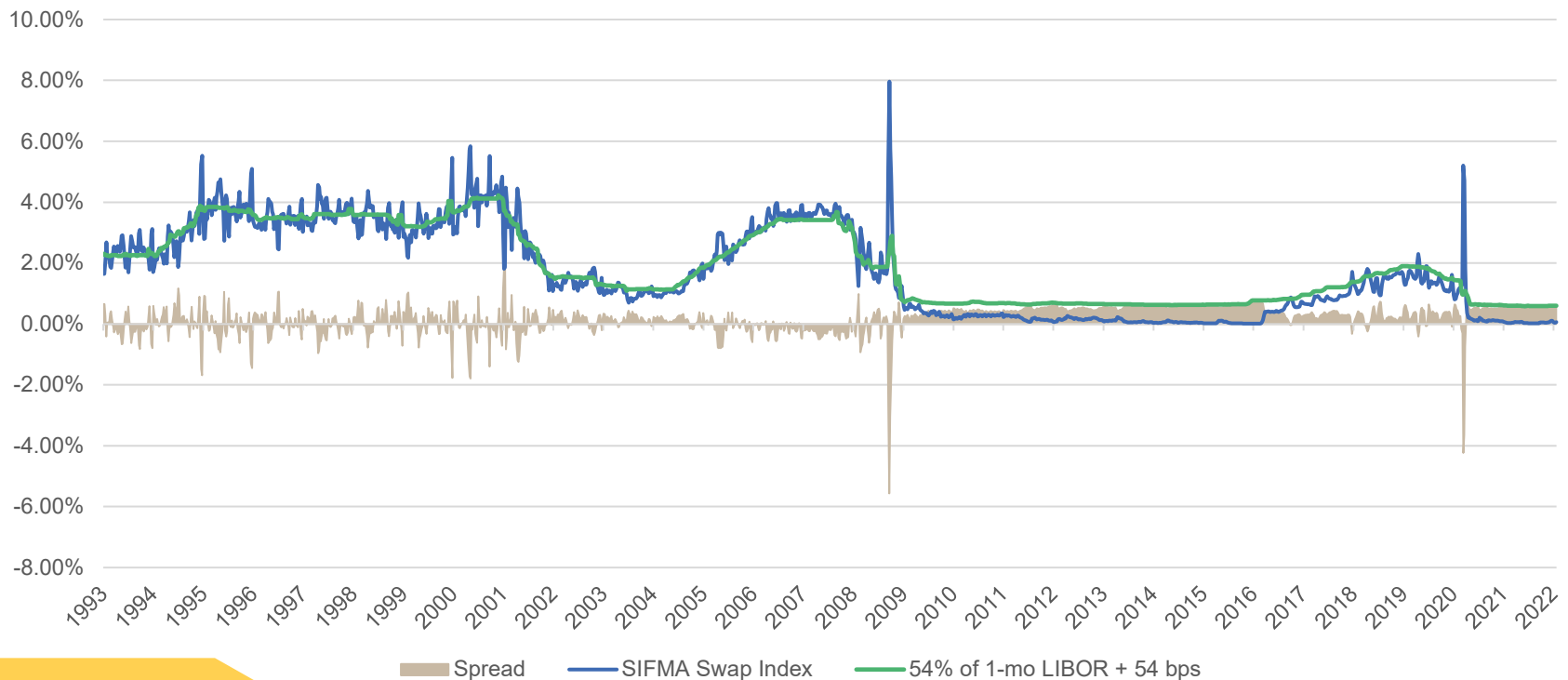
2008A Swap – SIFMA Resets vs. 54% of 1-mo LIBOR + 54 bps

- Swap was designed to approximate SIFMA, however it was expected to outperform in a low or compressed rate environment which it has
- As rates rise, that outperformance will diminish as NCPA has experienced for periods of time

Average Spread between SIFMA and Swap Rate

1993 to Today	0.18%
1993 to 2008	-0.01%
2008 to Today	0.38%

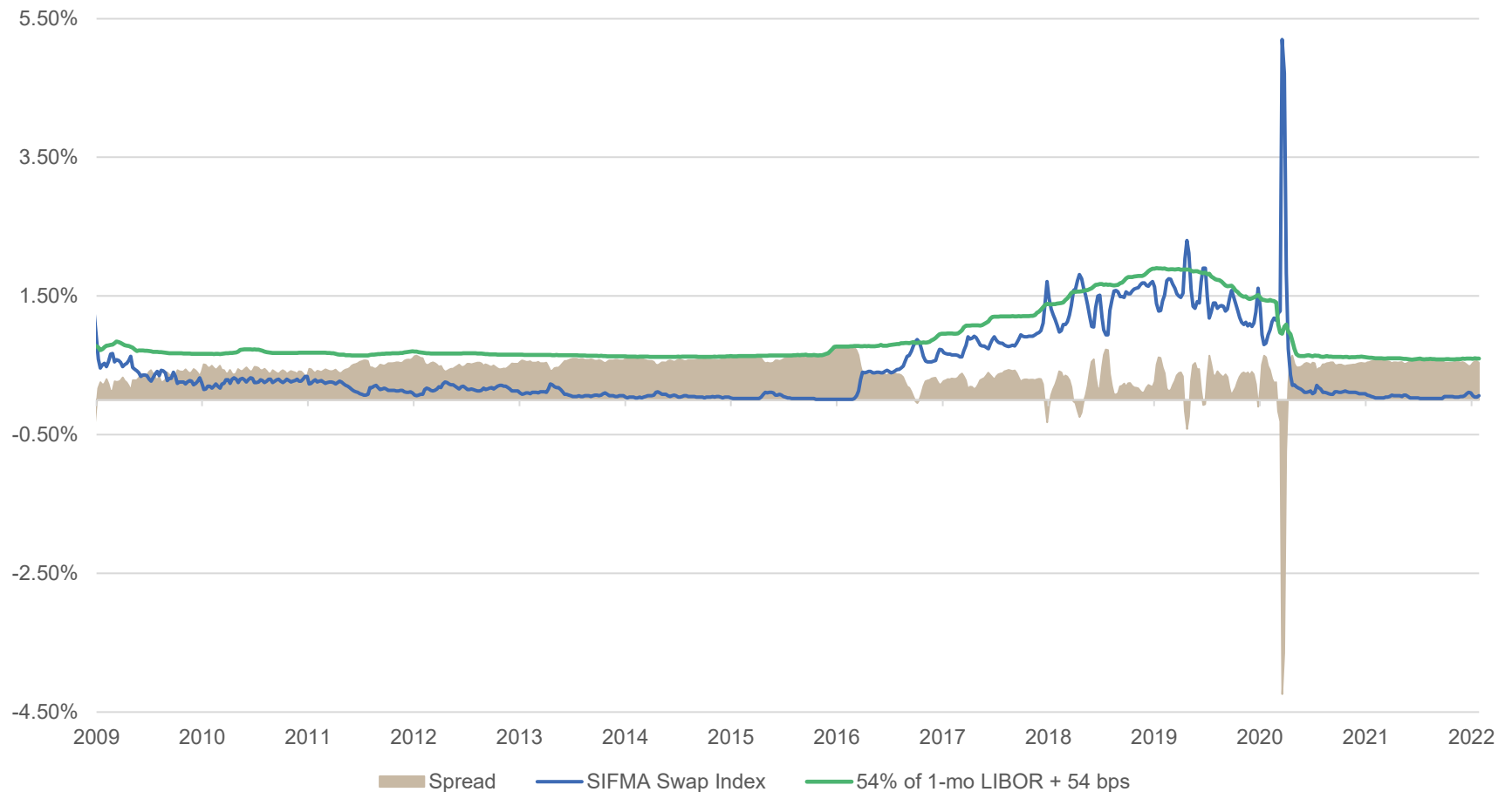
2008A Swap Floating Rate vs. SIFMA (Weekly Data, 1/6/1993 - 2/1/2022)





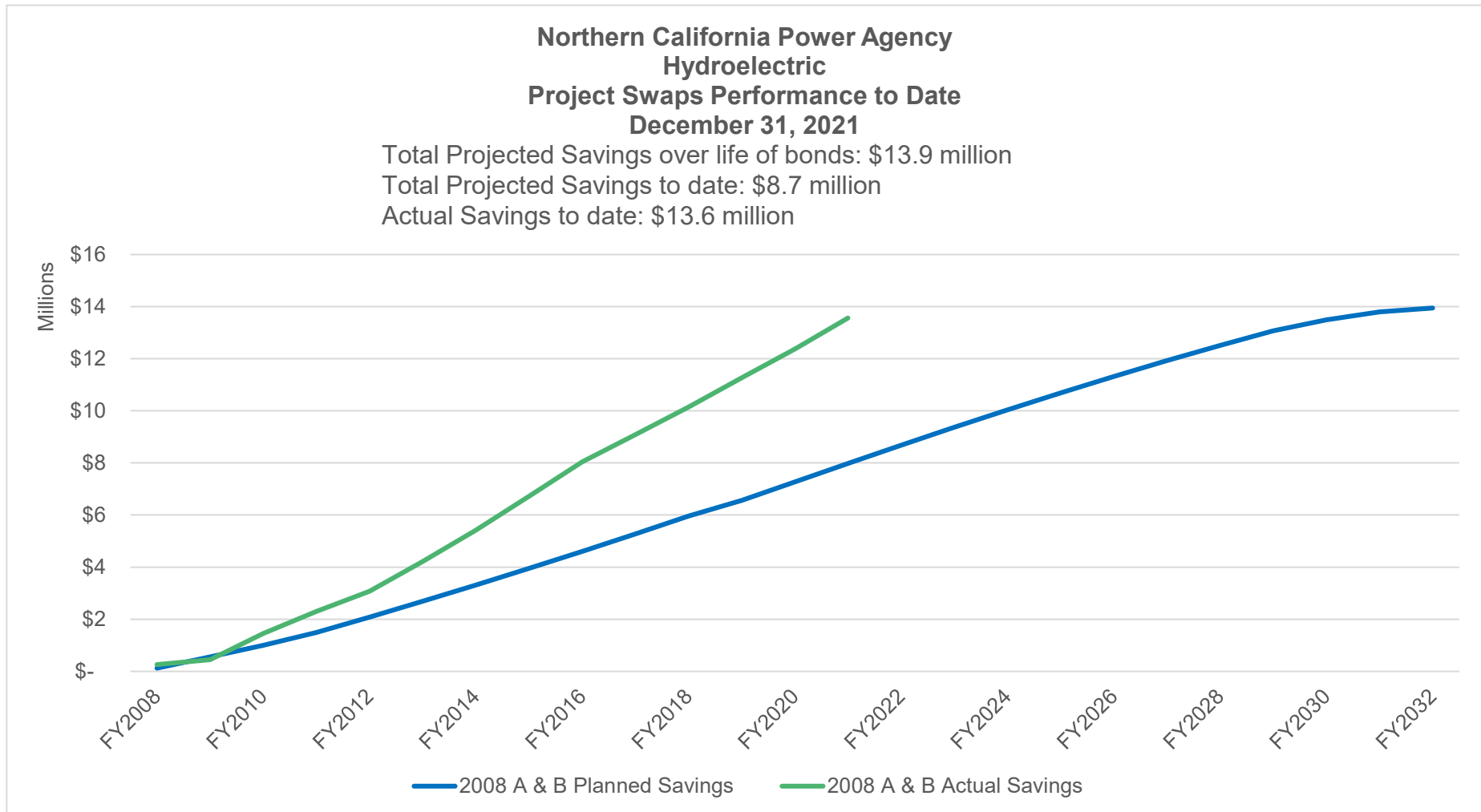
2008A Swap – SIFMA Resets vs. 54% of 1-mo LIBOR + 54 bps

2008A Swap Floating Rate vs. SIFMA (Weekly Data, 1/1/2009 - 2/1/2022)





2008A Swap – Performance History





2008A Refunding and Swap Termination – Assumptions

The savings/dis-savings from the de-risking are more heavily reliant on underlying assumptions than a normal refunding. Some key items to consider:

◆ Assumed POSITIVE Basis: 35 bps

- Based on the average basis between VRDO resets and floating swap receipts for the life of the bonds

◆ LOC Fee: 35 bps

- Paid quarterly
- Reflects current LOC Fee, which is on the low end

◆ Remarketing Fee: 5 bps

- Paid quarterly

◆ LOC Renewal Cost: \$150,000 on 6/1/2024, 7/1/2027 and 7/1/2030

◆ PFM Monitoring Fee: \$12,500 annually



2008A Refunding and Swap Termination – BASIS Scenarios

- The assumption around how much POSITIVE basis the swap will continue to enjoy has a +/--\$2MM impact on reported results

2008A Refunding & Swap Termination	35 bps Basis (Average for 2008As)	20 bps Basis (Historic Average)	0 bps Basis (Expected Basis)
Delivery Date	4/5/2022	4/5/2022	4/5/2022
First Interest Payment Date	7/1/2022	7/1/2022	7/1/2022
Par	69,640,000	69,650,000	69,660,000
Total Escrow Deposit	79,220,000	79,220,000	79,220,000
NPV Savings (\$)	-689,348	119,416	1,197,573
NPV Savings (%)	-0.87%	0.15%	1.51%
Average Annual D/S Savings	-1,032	85,028	200,122
Arbitrage Yield	1.64%	1.64%	1.64%
TIC	1.74%	1.74%	1.74%



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