# **Balance Sheet Strategies**

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For Institutional Use Only

After the session, the attendee will have a better understanding of:

- 1. Industry trends and its implications for balance sheet strategy
- 2. Relative value within the fixed income universe and what it means for continued cash deployment/portfolio construction
- 3. Upcoming FASB rule changes that have implications for today's operating and economic environment



Industry Trends: Cash, Cash, and more Cash

# Balance Sheet & Earnings Trends: Pandemic Onset (2020Q1) to Current (2021Q3)

Since the start of the pandemic in 2020Q1, Banks of all sizes have seen similar trends across the balance sheet:



Net Interest Margin



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Securities/Assets



(1) Includes all Commercial and Savings Banks with Total Assets between \$100M and \$100Bn per S&P Global as of 2021Q3 when available

# **Public Bank IRR Positioning**

As liquidity increased to historically high levels, an already asset sensitive industry became more so over the last 6 quarters:

Immediate	<u>NII 202</u>	0Q1	<u>NII 202</u>	20Q2	<u>NII 202</u>	2 <b>0Q3</b>	<u>NII 202</u>	<u>20Q4</u>	<u>NII 202</u>	<u>21Q1</u>	<u>NII 202</u>	<u>1Q2</u>
	All	126	All	116	All	114	All	82	All	140	All	116
	-100	+100	-100	+100	-100	+100	-100	+100	-100	+100	-100	+100
Observations	126	126	116	116	94	111	65	80	120	133	116	116
Min	-12.0	-5.7	-12.2	-8.1	-8.8	-5.6	-10.0	-4.5	-14.4	-7.0	-15.3	-7.8
Max	9.4	14.7	4.8	23.0	2.9	17.4	2.5	15.1	4.3	15.3	3.4	51.9
Median	-2.3	1.7	-1.3	2.9	-1.4	3.2	-2.7	4.1	-3.1	3.5	-2.9	3.5
Average	-2.8	2.3	-1.8	3.2	-1.9	3.4	-2.9	4.0	-3.3	3.9	-3.3	4.2
StDev	3.4	3.6	3.0	4.4	2.6	3.7	2.4	3.7	2.7	4.1	2.9	6.1



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- (1) Includes all Public Banks with Total Assets between \$100M and \$100Bn who publicly reported their IRR position on a +/-100 scale
- (2) Data per S&P Global

# Securities Portfolio Changes: Pandemic Onset (2020Q1) to Current (2021Q3) \$1Bn to \$10Bn Total Assets (87 Banks)

• Securities portfolio data includes 87 securities portfolios Stifel analyzed in 2020Q1 and in 2021Q3 for banks with Total Assets between \$1Bn and \$10Bn

Portfo	olio Metrica	S												
	2020Q1	2021Q3												
Book Yield	2020Q1         2021Q3           Book Yield         2.66         1.97													
WAL	4.32	4.90												
+300 Price Vol	-10.8	-14.6												
Secs/Assets	18.9%	21.2%												
HTM/Secs	10.9%	9.9%												

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# Securities Portfolio Changes: Pandemic Onset (2020Q1) to Current (2021Q3) \$100M to \$1Bn Total Assets (96 Banks)

 Securities portfolio data includes 96 securities portfolios Stifel analyzed in 2020Q1 and in 2021Q3 for banks with Total Assets between \$100M and \$1Bn

Portfo	olio Metrica	S
	2020Q1	2021Q3
Book Yield	2.58	1.90
WAL	3.86	4.43
+300 Price Vol	-10.1	-14.3
Secs/Assets	22.5%	25.5%
HTM/Secs	8.6%	6.8%





(1) Includes 96 Banks for which Stifel has a run a securities portfolio as of 2020Q1 and again as of 2021Q3, with total assets between \$100M and \$1Bn

- How has your institution managed the increased level of cash and deposits over the prior year?
- a) We have had reasonable loan growth and deployed cash towards lending opportunities
- b) We have had slow loan growth and have deployed cash towards loans and investments
- c) We have had little to no loan growth and predominantly deployed cash towards solely investments
- d) We have had little to no loan growth and have chosen to not deploy, instead keeping a larger cash balance



Excess Liquidity: Cash Deployment



# **Investment Options Grid**

			Secu	rities Purch	nases								
							0	12mo Yie	d		Pr	ice Volatili	ty
Туре	SubSector	Coupon (%)	Price	Duration	Сvх	WAL	-100	Base	+100	+300	-100	+100	+300
Treasury	2yr Treasury	0.38	99.72	2.0	0.0	2.0	0.52	0.52	0.52	0.52	2.0%	-2.0%	-5.8%
Treasury	3yr Treasury	0.63	99.52	2.9	0.1	3.0	0.79	0.79	0.79	0.79	3.0%	-2.9%	-8.4%
Treasury	5yr Treasury	1.13	99.55	4.9	0.3	5.0	1.22	1.22	1.22	1.22	5.0%	-4.7%	-13.5%
Treasury	10yr Treasury	1.25	96.92	9.2	0.9	9.8	1.59	1.59	1.59	1.59	9.8%	-8.8%	-24.0%
Agency Debt	2yr Agy Bullet	0.53	100.00	2.0	0.0	2.0	0.53	0.53	0.53	0.53	2.0%	-2.0%	-5.8%
Agency Debt	3yr Agy Bullet	0.81	100.00	3.0	0.1	3.0	0.81	0.81	0.81	0.81	3.0%	-2.9%	-8.5%
Agency Debt	5yr Agy Bullet	1.24	100.00	4.9	0.3	5.0	1.24	1.24	1.24	1.24	5.0%	-4.7%	-13.5%
Agency Debt	10yr Agy Bullet	1.63	100.00	9.3	1.0	10.0	1.63	1.63	1.63	1.63	9.8%	-8.8%	-24.1%
Agency Debt	2yr Agy Callable (2YNC6M Berm)	0.63	100.00	1.4	-0.8	0.5	0.63	0.63	0.63	0.63	0.8%	-1.6%	-5.4%
Agency Debt	3yr Agy Callable (3YNC6M Berm)	0.98	100.00	1.8	-1.3	0.5	0.98	0.98	0.98	0.98	1.0%	-2.2%	-7.7%
Agency Debt	5yr Agy Callable (5YNC6M Berm)	1.37	100.00	2.5	-2.2	0.5	1.37	1.37	1.37	1.37	1.2%	-3.2%	-11.5%
Agency Debt	10yr Agy Callable (10YNC6M Berm)	1.91	100.00	3.5	-4.2	0.8	1.91	1.91	1.91	1.91	1.5%	-4.8%	-18.7%
Agency MBS	10yr 2.0% MBS pass through	2.00	103.05	2.9	-0.6	3.5	0.83	1.07	1.14	1.20	2.6%	-3.2%	-10.4%
Agency MBS	15yr 2% MBS pass through	2.00	102.80	3.2	-1.6	4.5	0.75	1.32	1.44	1.50	2.4%	-3.9%	-13.7%
Agency MBS	15yr 1.5% MBS pass through	1.50	100.83	3.7	-1.5	5.0	1.10	1.31	1.33	1.35	2.9%	-4.4%	-14.6%
Agency MBS	20yr 2% MBS pass through	2.00	102.09	3.8	-2.0	5.1	1.07	1.54	1.66	1.70	2.8%	-4.7%	-16.6%
Agency MBS	30yr 2.5% MBS pass through	2.50	102.89	3.5	-3.2	5.6	0.89	1.91	2.12	2.20	2.1%	-4.9%	-19.1%
Agency MBS	30yr 2% MBS pass through	2.00	100.19	4.8	-2.9	7.5	1.84	1.96	1.97	1.98	3.3%	-6.0%	-21.2%
Hybrid ARM	7/6 Months Hybrid ARM	1.82	102.04	2.3	-1.5	3.4	0.54	1.18	1.43	1.69	1.7%	-3.0%	-11.0%
Hybrid ARM	10/ 6 Months Hybrid ARM	1.91	102.00	3.1	-1.7	4.7	0.87	1.43	1.58	1.72	2.3%	-3.9%	-13.7%
Agency CMO	3vr SEO	1.25	99.85	3.0	-2.5	2.8	1.38	1.28	1.27	1.26	1.7%	-4.0%	-14.7%
Agency CMO	3vr PAC	2.00	101.29	2.1	-2.7	3.2	-0.25	1.55	1.72	1.78	0.8%	-3.3%	-14.0%
Agency CMO	5yr SEQ	2.00	100.91	2.6	-3.2	4.4	0.00	1.76	1.84	1.87	0.9%	-4.0%	-16.2%
Agency CMO	CMO Eloater	0.30	99.88	1.4	-0.3	3.7	0.34	0.33	1.31	3.04	1.2%	-1.7%	-9.6%
Agency CMBS	Avr Agy CMBS	1 10	99.78	45	0.2	47	1 15	1.15	1 15	1 15	4.7%	-4.4%	-12.6%
Agency CMBS	fyr Agy CMBS	1.10	101 41	6.2	0.4	6.6	1.15	1 45	1.15	1.15	6.5%	-6.0%	-16.9%
Agency CMBS	Gyr Agy CMBS	1.60	99.47	9.2	0.4	9.9	1.72	1 72	1 72	1.45	9.7%	-8.7%	-23.8%
SBV	SBA Eloster (Premium)	2.58	107 75	1.2	6.5	3.0	0.55	0.44	1 10	2.47	1.6%	-0.9%	-2.0%
SDA	SBA Hoatel (Fremium)	1.50	00.62	5.5	1.2	5.5	1.60	1.60	1.15	1.60	5.4%	5.0%	14.0%
		2.50	101 50	1.5	-1.5	2.0	0.10	1.05	2.20	2.26	0.2%	-3.0%	16 20/
		2.50	101.50	1.5	-5.4	4.2	1.01	2.79	2.20	2.20	-0.2%	-5.0%	-10.2%
		2.30	100.77	0.0	-3.5	4.2	1.01	1 20	2.41	2.42	2.5%	-0.2/0	-22.4/0
CLO		1.55	100.10	0.8	4.9	2.0	1.20	1.50	2.10	3.00	2.3%	-0.5%	-1.0%
CLU	10ur Conoral Market Muni (AA)	2.02	115 00	1.4	9.0	5.4 10.0	1.72	1.04	2.74	4.55	4.7%	-0.5%	-1.5%
Municipal		3.00	111.00	0.0	0.9	10.0	2.04	1.01	2.04	1.01	9.5%	-0.4%	-22.9%
Nunicipal		3.00	111.71	10.2	0.7	10.0	2.04	2.04	2.04	2.51	10.2%	-9.7%	-27.4%
Municipal	20yr General Market Muni (AA)	3.00	108.27	11.6	0.7	10.0	2.50	2.50	2.83	3.00	11.2%	-10.9%	-31.0%
Municipal	Loyr Taxable Muni	2.04	100.20	9.1	0.9	10.0	2.02	2.02	2.02	2.02	9.6%	-8.7%	-23.6%
Municipal	15yr Taxable Muni	2.33	100.53	11.3	0.9	10.0	2.27	2.27	2.28	2.29	11.2%	-10.6%	-29.3%
Municipal	20yr Taxable Muni	2.70	100.70	12.5	1.0	11.5	2.62	2.63	2.65	2.65	12.1%	-11.7%	-32.6%
Corporate	Byr Floater Corp (Financial)	0.63	100.39	0.3	0.4	1.4	0.27	0.35	0.99	2.26	0.9%	-0.2%	-0.4%
Corporate	5yr Fixed Corp (Banks)	1.50	100.00	4.8	0.3	5.0	1.50	1.50	1.50	1.50	5.0%	-4.7%	-13.4%
Corporate	5yr Floater Corp (Financial)	0.93	101.27	0.5	-0.1	4.5	0.54	0.66	1.54	3.31	1.1%	-0.5%	-1.0%
Corporate	10yr Fixed Corp (Banks)	2.29	100.00	9.0	0.9	10.0	2.29	2.29	2.29	2.29	9.5%	-8.6%	-23.4%
Subdebt	Community Bank Sub Debt (BBB)	3.13	100.00	4.4	1.0	4.9	3.13	3.13	3.13	3.13	4.5%	-4.3%	-12.3%
Swapped Bond	Swapped 10y Freddie K (10y Spot)	2.02	103.08	0.4	0.0	9.8	-0.52	0.48	1.48	3.48	0.5%	-0.3%	-0.9%

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• Securities pricing provided by Stifel Fixed Income Proprietary Pricing matrix as of 11/01/2021 and may not represent executable levels

Pass Through Sector: Relative Value

# 15 yr UMBS Spreads - Uninspiring

The chart below illustrates 15 yr current coupon mortgage rates relative to 7 year Libor swap rates. As can be seen, we are at significantly historically tight spreads



This clearly indicates the need to view other products (i.e., Hybrid Arms, CMO's, non agency MBS, etc.) for relative value while deploying cash

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Source: Bloomberg and Stifel Priced as of 11/12/2021

# Relative Value Comparison - SOFR Hybrid ARMs vs. 10/15yr MBS

#### Freddie 7x6mo SOFR Hybrid ARM vs. Fannie 10yr 1.5% Passthru



#### Freddie 10x6mo SOFR Hybrid ARM vs. UMBS 15yr 2% Passthru

Р	ool		Security							Pricing	I-Sprd	Mkt	Mkt	1	.2mo	Proj	Zvol	Opt	Libor	Eff	Eff	Proje	cted LT	CPR	Yie	ld Table	e
# N	lumbe	r	Descript	ion		Cpn	WAC	Age	WAM	Spread	(YldBk)	Price	YTM	WAL	TRR	LTCPR	LOAS	Cost	OAS	Dura	Cnvx	Up50	Base	Dn50	Up50	Base [	Dn50
Buy F	N CB2	212	10x6mo	SOFR Hybrid A	RM	1.76	2.41	3	357	10/z/15cpb	22	101.441	1.46	5.05	1.73	15.5	6.6	36.8	-30.2	3.24	-1.63	13.0	15.5	23.3	1.52	1.46	1.31
Sell F	N MA	4470	15yr 2.0%	% New Prod		2.00	2.46	1	178	+3/32s vs. Dw 2s	25	102.516	1.39	4.55	1.53	12.0	1.1	36.2	-35.0	3.16	-1.75	8.8	12.0	20.2	1.47	1.39	1.18
differe	ence				-	<mark>-0.24</mark>	-0.05	2	179		-3	-1.0742	0.06	0.50	0.19	3.5	5.4	0.6	4.8	0.08	0.13	4.2	3.5	3.2	0.06	0.06	0.13
			12mo TRR   24mo TRR	Difference (Buy Difference (Buy	less Sell) less Sell)		Т	RR	& Yie	eld Differen	ce (Bu	y less	Sell;	12/2	4/3	6mo	. Hor	izon)									
Sell of	- 0.4	10 T	🗖 36mo TRR	Difference (Buy	less Sell)																	0	22		0.36		
550			Yield Differ	ence (Buy less S	ell)																	0	.52			0 17	
	2 U.	30 -																		0.26	-0.22		0.24	4	0	24	
(Bi			0.210.21 0.21	0.19 <sup>0.20</sup>													0.18	0.19	0.20 0.20	)	0.22	.20		0.19	0	0.18	5
- Juce	. 0.	20 -		0.16				<u>0.06</u>	0 13	<u>0.13</u>		<u>0.06</u>	<u>.</u>	0.1	3 <sup>0.15</sup>	0.13	.17 0.18		0.00		0.00		<u>0.1</u>	. <u>3</u>		>	
Differe	0.1	10 -	<u>0.08</u>	<u>0.05</u>	0.0	<mark>)6</mark> 0.0	5 0.05	0.11	0.15	0.08 0.08 0.03 0.08	0.09 0.06	0.09	0.11	0.09 <u>0.0</u>	<u>06</u>	9	0.06		<u>0.06</u>		<u>0.09</u> ♦		<b>~</b>				
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			UpStp150	UpStp75	UpFlat	t150	U	pFlat	75	Up300 l	Jp200	Up10	00	Up5	0	U	p25	E	Base		Dn25		Dn5(	U	Dn	100	

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Priced as of 11/12/21 based on recent new issue spreads Source: Bloomberg, Yield Book and Stifel

## LIBOR to SOFR "Spread Adjustment" is Generous for New Hybrids

1.75% 1.75% (12mo. LIBOR less Daily SOFR) 4/21/2020: Diff. (12M LIBOR - 30D SOFR) 1.50% 1.50% 12mo LIB - 30D SOFR = +97bps 12mo. LIBOR and Daily SOFR - 30-Day SOFR Avg. Difference: (All-time high) 1.25% 1.25% 12mo LIB - 30D SOFR = +29bps = 12-Month LIBOR 1.00% (March '20-Present) 1.00% - Avg. Diff. (March '20-Present) 0.75% 0.75% 0.50% 0.50% 0.25% 0.25% 0.00% 0.00% -0.25% -0.25% ead 3/9/2020: -0.50% -0.50% 12mo LIB - 30D SOFR = -77bps (All-time low) -0.75% d -0.75% -1.00% -1.00% Jun-21 Jun-20 Sep-20 Mar-21 Sep-21 Mar-20 Dec-20

Hybrid ARM Index Co	mparison: 12-Month l	LIBOR vs. 30-Day SOFR

	Сар	Reset	Orig	Curr				Net	Gross	Curr				Orig	HPA	WA		Hist	orical (	CPR	
Product	Struc.	Freq.	Year	UPB	#Pool	Cpn	WAC	Mrgn	Mrgn	MTR	Age	WAM	FICO	LTV	LTV	CLS	1mo	3mo	6mo	12mo	Life
5x6mo SOFR ARM	2/1/5	Semi-Ann.	2021	1,465	113	1.69	2.32	2.21	2.84	57	3	357	770	62	60	357	11.6	13.0	16.6	0.0	13.2
5x1 LIBOR ARM	2/2/5	Annual	2020	687	120	2.22	2.84	1.63	2.25	45	15	345	775	61	51	308	44.3	40.4	38.0	34.5	31.4
Difference				778	-7	-0.53	-0.52	0.59	0.59	12	-12	12	-4	2	9	49	-32.7	-27.4	-21.4	-34.5	-18.2
7x6mo SOFR ARM	5/1/5	Semi-Ann.	2021	4,479	217	1.80	2.43	2.22	2.85	81	3	357	768	64	61	387	10.2	9.8	14.4	0.0	7.1
7x1 LIBOR ARM	5/2/5	Annual	2020	2,220	257	2.30	2.93	1.62	2.25	69	15	344	771	63	53	340	33.7	32.4	31.9	33.1	28.9
Difference				2,259	-40	-0.50	-0.50	0.60	0.60	12	-12	13	-3	1	8	47	-23.5	-22.6	-17.5	-33.1	-21.8
10x6mo SOFR ARM	5/1/5	Semi-Ann.	2021	2,985	165	1.88	2.51	2.14	2.77	117	3	357	768	66	63	367	5.1	5.2	6.3	0.0	4.0
10x1 LIBOR ARM	5/2/5	Annual	2020	1,924	210	2.45	3.08	1.62	2.25	104	16	344	766	64	54	320	34.0	29.2	28.7	30.7	25.3
Difference				1,061	-45	-0.57	-0.57	0.52	0.52	13	-13	13	2	1	9	47	-28.9	-24.0	-22.4	-30.7	-21.3

# Relative Value Comparison: 6yr Front SEQ (NY) vs. 15yr Passthru

- Select Collateral with a Favorable Prepayment Profile (Example: 100% NY)
- Specify a Structure and Principal Pay Window (Example: 6yr Front Sequential)
- Choose a Coupon that Satisfies Your Premium Tolerance (Example: ~\$102-Handle)





Up100

Up50

Up25

Base

Dn25

Dn50

Dn100

Up200

UpStp150 - 3mo LIBOR up 50bps, 5yr Swap up 100bps, 10yr swap up 150bps Page 15UpStp75 - 3mo LIBOR up 25bps, 5yr Swap up 50bps, 10yr swap up 75bps UpFlt150 - 3m LIBOR up 150bps, 5yr Swap up 75bps, 10yr Swap up 50bj UpFlt75 - 3mo LIBOR up 100bps, 5yr Swap up 50bps, 10yr Swap up 25bj

Source: Bloomberg, Yield Book and Stifel Priced as of 11/12/2021

UpStp75

UpFlat150

UpFlat75

Up300

► 1.00 0.80 0.60 0.40 0.20 0.00

UpStp150

## Collateral Characteristics: Loan Balance vs. NY/FL/TX

- Loan size is arguably the largest driver of prepayment behavior
- The lower the loan size, the slower the prepays
- W2D (Worst to Deliver) or TBA collateral
- New York, Florida & Texas have impediments to refinancing, such as a mortgage recording tax and/or rules that discourage loan churning



Source: KDS and Stifel

# Agency/Non-Agency Basis for Prime Jumbo RMBS 2.0

The Agency/Non-Agency basis is extremely wide for low-WAC, new-WALA Jumbo RMBS deals, driven by historically tight spreads in Agency paper, elevated supply in private label paper and relatively slow projected speeds for low-WAC, new-WALA Jumbo collateral.

#### SSNR 30yr 2.5% Passthru vs. Fannie 30yr 2.5% Passthru (New WALA)

	Pool	Security					Pricing	I-Sprd	Mkt	Mkt		12mo	Proj	Zvol	Opt	Libor	Eff	Eff
#	Number	Description	Cpn	WAC	Age	WAM	Spread	(YldBk)	Price	YTM	WAL	TRR	LTCPR	LOAS	Cost	OAS	Dura	Cnvx
Buy	JPMMT 2021-13 A3	SSNR 30yr 2.5% Passthru	2.50	3.23	3	356	-2-00/32s vs. FN 2.5s	120	100.31	2.40	4.84	2.41	15.1	92.2	72.8	19.4	3.77	-3.03
Sell	FN MA4466	30yr 2.5% New Prod	2.50	3.22	2	357	+3/32s vs. FN 2.5s	69	102.41	2.02	5.86	2.13	13.3	55.0	74.1	-19.1	3.65	-3.23
diff	erence		0.00	0.01	1	-1		51	-2.09	0.38	-1.02	0.28	<mark>1.8</mark>	37.2	-1.3	<mark>38.4</mark>	0.12	0.20

#### SSNR 30yr 2% Passthru vs. Fannie 30yr 2% Passthru (New WALA)

	Pool	Security					Pricing	I-Sprd	Mkt	Mkt		12mo	Proj	Zvol	Opt	Libor	Eff	Eff
#	Number	Description	Cpn	WAC	Age	WAM	Spread	(YldBk)	Price	YTM	WAL	TRR	LTCPR	LOAS	Cost	OAS	Dura	Cnvx
Buy	JPMMT 2021-13 A3A	SSNR 30yr 2% Passthru	2.00	3.23	3	356	-1-04/32s vs. FN 2s	111	98.53	2.32	4.84	2.36	15.1	74.0	66.6	7.3	4.91	-2.56
Sell	FN MA4465	30yr 2% New Prod	2.00	2.84	2	358	+3/32s vs. FN 2s	53	99.75	2.03	7.73	2.13	9.0	44.5	69.3	-24.8	4.85	-2.81
diffe	erence		0.00	0.39	1	-2		58	-1.22	0.29	-2.89	0.23	6.1	29.5	-2.7	32.2	0.06	0.25

#### SSNR 2.5% Front SEQ vs. Fannie 15yr 2.5% Passthru (New WALA)

	Pool	Security					Pricing	I-Sprd	Mkt	Mkt	:	12mo	Proj	Zvol	Opt	Libor	Eff	Eff
#	Number	Description	Cpn	WAC	Age	WAM	Spread	(YldBk)	Price	YTM	WAL	TRR	LTCPR	LOAS	Cost	OAS	Dura	Cnvx
Buy	JPMMT 2021-13 A4	SSNR Front SEQ 2.5%	2.50	3.23	3	356	-2-16/32s vs. Dw 2.5s	124	101.17	1.99	2.70	2.08	15.1	86.1	75.4	10.7	2.15	-2.83
Sell	FN MA4471	15yr 2.5% New Prod	2.50	3.04	1	174	+14/32s vs. Dw 2.5s	32	104.11	1.30	3.72	1.32	17.1	5.4	33.9	-28.5	2.63	-1.56
diffe	erence		0.00	0.18	2	182		92	-2.94	0.69	-1.02	0.75	-2.0	80.7	41.5	39.2	-0.48	- <mark>1.27</mark>

#### SSNR 2% Front SEQ vs. Fannie 15yr 2% Passthru (New WALA)

	Pool	Security					Pricing	I-Sprd	Mkt	Mkt		12mo	Proj	Zvol	Opt	Libor	Eff	Eff
#	Number	Description	Cpn	WAC	Age	WAM	Spread	(YldBk)	Price	YTM	WAL	TRR	LTCPR	LOAS	Cost	OAS	Dura	Cnvx
Buy	JPMMT 2021-13 A4A	SSNR Front SEQ 2%	2.00	3.23	3	356	-2-06/32s vs. Dw 2s	111	100.23	1.87	2.70	2.01	15.1	63.8	71.4	-7.6	2.97	-2.41
Sell	FN MA4470	15yr 2.0% New Prod	2.00	2.46	1	178	+3/32s vs. Dw 2s	25	102.52	1.39	4.55	1.53	12.0	1.1	36.2	-35.0	3.16	-1.75
diffe	erence		0.00	0.77	2	178		87	-2.28	0.47	-1.85	0.48	<mark>3.1</mark>	62.7	35.2	27.4	-0.19	<mark>-0.65</mark>

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Source: Yield Book, Bloomberg and Stifel Priced as of 11/12/2021 \*Prices based on pricing spreads of most recent new issue deal

### CMBS - Agency/Non-Agency Basis

Take Advantage of the Agency/Non-Agency Basis. The yield and spread differential between Agency and AAA-rated SSNR private label bonds with similar average life and cashflow profiles is historically wide in CMBS.

#### Private Label SSNR Last CF 9.8yr vs. Agency Freddie K A2 9.8yr

	Tranche	Security	Credit					Pricing	I-Sprd	Mkt	Mkt		12mo	Libor	Eff	Eff
#	Ticker	Description	Rating	Cpn	WAC	Age	WAM	Spread	(YldBk)	Price	YTM	WAL	TRR	OAS	Dura	Cnvx
Buy	BANK 2021-BN36 A5	SSNR Last CF 9.8yr	AAA	2.47	3.22	3	110	61/n/0CPY	66	102.141	2.23	9.80	2.67	61.1	8.72	0.86
Sell	FHMS K132 A2	Freddie K A2 (10yr)	Agency	2.02	3.13	4	118	13/n/0CPY	18	102.406	1.75	9.77	2.17	13.3	8.91	0.89
diffe	erence			0.45	0.10	-1	-8		48	-0.266	<b>0.48</b>	0.03	0.50	47.8	-0.18	-0.02

#### Private Label SSNR Last CF 9.8yr vs. Agency Fannie DUS 10/9.5 9.7yr

	Tranche	Security	Credit					Pricing	I-Sprd	Mkt	Mkt		12mo	Libor	Eff	Eff
#	Ticker	Description	Rating	Cpn	WAC	Age	WAM	Spread	(YldBk)	Price	YTM	WAL	TRR	OAS	Dura	Cnvx
Buy	BANK 2021-BN36 A5	SSNR Last CF 9.8yr	AAA	2.47	3.22	3	110	61/n/0CPY	66	102.141	2.23	9.80	2.67	61.1	8.72	0.86
Sell	FN BS3239	Fannie 10/9.5 DUS	Agency	1.85	3.31	1	119	21/n/0CPY	26	100.438	1.82	9.69	2.33	21.1	8.89	0.89
diffe	erence			0.62	-0.09	2	-9		40	1.703	0.41	0.11	0.34	40.0	-0.17	-0.02

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Source: Yield Book, Bloomberg and Stifel Priced as of 11/12/2021

# Municipal Credit and Market Update

## Municipal Credit Update : Strong Tax Revenue Growth

- Tax collection data supports strong state and local government credit quality and continued selective cash deployment into the municipal sector. Tax collections have outperformed both pessimistic postpandemic forecasts and even pre-pandemic levels.
- Overall, state and local sales tax collections in 2Q2021 were up a substantial 33.4% vs. 1Q and 16.2% above the corresponding pre-pandemic period in 2Q2021.
- These strong results brought rolling 4 quarter total state and local tax collections to 22.7% above the rolling quarters ended 2Q2020.
- Only three states saw year-over-year declines in tax collections: ND, WY, and AK - all oil, gas, or coal dependent. States with large tourist industries like HI and FL generally saw weaker tax revenue performance, but still saw solid absolute growth.

State	Trailing 40	Q Total Tax Reve	nue (Mlns)	ć Cha VoV	% Cha VoV
State	2Q2019	2Q2020	2Q2021	S Clig TOT	∕₀ clig fut
California	\$206,107	\$169,866	\$254,594	\$84,728	49.9%
New York	\$90,612	\$80 <i>,</i> 885	\$106,231	\$25,346	31.3%
Minnesota	\$29,839	\$26,393	\$32,021	\$5,628	21.3%
Pennsylvania	\$42,755	\$39,087	\$47,334	\$8,247	21.1%
Virginia	\$26,988	\$27,944	\$32,650	\$4,706	16.8%
New Jersey	\$45,302	\$37,927	\$43,925	\$5 <i>,</i> 998	15.8%
Texas	\$65,039	\$58,527	\$66,391	\$7,864	13.4%
Florida	\$46,778	\$44,034	\$49,544	\$5,510	12.5%
Kentucky	\$13,135	\$13,020	\$14,277	\$1,257	9.7%
Illinois	\$46,160	\$45,290	\$49,527	\$4,237	9.4%
Massachusetts	\$32,912	\$31,225	\$32,165	\$940	3.0%
Hawaii	\$8,402	\$7 <i>,</i> 897	\$8,035	\$138	1.7%
North Dakota	\$4,984	\$4,336	\$4,080	(\$256)	(5.9%)
Wyoming	\$2,406	\$2,078	\$1,955	(\$123)	(5.9%)
Alaska	\$1,945	\$1,275	\$1,090	(\$185)	(14.5%)
Cummulative	\$1,150,725	\$1,043,081	\$1,279,346	\$236,265	22.7%
Mean	\$22,563	\$20,453	\$25,085	\$4,633	15.8%
Median	\$12,793	\$11,709	\$14,257	\$2,090	16.6%

Trailing 4Q Total Tax Collections



Source: United States Census Bureau

#### Municipal Market Update: Tax-Exempt Spread Dynamics



Muni-to-Treasury Ratio (%)

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(1) Sources: Stifel; Bloomberg LP

30yr Muni-Treasury Ratio
10yr Muni-Treasury Ratio

# Spreads and Value: Tax Rate Sensitivity Analysis

- Taxable municipals have lost some luster given the widening in exempts. Still, shorter taxables remain relatively attractive.
- On a matched maturity basis, taxables outperform lower 2% coupon tax-exempts inside of 12 years and outperform 3% coupons tax-exempts at all but the longest maturities outside of 23 years.
- Notably, short taxables also outperform other bulletlike products like Freddie ACEs, Ks, and DUS.



	M	atrix of Ta	ax-Exemp	ot v	vs. Taxa	b	le Munic	cip	al Sprea	ds	
		<u>2% Co</u>	oupon		<u>3% C</u>	0	<u>upon</u>		<u>4% Co</u>	oupon	
		Federal	Tax Rate		Federal	Т	ax Rate		Federal	Tax Rate	
		21.0%	26.5%		21.0%		26.5%		21.0%	26.5%	•
	3Y	(0.29)	(0.25)		(0.44)		(0.41)		(0.25)	(0.21)	
	4Y	(0.30)	(0.24)		(0.50)		(0.46)		(0.32)	(0.26)	
	5Y	(0.28)	(0.21)		(0.49)		(0.43)		(0.37)	(0.30)	
	6Y	(0.21)	(0.13)		(0.48)		(0.41)		(0.36)	(0.28)	
	7Y	(0.20)	(0.10)		(0.44)		(0.35)		(0.39)	(0.30)	
	8Y	(0.17)	(0.05)		(0.47)		(0.37)		(0.49)	(0.39)	
	9Y	(0.09)	0.04		(0.44)		(0.33)		(0.43)	(0.32)	
	10Y	(0.05)	0.09		(0.40)		(0.29)		(0.46)	(0.35)	
	11Y	0.00	0.16		(0.40)		(0.27)		(0.45)	(0.33)	
	12Y	0.05	0.22		(0.38)		(0.24)		(0.44)	(0.31)	
;	13Y	0.09	0.27		(0.35)		(0.21)		(0.43)	(0.29)	
	14Y	0.16	0.35		(0.31)		(0.16)		(0.41)	(0.27)	
	15Y	0.18	0.38		(0.29)		(0.13)		(0.41)	(0.27)	
	16Y	0.21	0.41		(0.26)		(0.10)		(0.38)	(0.23)	
	17Y	0.24	0.45		(0.22)		(0.05)		(0.35)	(0.19)	
	18Y	0.27	0.48		(0.19)		(0.01)		(0.35)	(0.18)	
	19Y	0.30	0.51		(0.16)		0.02		(0.32)	(0.16)	
	20Y	0.31	0.53		(0.13)		0.06		(0.31)	(0.14)	
	21Y	0.34	0.56		(0.10)		0.09		(0.28)	(0.10)	
	22Y	0.34	0.57		(0.06)		0.13		(0.26)	(0.08)	
	23Y	0.34	0.57		(0.04)		0.16		(0.23)	(0.04)	
	24Y	0.35	0.58		0.01		0.21		(0.20)	(0.01)	
	25Y	0.35	0.59		0.02		0.22		(0.18)	0.02	

In general, taxables still pickup yield vs. comparable maturity tax-exempts inside of the 11 year point for lower 2% coupons. With some exceptions, only the longest 23yr+ 3% coupons beat matched maturity taxables.

### Key Changes in the "Build Back Better" Reconciliation Bill

Overall, the Build Back Better Reconciliation Bill was a disappointment for the municipal market.

- The increase in the corporate tax rate from 21% to 26.5% has been dropped.
- A 15% corporate minimum tax based on book income has been added. Notably, this provision will only kick in only for companies with more than \$1bn in annual income.
- Net Investment Income taxes have been added to pass-through entities.
- A 3-5% surcharge to high income individuals has been added.
- Although local government issuance will benefit from the thrust of the infrastructure legislation, essentially all public finance specific provisions have been dropped from the final legislation:
  - Infrastructure Tax Credit Bonds "Build America Bonds 2.0"
  - Reinstatement of Advanced Refundings
  - Additional Private Activity Bond Allocations
  - Permanent Expansion of Bank Qualified Limits

## Cash Deploy Summary

- The following analysis for Sample Bank shows the impact of three \$100M Cash Deployment strategies with varying goals and constraints
- The strategies assume cash is earning 0.15%, and that the Sample Bank can deploy that cash into a basket of securities: Securities options include MBS, Hybrid ARMs, CMOs, CMBS, SBAs, Municipals, Corporates, and non-ACMBS products
- The following goals and constraints were used in solving for the optimal asset mix:

Strategy 1 (No Credit):	"Short Allocation": \$100M Cash Deploy, Maximize Spread, Limit +300 Price Volatility to -12.0%
	Result: Spread of 1.20% on cash vs. purchases (yielding 1.35%)
Strategy 2 (Allow Credit):	"Medium Allocation": \$100M Cash Deploy, Maximize Spread, Limit +300 Price Volatility to -16.0%
	Result: Spread of 1.74% on cash vs. purchases (yielding 1.89%)
Strategy 3 (Allow Credit):	"Long Allocation": \$100M Cash Deploy, Maximize Spread, Limit +300 Price Volatility to -20.0% Result: Spread of 2.01% on cash vs. purchases (yielding 2.16%)
Strategy 4 (Swapped Securities):	"Medium Allocation": \$100M Cash Deploy, Maximize Spread, Limit +300 Price Volatility to -16.0%, allow 20% swapped Freddie k allocation Powelt: Spread of 1.71% on each we wardware (violding 1.96%)
	Result: Spread of 1.71% on cash vs. purchases (yielding 1.86%)

 The majority of the securities were selected to represent an array of bonds that provide a tradeoff between base case yield, diversification and price volatility
 Fixed Income Capital Markets

- (1) Assumes Cash Earns 0.15%
- (2) Securities pricing provided by Stifel Fixed Income Proprietary Pricing matrix as of 11/01/2021 and may not represent executable levels
- (3) Analytics provided by Bloomberg, The Yield Book, and ZM Financial

#### Sample

#### **Cash Deploy Allocations - Consolidated**

• The grid below consolidates the Funding & Securities Universe to only those line items that were chosen within the model for any of the four strategies

			Funding											Alloc	ation	
						0-1	2mo Cost (	(%)		Pri	ice Volatili	ty	Strategy	Strategy	Strategy	Strategy
Туре	Maturity	Coupon (%)	Price Duration	Сvх	WAL	-100	Base	+100	+300	-100	+100	+300	1	2	3	4
Cash	11/11/2021	0.15	100.00 0.0	0.0	0.0	-0.85	0.15	1.15	3.15	0.0%	0.0%	0.0%	100%	100%	100%	100%

			Securi	ties Purc	hases										Alloc	ation	
							0	12mo Yie	ld		Pr	ice Volatili	ity	Strategy	Strategy	Strategy	Strategy
Туре	SubSector	Coupon (%)	Price D	Duration	Сvх	WAL	-100	Base	+100	+300	-100	+100	+300	1	2	3	4
Agency Debt	5yr Agy Callable (5YNC6M Berm)	1.37	100.00	2.5	-2.2	0.5	1.37	1.37	1.37	1.37	1.2%	-3.2%	-11.5%	25%	25%	0%	0%
Agency Debt	10yr Agy Callable (10YNC6M Berm)	1.91	100.00	3.5	-4.2	0.8	1.91	1.91	1.91	1.91	1.5%	-4.8%	-18.7%	0%	0%	25%	25%
Agency MBS	10yr 2.0% MBS pass through	2.00	103.05	2.9	-0.6	3.5	0.83	1.07	1.14	1.20	2.6%	-3.2%	-10.4%	6%	0%	0%	0%
Agency MBS	30yr 2.5% MBS pass through	2.50	102.89	3.5	-3.2	5.6	0.89	1.91	2.12	2.20	2.1%	-4.9%	-19.1%	4%	9%	6%	0%
Hybrid ARM	7/ 6 Months Hybrid ARM	1.82	102.04	2.3	-1.5	3.4	0.54	1.18	1.43	1.69	1.7%	-3.0%	-11.0%	20%	0%	0%	0%
Agency CMO	3yr PAC	2.00	101.29	2.1	-2.7	3.2	-0.25	1.55	1.72	1.78	0.8%	-3.3%	-14.0%	10%	0%	0%	0%
Agency CMO	5yr SEQ	2.00	100.91	2.6	-3.2	4.4	0.00	1.76	1.84	1.87	0.9%	-4.0%	-16.2%	15%	15%	15%	6%
SBA	SBA Floater (Premium)	2.58	107.75	1.2	6.5	3.9	0.55	0.44	1.19	2.47	4.6%	-0.9%	-2.9%	10%	0%	0%	0%
SBA	SBA Fixed	1.67	99.63	5.5	-1.3	5.6	1.69	1.69	1.69	1.69	5.4%	-5.0%	-14.0%	10%	10%	10%	10%
NA RMBS	RMBS 30yr PT	2.50	100.77	3.2	-3.3	4.2	1.81	2.31	2.41	2.42	1.3%	-8.2%	-22.4%	0%	10%	10%	10%
Municipal	10yr Taxable Muni	2.04	100.20	9.1	0.9	10.0	2.02	2.02	2.02	2.02	9.6%	-8.7%	-23.6%	0%	6%	0%	0%
Municipal	20yr Taxable Muni	2.70	100.70	12.5	1.0	11.5	2.62	2.63	2.65	2.65	12.1%	-11.7%	-32.6%	0%	0%	14%	9%
Corporate	5yr Fixed Corp (Banks)	1.50	100.00	4.8	0.3	5.0	1.50	1.50	1.50	1.50	5.0%	-4.7%	-13.4%	0%	2%	0%	0%
Corporate	5yr Floater Corp (Financial)	0.93	101.27	0.5	-0.1	4.5	0.54	0.66	1.54	3.31	1.1%	-0.5%	-1.0%	0%	3%	0%	0%
Corporate	10yr Fixed Corp (Banks)	2.29	100.00	9.0	0.9	10.0	2.29	2.29	2.29	2.29	9.5%	-8.6%	-23.4%	0%	10%	10%	10%
Subdebt	Community Bank Sub Debt (BBB)	3.13	100.00	4.4	1.0	4.9	3.13	3.13	3.13	3.13	4.5%	-4.3%	-12.3%	0%	10%	10%	10%
Swapped Bond	Swapped 10y Freddie K (10y Spot)	2.02	103.08	0.4	0.0	9.8	-0.52	0.48	1.48	3.48	0.5%	-0.3%	-0.9%	0%	0%	0%	20%
Strategy 1 Purch.	Short Allocation Max 12% Px Risk	1.85	101.71	2.7	-1.3	3.2	0.74	1.35	1.52	1.72	2.1%	-3.3%	-12.0%				
Strategy 2 Purch.	Med. Allocation Max 16% Px Risk	2.01	100.49	4.2	-1.6	4.6	1.48	1.89	1.96	2.02	3.4%	-5.1%	-16.0%				
Strategy 3 Purch.	Long Allocation Max 20% Px Risk	2.26	100.45	5.4	-1.8	5.2	1.79	2.16	2.20	2.21	4.4%	-6.3%	-20.0%				
Strategy 4 Purch.	Allow Swapped Bonds Max 16% Px Risk	2.20	100.77	4.5	-1.5	5.9	1.51	1.86	2.08	2.48	3.7%	-5.2%	-16.0%				
Difference	1.70	1.71	2.7	-1.3	3.2	1.59	1.20	0.37	-1.43	2.1%	-3.3%	-12.0%					
Difference		1.86	0.49	4.2	-1.6	4.6	2.33	1.74	0.81	-1.13	3.4%	-5.1%	-16.0%				
Difference		2.11	0.45	5.4	-1.8	5.2	2.64	2.01	1.05	-0.94	4.4%	-6.3%	-20.0%				
Difference		2.05	0.77	4.5	-1.5	5.9	2.36	1.71	0.93	-0.67	3.7%	-5.2%	-16.0%				

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- (1) Securities pricing provided by Stifel Fixed Income Proprietary Pricing matrix as of 11/01/2021 and may not represent executable levels
- (2) Analytics provided by Bloomberg, The Yield Book, and ZM Financial

Change

Strategy 4

Include Swapped Bonds

Medium Allocation

Px Risk +300 to -16%

100,000

1.86%

5.9 4.5

(16.0%)

100,000

0.15%

1.71%

Spread

2.36%

1.71%

0.93%

%∆

3.7%

(5.2%)

(16.0%)

%∆

0.00%

(0.15%)

0.00%

0.05%

0.04%

0.35%

0.09

\$

2,354

1,709

925

Ś

3,720

(5, 173)

(16,000)

8.75%

12.03%

8.58%

3.25%

1.24%

10.12%

2.84

**Pro Forma** 

Allow "Credit"

## Summary Comparison

The grid describes cash deploy strategies with various goals and constraints

- The "Short Allo achieves a spr 1.20% with an Volatility of -12
- Strategy 2-4 a ۲ product allocation
- The "Medium / ۲ achieves a spr 1.74% with an Volatility of -16
- The "Long Allo ۲ achieves a spr 2.01% with an Volatility of -20
- Swapped Bon 4) using Strate constraint perf to strategy 2 in but outperform scenarios

ocation"			No "Credit '	,	Allow "Crea	lit"	Allow "Cred	it"
read of			Px Risk +30	00 to -12%	Px Risk +30	00 to -16%	Px Risk +30	00 to -20%
+300 Price	Asset Purchases		100,	000	100,	,000	100,	000
000 T 1100	Securities Yield		1.35	5%	1.89	9%	2.16	5%
2 70	WAL		3.	2	4.	.6	5.	2
	Duration		2.	7	4.	2	5.	4
llow credit	+300 Price Vol.		(12.0	0%)	(16.	0%)	(20.	0%)
tion	Cash Balance		100,	000	100,	,000	100,	000
	Cash Yield		0.15	5%	0.15	5%	0.15	5%
Allocation" 🔶	Net Interest Spread		1.20	0%	1.7	4%	2.0	1%
read of	0-12 Month NII		\$	Spread	\$	Spread	\$	Spread
	-100 0-12 Mo. NII		1,585	1.59%	2,330	2.33%	2,634	2.64%
+300 Price	Base 0-12 Mo. NII		1,200	1.20%	1,743	1.74%	2,013	2.01%
5%	+100 0-12 Mo. NII		370	0.37%	809	0.81%	1,052	1.05%
	Impact On EVE		\$	%Δ	\$	%∆	\$	%∆
ocation"	-100 EVE		2,090	2.1%	3,400	3.4%	4,393	4.4%
read of	+100 EVE		(3,313)	(3.3%)	(5,081)	(5.1%)	(6,332)	(6.3%)
+300 Price	+300 EVE		(12,000)	(12.0%)	(16,000)	(16.0%)	(20,000)	(20.0%)
יפטטיי אופט ז%	Key Impacts			%∆		%∆		%Δ
<b>J</b> / <b>U</b>	Leverage	8.75%	8.75%	0.00%	8.75%	0.00%	8.75%	0.00%
de (Ctrete eu	Tot RB Capital	12.19%	12.11%	(0.07%)	12.01%	(0.17%)	12.03%	(0.15%)
us (Strategy	TCE/TA	8.58%	8.58%	0.00%	8.58%	0.00%	8.58%	0.00%
egy 2's	NIM	3.20%	3.24%	0.04%	3.26%	0.06%	3.26%	0.06%
orms similar	ROA	1.20%	1.23%	0.03%	1.24%	0.04%	1.25%	0.05%
hase case	ROE	9.77%	10.02%	0.25%	10.13%	0.36%	10.18%	0.41%
	EPS	2.75	2.81	0.06	2.84	0.09	2.86	0.11
is in up rate			-					
							C	וידדידי
							_	

Strategy 1

Shorter Allocation

Short Allocation

Change

**Pro Forma** 

Beginning

Data

Descriptions

Strategy 2

Medium Allocation

Medium Allocation

Change

**Pro Forma** 

Strategy 3

Longer Allocation

Long Allocation

Change

**Pro Forma** 

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Securities pricing provided by Stifel Fixed Income Proprietary Pricing matrix as of 11/01/2021 and may not represent executable levels (1)

Analytics provided by Bloomberg, The Yield Book, and ZM Financial (2)

#### **Generic Sector Allocation vs Swapped Bond Allocation**

- The chart below contrasts the differences between Strategy 2 and Strategy 4
  - Both have relatively the same base case spread vs cash yielding 15 bps around ~1.88 bps of spread and both have similar price rate volatility in rate shock scenarios
- However, including swapped bond allocation in cash deploy allows for greater performance for overall yield increase in rates up scenarios

				Funding										Alloc	ation
							0-1	2mo Cost	(%)		P	rice Volatil	ity	Strategy	Strategy
Туре	Maturity	Coupon (%)	Price	Duration	Сvх	WAL	-100	Base	+100	+300	-100	+100	+300	2	4
Cash	11/11/2021	0.15	100.00	0.0	0.0	0.0	-0.85	0.15	1.15	3.15	0.0%	0.0%	0.0%	100%	100%
			<b>C</b>	iti a a Duual										Allas	- <b>*</b> '
			Secur	rities Purci	nases		0	-12mo Vie	ld		P	rice Volatil	itv	Strategy	Strategy
Туре	SubSector	Coupon (%)	Price	Duration	Сvх	WAL	-100	Base	+100	+300	-100	+100	+300	2	4
Agency Debt	5yr Agy Callable (5YNC6M Berm)	1.37	100.00	2.5	-2.2	0.5	1.37	1.37	1.37	1.37	1.2%	-3.2%	-11.5%	25%	0%
Agency Debt	10yr Agy Callable (10YNC6M Berm)	1.91	100.00	3.5	-4.2	0.8	1.91	1.91	1.91	1.91	1.5%	-4.8%	-18.7%	0%	25%
Agency MBS	30yr 2.5% MBS pass through	2.50	102.89	3.5	-3.2	5.6	0.89	1.91	2.12	2.20	2.1%	-4.9%	-19.1%	9%	0%
Agency CMO	5yr SEQ	2.00	100.91	2.6	-3.2	4.4	0.00	1.76	1.84	1.87	0.9%	-4.0%	-16.2%	15%	6%
SBA	SBA Fixed	1.67	99.63	5.5	-1.3	5.6	1.69	1.69	1.69	1.69	5.4%	-5.0%	-14.0%	10%	10%
NA RMBS	RMBS 30yr PT	2.50	100.77	3.2	-3.3	4.2	1.81	2.31	2.41	2.42	1.3%	-8.2%	-22.4%	10%	10%
Municipal	10yr Taxable Muni	2.04	100.20	9.1	0.9	10.0	2.02	2.02	2.02	2.02	9.6%	-8.7%	-23.6%	6%	0%
Municipal	20yr Taxable Muni	2.70	100.70	12.5	1.0	11.5	2.62	2.63	2.65	2.65	12.1%	-11.7%	-32.6%	0%	9%
Corporate	5yr Fixed Corp (Banks)	1.50	100.00	4.8	0.3	5.0	1.50	1.50	1.50	1.50	5.0%	-4.7%	-13.4%	2%	0%
Corporate	5yr Floater Corp (Financial)	0.93	101.27	0.5	-0.1	4.5	0.54	0.66	1.54	3.31	1.1%	-0.5%	-1.0%	3%	0%
Corporate	10yr Fixed Corp (Banks)	2.29	100.00	9.0	0.9	10.0	2.29	2.29	2.29	2.29	9.5%	-8.6%	-23.4%	10%	10%
Subdebt	Community Bank Sub Debt (BBB)	3.13	100.00	4.4	1.0	4.9	3.13	3.13	3.13	3.13	4.5%	-4.3%	-12.3%	10%	10%
Swapped Bond	Swapped 10y Freddie K (10y Spot)	2.02	103.08	0.4	0.0	9.8	-0.52	0.48	1.48	3.48	0.5%	-0.3%	-0.9%	0%	20%
Strategy 2 Purch.	Med. Allocation Max 16% Px Risk	2.01	100.49	4.2	-1.6	4.6	1.48	1.89	1.96	2.02	3.4%	-5.1%	-16.0%		
Strategy 4 Purch.	Allow Swapped Bonds Max 16% Px Bisk	2.20	100.77	4.5	-1.5	5.9	1.51	1.86	2.08	2.48	3.7%	-5.2%	-16.0%		
			200.77			0.0					<b>C</b> ,S	0.2/3			
Difference from Cash P	osition	1.86	0.49	4.2	-1.6	4.6	2.33	1.74	0.81	-1.13	3.4%	-5.1%	-16.0%		
Difference from Cash Po	osition	2.05	0.77	4.5	-1.5	5.9	2.36	1.71	0.93	-0.67	3.7%	-5.2%	-16.0%		

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(2) Analytics provided by Bloomberg, The Yield Book, and ZM Financial

(3) Information presented above regarding interest rate derivatives is considered general and factual. Please see further disclosures on the last page of this presentation.

Fixed Income Capital Markets

- While constructing your investment portfolio, what concerns you most in this environment:
- a) Earnings growth in light of slow loan growth
- b) Building a consistent cash flow profile to help provide liquidity to loan growth over the coming years
- c) Price volatility due to the duration that has been added within this low rate environment
- d) Credit considerations within credit exposed product (i.e., corporates, municipals, private label MBS, etc.)



Hedging Investment Securities with Pay Fixed Swaps



#### **Executive Overview**

#### **Strategy Overview**

Partial term fair value hedging allows a financial institution to create floating-rate or fixed-to-floating rate exposures by pairing an underlying fixed rate security with an interest rate swap. This strategy captures the spread, without the full benchmark interest rate risk, associated with longer duration securities.

#### **Discount Margins**

- On the longer end of the curve, certain Agency CMBS and municipal securities can offer compelling back-end discount margins, given the spreads that are offered
- Examples:
  - 10y agency bullet immediately swapped to +39 basis points over SOFR
  - Seasoned Freddie K A2, 1.43% fixed yield for 1 year, then floating at +25 basis points over SOFR (up to open window at 100cpy)
  - compare to the recent 10y K-deal floater issued on 11/4 at an immediate floating yield of 30d average SOFR + 22bps

#### Structure and Availability

- SOFR interest rate swaps presented in each of the following slides are using daily compounded SOFR in arrears- floating daily, capturing real time index movements
  - Whereas certain floating rate products like K-deal floaters noted above, which reference 30d average SOFR a backward looking average, creating a delayed response to index movements
- In terms of availability, the ability to create floating rate exposure by swapping fixed rate securities to floating also opens up greater access to product
  - See Appendix for further comments on relative value and availability of floating rate securities versus synthetic floaters (fixed swapped to floating) (see footnotes on following slides)
- A range of securities for each of these three sectors are shown swapped to floating and swapped to fixed-to-floating structures on the following slides (shown versus SOFR). As of 11/8, overnight SOFR was 0.05% IFEL | Fixed Income Page 30

<sup>(1)</sup> Information presented above regarding interest rate derivatives is considered general and factual. Please see further disclosures on the last page of this presentation.

<sup>(2)</sup> SOFR interest rate swaps presented in each of the following slides are using daily compounded SOFR in arrears

• The table below illustrates various floating and fixed-to-float options using fixed rate Agency bullets:

	Bond										Hedge		Hedged F	osition					
	Description	Price	Cpn	Yield	Mat	A∨g Life	Eff Dur	Px Chg -1	Px Chg +1	Px Chg +3	Structure	Cpn	Structure	Fixed Yld	SOFR DM	Eff Dur	Net Px Chg -1	Net Px Chg +1	Net Px Chg +3
1											3v	0.75	Flt		+-0.09	0.0	0.0%	0.0%	0.1%
	3y Bullet	100.13	0.70	0.66	3.0	3.0	2.9	3.0%	-2.9%	-8.3%	In 1y for 2y	1.02	Fx to Flt	0.66	+-0.36	1.0	1.0%	-1.0%	-2.9%
	,										In 2y for 1y	1.24	Fx to Flt	0.66	+-0.58	2.0	2.0%	-2.0%	-5.7%
											5y	1.02	Flt		+0.04	0.0	0.0%	0.0%	0.1%
	5y Bullet	100.54	1.16	1.05	5.0	5.0	4.8	4.9%	-4.7%	-13.3%	In 1y for 4y	1.23	Fx to Flt	1.05	+-0.18	1.0	1.0%	-1.0%	-2.8%
,											In 2y for 3y	1.36	Fx to Flt	1.05	+-0.31	2.0	2.0%	-1.9%	-5.6%
											7y spot	1.19	Flt		+0.35	0.3	0.3%	-0.3%	-0.7%
	7y Bullet	111.02	3.00	1.42	7.4	7.4	6.6	6.9%	-6.4%	-17.8%	In 1y for 6y	1.36	Fx to Flt	1.42	+0.06	1.1	1.2%	-1.1%	-3.3%
											In 2y for 5y	1.46	Fx to Flt	1.42	+-0.04	2.0	2.1%	-2.0%	-5.8%
		~				~ <b>-</b>		<b>a a a a</b>	<b>• -</b> •/	<b></b>	10y spot	1.29	Flt		+0.39	-0.2	-0.3%	0.3%	0.8%
	10y Bullet	97.77	1.31	1.71	9.7	9.7	9.1	9.6%	-8.7%	-23.6%	In 1y for 9y	1.44	Fx to Flt	1./1	+0.27	0.8	0.7%	-0.7%	-2.1%
1											In 2y for 8y	1.52		1.71	+0.19	1.8	1.7%	-1.7%	-4.9%
	10v Pullot	101 04	1 05	1 75	12.0	12.0	10.7	11 /0/	10 10/	27 09/	12y spot	1.30	FIL Ex to Elt	1 75	+0.4	-0.1	-0.2%	0.2%	0.7%
	12y Dullet	101.04	1.00	1.75	12.0	12.0	10.7	11.470	-10.1%	-27.0%	In 2y for 0y	1.50	FX to FIL	1.75	+0.19	1.0	1.770 2.7%	-1.0%	-4.0%
											17v spot	1.39	Flt	1.75	+0.10	-0.6	-0.7%	-2.0%	1.6%
	17v Bullet	100.07	1.98	1.98	16.7	16.7	14.2	15.4%	-13.1%	-33.8%	In 2v for 15v	1.59	Fx to Flt	1.98	+0.39	1.3	1.1%	-1.2%	-3.8%
									/ .	20.070	In 3y for 14v	1.61	Fx to Flt	1.98	+0.36	2.3	2.1%	-2.1%	-6.5%
																-			

(1) Indicative levels as of 11/8/21; may not represent executable levels.

Page 31 (2) Interest rate swap maturities match the maturity of the security.

(3) Price shocks represent an immediate parallel curve shock.

Agency Debentures

(4) Information presented above regarding interest rate derivatives is considered general and factual. Please see further disclosures on the last page of this presentation.

Fixed Income Capital Markets

**STIFEL** 

• The table below illustrates various floating and fixed-to-float options using fixed rate Agency CMBS:

Bond										Hedge		Hedged P	osition					
Description	Price	Cpn	Yield	Mat	A∨g Life	Eff Dur	Px Chg -1	Px Chg +1	Px Chg +3	Structure	Cpn	Structure	Fixed Yld	SOFR DM	Eff Dur	Net Px Chg -1	Net Px Chg +1	Net Px Chg +3
										9v spot	1 28	Flt		+0.43	0.4	0.5%	-0.3%	-0.9%
New Issue 10y	103.08	2.02	1.67	9.8	9.8	9.0	9.4%	-8.5%	-23.3%	In 1y for 8y	1.43	Fx to Flt	1.67	+0.25	1.3	1.4%	-1.3%	-3.6%
K A2		-	-							In 2y for 7y	1.51	Fx to Flt	1.67	+0.16	2.3	2.3%	-2.2%	-6.3%
0										8y spot	1.21	Flt		+0.33	0.6	0.6%	-0.5%	-1.1%
Seasoned 10y	98.55	1.38	1.56	8.6	8.6	8.2	8.5%	-7.8%	-21.4%	In 1y for 7y	1.38	Fx to Flt	1.56	+0.18	1.5	1.6%	-1.5%	-4.0%
K AZ										In 2y for 6y	1.48	Fx to Flt	1.56	+0.08	2.5	2.6%	-2.5%	-6.8%
										14y spot	1.40	Flt		+0.65	0.2	0.3%	-0.2%	-0.2%
New Issue Toy κ Δ2	101.85	2.18	2.03	14.8	14.6	12.7	13.6%	-11.8%	-30.9%	In 2y for 12y	1.57	Fx to Flt	2.03	+0.46	2.1	2.1%	-2.0%	-5.6%
										In 3y for 11y	1.60	Fx to Flt	2.03	+0.43	3.0	3.1%	-2.9%	-8.3%
Second 15v										8y spot	1.23	Flt		+0.65	1.1	1.2%	-1.0%	-2.7%
Seasoned 15y κ Δ2	117.94	3.90	1.71	9.1	8.9	7.8	8.1%	-7.4%	-20.4%	In 2y for 6y	1.49	Fx to Flt	1.71	+0.22	2.7	2.8%	-2.6%	-7.5%
										In 3y for 5y	1.53	Fx to Flt	1.71	+0.17	3.6	3.7%	-3.5%	-9.8%
										9y spot	1.28	Flt		+0.4	0.2	0.3%	-0.2%	-0.3%
10/9.5 DUS	100.43	1.71	1.68	9.9	9.7	9.1	9.5%	-8.6%	-23.4%	In 1y for 8y	1.43	Fx to Flt	1.68	+0.25	1.2	1.2%	-1.1%	-3.1%
										In 2y for 7y	1.51	Fx to Flt	1.68	+0.17	2.1	2.2%	-2.1%	-5.8%
										14y spot	1.40	Flt		+0.67	-0.4	-0.4%	0.4%	1.1%
15/14.5 DUS	102.36	2.21	2.04	14.5	13.9	12.1	12.9%	-11.2%	-29.6%	In 2y for 12y	1.57	Fx to Flt	2.04	+0.47	1.4	1.4%	-1.4%	-4.3%
										In 3y for 11y	1.60	Fx to Flt	2.04	+0.44	2.4	2.4%	-2.3%	-7.0%
										9y spot	1.28	Flt		+0.87	0.2	0.2%	-0.2%	-0.4%
CMBS: Conduit	103.16	2.47	2.11	42.9	9.8	8.8	9.2%	-8.4%	-22.9%	In 2y for 7y	1.51	Fx to Flt	2.11	+0.6	2.1	2.1%	-2.1%	-5.9%
										In 3y for 6y	1.55	Fx to Flt	2.11	+0.56	3.0	3.1%	-3.0%	-8.5%

(1) Indicative levels as of 11/8/21 (new issues priced at new issue spread); may not represent executable levels.

- (2) For Freddie K-Deal, 10y and 15y refer to the original maturity of the underlying collateral (not necessarily the remaining maturity or average life of the deal)
- (3) Interest rate swap maturities match the end of the call protection period of the security.
- (4) Price shocks represent an immediate parallel curve shock.

Page 32 (5) For amortizing bond structures, hedged position floating DMs and net price risk represent the hedged portion of the exposure (where the hedge notional is aligned to the current face outstanding at the end of the call protection period of the security)

(6) Information presented above regarding interest rate derivatives is considered general and factual. Please see further disclosures on the last page of this presentation.



Freddie K-Deal

Fannie DUS

Private Label

The table below illustrates various floating and fixed-to-float options using fixed rate, AA Municipals: ٠

Description         Price         Cpn         Yield         Mat         Avg Life         Eff Dur 1         Px Chg Px Chg Px Chg 1         Px Chg 1	В	ond										Hedge		Hedged P	osition						
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		Description	Price	Cpn	Yield	Mat	Avg Life	Eff Dur	Px Chg -1	Px Chg +1	Px Chg +3	Structure	Cpn	Structure	Fixed Yld	SOFR DM	Eff Dur	Net Px Chg -1	Net Px Chg +1	Net Px Chg +3	
$ \begin{array}{c} 14nc9 \ 3.0 & 111.46 & 3.00 & 2.08 & 14.3 & 9.3 & 8.7 & 8.6\% & -8.8\% & -27.1\% \\ 19nc9 \ 3.0 & 109.30 & 3.00 & 2.32 & 19.3 & 9.3 & 9.9 & 8.9\% & -10.9\% & -32.5\% \\ 19nc9 \ 3.0 & 109.30 & 3.00 & 2.32 & 19.3 & 9.3 & 9.9 & 8.9\% & -10.9\% & -32.5\% \\ 19nc9 \ 4.0 & 120.91 & 4.00 & 1.81 & 14.8 & 8.8 & 7.6 & 7.9\% & -7.3\% & -23.2\% \\ 15nc9 \ 4.0 & 120.91 & 4.00 & 1.81 & 14.8 & 8.8 & 7.6 & 7.9\% & -7.3\% & -23.2\% \\ 15nc9 \ 4.0 & 119.01 & 4.00 & 2.01 & 19.8 & 8.8 & 7.6 & 7.9\% & -7.4\% & -25.7\% \\ 20nc9 \ 4.0 & 119.01 & 4.00 & 2.01 & 19.8 & 8.8 & 7.6 & 7.9\% & -7.4\% & -25.7\% \\ 15nc9 \ 4.0 & 119.01 & 4.00 & 2.01 & 19.8 & 8.8 & 7.6 & 7.9\% & -7.4\% & -25.7\% \\ 7y \ bullet & 99.33 & 1.12 & 1.27 & 4.7 & 4.7 & 4.6 & 4.7\% & -4.5\% & -12.7\% \\ 10nc9 & 100.23 & 2.02 & 1.99 & 9.8 & 8.8 & 8.5 & 8.7\% & -8.3\% & -22.9\% \\ 14nc9 & 97.38 \ 2.18 \ 2.40 & 14.3 & 14.3 & 11.1 & 11.0\% & -11.2\% & -22.7\% \\ 14nc9 & 97.38 \ 2.18 \ 2.40 & 14.3 & 14.3 & 11.1 & 11.0\% & -11.2\% & -29.7\% \\ 14nc9 & 97.38 \ 2.18 \ 2.40 & 14.3 & 14.3 & 11.1 & 11.0\% & -11.2\% -29.7\% \\ 14nc9 & 97.38 \ 2.18 \ 2.40 \ 14.3 \ 14.3 \ 11.1 \ 11.0\% & -11.2\% & -29.7\% \\ 20nc9 \ 4.01176 \ 4.26 \ 2.40 \ 14.8 \ 1.48 \ 1.68\% & -12.7\% \\ 14nc9 \ 97.38 \ 2.18 \ 2.40 \ 14.3 \ 14.8 \ 10.8\% & -12.7\% \\ 14nc9 \ 97.38 \ 2.18 \ 2.40 \ 14.3 \ 14.8 \ 10.8\% & -12.7\% \\ 14nc9 \ 97.38 \ 2.18 \ 2.40 \ 14.3 \ 14.8 \ 10.8\% & -12.7\% \\ 14nc9 \ 97.38 \ 2.18 \ 2.40 \ 14.3 \ 14.8 \ 10.8\% & -12.7\% \\ 14nc9 \ 97.38 \ 2.18 \ 2.40 \ 14.3 \ 14.8 \ 10.8\% & -12.7\% \\ 14nc9 \ 97.38 \ 2.18 \ 2.40 \ 14.3 \ 14.8 \ 10.8\% & -28\% & -29.7\% \\ 14nc9 \ 97.38 \ 2.18 \ 2.40 \ 14.3 \ 14.8 \ 10.8\% & -12.7\% \\ 14nc9 \ 97.38 \ 2.18 \ 2.40 \ 14.3 \ 14.8 \ 10.8\% & -12.7\% \\ 14nc9 \ 97.38 \ 2.18 \ 2.40 \ 14.3 \ 14.8 \ 10.8\% & -12.7\% \\ 14nc9 \ 97.38 \ 2.18 \ 2.40 \ 14.3 \ 14.8 \ 10.8\% & -12.7\% \\ 14nc9 \ 97.38 \ 2.18 \ 2.40 \ 14.3 \ 14.8 \ 10.8\% & -2.4\% &$	_											9v spot	1 20	Flt		±0 02	0.8	0.4%	-1 3%	-6.5%	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		14nc9 3 0	111 46	3 00	2.08	14.3	93	87	8.6%	-8.8%	-27 1%	In 1v for 8v	1.29	Ex to Elt	2.08	+0.92	17	1.2%	-2.2%	-9.0%	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				0.00	2.00	1	0.0	0.7	0.070	0.070	211170	In 2v for 7v	1.52	Fx to Flt	2.08	+0.56	2.6	2.1%	-3.0%	-11.5%	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$												9y spot	1.29	Flt		+1.14	1.9	0.5%	-3.3%	-11.5%	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		19nc9 3.0	109.30	3.00	2.32	19.3	9.3	9.9	8.9%	-10.9%	-32.5%	In 1y for 8y	1.44	Fx to Flt	2.32	+0.88	2.8	1.4%	-4.1%	-14.0%	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $												In 2y for 7y	1.52	Fx to Flt	2.32	+0.8	3.6	2.3%	-5.0%	-16.6%	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$												9y spot	1.26	Flt		+0.75	0.7	0.7%	-0.7%	-5.1%	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		15nc9 4.0	120.91	4.00	1.81	14.8	8.8	7.6	7.9%	-7.3%	-23.2%	In 1y for 8y	1.42	Fx to Flt	1.81	+0.39	1.5	1.5%	-1.5%	-7.4%	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $												In 2y for 7y	1.51	Fx to Flt	1.81	+0.3	2.3	2.3%	-2.3%	-9.7%	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $												9y spot	1.26	Flt		+0.94	0.6	0.6%	-0.7%	-7.3%	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		20nc9 4.0	119.01	4.00	2.01	19.8	8.8	7.6	7.9%	-7.4%	-25.7%	In 1y for 8y	1.42	Fx to Flt	2.01	+0.59	1.4	1.4%	-1.5%	-9.6%	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$												In 2y for 7y	1.51	Fx to Flt	2.01	+0.5	2.2	2.2%	-2.3%	-12.0%	
5y bullet99.331.121.274.74.64.7%-4.5%-12.7%5y spot $0.99$ Fit $+0.27$ $-0.1$ $-0.1\%$ $0.1\%$ $0.3\%$ 7y bullet99.331.481.596.76.76.46.6%-6.1%-17.2% $\ln 1y$ for $4y$ 1.22Fx to Flt $1.27$ $+0.09$ $1.9$ $-1.9\%$ $-2.6\%$ 7y bullet99.331.481.596.76.76.46.6%-6.1%-17.2% $\ln 1y$ for $6y$ $1.34$ Fx to Flt $1.27$ $+0.09$ $1.9$ $-0.9\%$ $-0.9\%$ $-2.6\%$ 10nc9100.232.021.999.88.88.5 $8.7\%$ $-8.3\%$ $-22.9\%$ $1.45$ Fx to Flt $1.59$ $+0.14$ $1.8$ $1.8\%$ $-0.8\%$ $-0.8\%$ $-0.9\%$ 14nc997.382.182.4014.314.311.1 $11.0\%$ $-11.2\%$ $-29.7\%$ $1.29$ Fit $+1.08$ $2.1$ $1.6\%$ $-2.6\%$ $-6.1\%$ 14nc997.382.182.4014.314.311.1 $11.0\%$ $-11.2\%$ $-29.7\%$ $1.29$ Fit $+1.08$ $2.1$ $1.6\%$ $-2.6\%$ $-6.1\%$ 14nc997.382.182.4014.314.311.1 $11.0\%$ $-11.2\%$ $-29.7\%$ $-1.2\%$ $-1.2\%$ $-2.6\%$ $-6.1\%$ 14nc997.382.182.4014.314.311.1 $11.0\%$ $-11.2\%$ $-29.7\%$ $-1.2\%$ $-1.2\%$ $-2.6\%$	_												0.00			0.07		0.40/	0.40/	0.001	
Sy bullet       99.33       1.12       1.27       4.7       4.7       4.6       4.7%       -4.5%       -12.7%       In 1y for 4y       1.22       Fx to Fit       1.27       40.05       0.9       0.9%       -0.9%       -2.6%         In 2y for 3y       1.36       Fx to Fit       1.27       +0.05       0.9       0.9%       -0.9%       -2.6%         Ty bullet       99.33       1.48       1.59       6.7       6.7       6.4       6.6%       -6.1%       -17.2%       Fx to Fit       1.27       +0.09       1.9       1.9%       -1.9%       -5.5%         Ty bullet       99.33       1.48       1.59       6.7       6.7       6.4       6.6%       -6.1%       -17.2%       Fx to Fit       1.27       +0.09       1.9       1.9%       -1.9%       -5.5%         Ty bullet       99.33       1.48       1.59       6.7       6.7       6.4       6.6%       -6.1%       -17.2%       In 1y for 6y       1.34       Fx to Fit       1.59       +0.14       1.8       1.8%       -1.8%       -2.6%         10nc9       100.23       2.02       1.99       9.8       8.8       8.5       8.7%       -8.3%       -22.9%       Fx to Fit <td></td> <td>C. bullet</td> <td>00.00</td> <td>1 10</td> <td>4.07</td> <td>4 7</td> <td>4 7</td> <td>4.0</td> <td>4 70/</td> <td>4 50/</td> <td>40 70/</td> <td>5y spot</td> <td>0.99</td> <td>Fit</td> <td>4.07</td> <td>+0.27</td> <td>-0.1</td> <td>-0.1%</td> <td>0.1%</td> <td>0.3%</td>		C. bullet	00.00	1 10	4.07	4 7	4 7	4.0	4 70/	4 50/	40 70/	5y spot	0.99	Fit	4.07	+0.27	-0.1	-0.1%	0.1%	0.3%	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		5y bullet	99.33	1.12	1.27	4.7	4.7	4.6	4.7%	-4.5%	-12.7%	In 1y for 4y	1.22	FX to Fit	1.27	+0.05	0.9	0.9%	-0.9%	-2.6%	
7y bullet       99.33       1.48       1.59       6.7       6.7       6.4       6.6%       -6.1%       -17.2%       In 1y for 6y       1.34       Fit $+0.42$ $-0.2$ $-0.1\%$ $0.2\%$ $0.5\%$ 7y bullet       99.33       1.48       1.59       6.7       6.7       6.4       6.6% $-6.1\%$ $-17.2\%$ In 1y for 6y       1.34       Fx to Flt $1.59$ $+0.25$ $0.8$ $0.8\%$ $-2.4\%$ 10nc9       100.23       2.02       1.99       9.8       8.8       8.5 $8.7\%$ $-8.3\%$ $-22.9\%$ In 1y for 8y $1.42$ Fx to Flt $1.99$ $+0.48$ $2.1$ $2.0\%$ $-0.8\%$ $-2.4\%$ 10nc9       100.23       2.02 $1.99$ $9.8$ $8.8$ $8.7\%$ $-8.3\%$ $-22.9\%$ In 1y for 8y $1.42$ Fx to Flt $1.99$ $+0.48$ $2.1$ $2.0\%$ $-3.8\%$ $-3.8\%$ 14nc9       97.38 $2.18$ $2.40$ $14.3$ $11.1$ $11.0\%$ $-11.2\%$ $-29.7\%$ In 1y for 8y $1.44$ Fx to Flt $2.40$ $+0.48$ $2.1$												In Zy IOF 3y	1.30		1.27	+-0.09	1.9	1.9%	-1.9%	-5.5%	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		7y bullot	00.33	1 / 9	1 50	67	67	6.4	6 6%	6 10/	17 20/	7 y Spol	1.10	FIL Ex to Elt	1 50	+0.42	-0.2	-0.1%	0.2%	0.5%	
10nc9       100.23       2.02       1.99       9.8       8.8       8.5       8.7%       -8.3%       -22.9%       In 1y for 8y       1.42       Fit       +0.73       0.2       0.0%       -0.4%       -0.9%         10nc9       100.23       2.02       1.99       9.8       8.8       8.5       8.7%       -8.3%       -22.9%       In 1y for 8y       1.42       Fit       +0.73       0.2       0.0%       -0.4%       -0.9%         14nc9       97.38       2.18       2.40       14.3       11.1       11.0%       -11.2%       -29.7%       Fit       1.99       +0.48       2.1       2.0%       -2.3%       -6.5%         9y spot       1.29       Fit       +1.08       2.1       1.6%       -2.6%       -6.1%         14nc9       97.38       2.18       2.40       14.3       11.1       11.0%       -11.2%       -29.7%       Fit       +1.08       2.1       1.6%       -2.6%       -6.1%         19 spot       1.27       Fx to Fit       2.40       +0.96       3.1       2.6%       -3.6%       -9.0%         120 co       101.78       2.83       2.60       19.8       8.8       11.8       10.8%       -12		ry bullet	99.55	1.40	1.59	0.7	0.7	0.4	0.070	-0.170	-17.2/0	In Ty for 5y	1.34	Ex to Elt	1.59	+0.23	1.8	1.8%	-0.0%	-2.4 /0	
10nc9       100.23       2.02       1.99       9.8       8.8       8.5       8.7%       -8.3%       -22.9%       In 1y for 8y       1.42       Fx to Flt       1.99       +0.57       1.2       1.0%       -1.3%       -3.8%         14nc9       97.38       2.18       2.40       14.3       11.1       11.0%       -11.2%       -29.7%       Flt       +1.08       2.1       1.6%       -2.6%       -6.1%         14nc9       97.38       2.18       2.40       14.3       11.1       11.0%       -11.2%       -29.7%       Flt       +1.08       2.1       1.6%       -2.6%       -6.1%         19y spot       1.29       Flt       +1.08       2.1       1.6%       -2.6%       -6.1%         19y spot       1.29       Flt       +1.08       2.1       1.6%       -2.6%       -6.1%         19y spot       1.29       Flt       +1.08       2.1       2.6%       -3.6%       -9.0%         In 2y for 7y       1.52       Fx to Flt       2.40       +0.96       3.1       2.6%       -3.6%       -11.9%         9y spot       1.27       In 1y for 8y       1.42       Fx to Flt       2.60       +1.18       4.5       3	_											9v spot	1.45	Flt	1.00	+0.73	0.2	0.0%	-0.4%	-0.9%	
In tyrns of y       International transmission       International transmission <th coldstatrational="" td="" trans<=""><td></td><td>10nc9</td><td>100 23</td><td>2 02</td><td>1 99</td><td>98</td><td>88</td><td>85</td><td>8 7%</td><td>-8.3%</td><td>-22.9%</td><td>In 1y for 8y</td><td>1.27</td><td>Ex to Elt</td><td>1 99</td><td>+0.57</td><td>1.2</td><td>1.0%</td><td>-1.3%</td><td>-3.8%</td></th>	<td></td> <td>10nc9</td> <td>100 23</td> <td>2 02</td> <td>1 99</td> <td>98</td> <td>88</td> <td>85</td> <td>8 7%</td> <td>-8.3%</td> <td>-22.9%</td> <td>In 1y for 8y</td> <td>1.27</td> <td>Ex to Elt</td> <td>1 99</td> <td>+0.57</td> <td>1.2</td> <td>1.0%</td> <td>-1.3%</td> <td>-3.8%</td>		10nc9	100 23	2 02	1 99	98	88	85	8 7%	-8.3%	-22.9%	In 1y for 8y	1.27	Ex to Elt	1 99	+0.57	1.2	1.0%	-1.3%	-3.8%
14nc9       97.38       2.18       2.40       14.3       11.1       11.0%       -11.2%       -29.7%       Fit       +1.08       2.1       1.6%       -2.6%       -6.1%         9y spot       1.29       Fit       +1.08       2.1       1.6%       -2.6%       -6.1%         9y spot       1.29       Fit       2.40       +0.96       3.1       2.6%       -3.6%       -9.0%         In 1y for 8y       1.44       Fx to Fit       2.40       +0.96       3.1       2.6%       -3.6%       -9.0%         In 2y for 7y       1.52       Fx to Fit       2.40       +0.88       4.1       3.6%       -4.6%       -11.9%         9y spot       1.27       In 1y for 8y       1.42       Fx to Fit       2.60       +1.18       4.5       3.2%       -5.8%       -15.2%		101100	100.20	2.02		0.0	0.0	0.0	0.1 /0	0.070	LE.0 /0	In 2v for 7v	1.51	Fx to Flt	1.99	+0.48	2.1	2.0%	-2.3%	-6.5%	
14nc9       97.38       2.18       2.40       14.3       11.1       11.0%       -11.2%       -29.7%       In 1y for 8y       1.44       Fx to Flt       2.40       +0.96       3.1       2.6%       -3.6%       -9.0%         20nc9       101.78       2.83       2.60       19.8       8.8       11.8       10.8%       -12.7%       -34.0%       1.42       Fx to Flt       2.40       +0.96       3.1       2.6%       -3.6%       -9.0%         20nc9       101.78       2.83       2.60       19.8       8.8       11.8       10.8%       -12.7%       -34.0%       1.42       Fx to Flt       2.60       +1.18       4.5       3.2%       -5.8%       -15.2%												9v spot	1.29	Flt		+1.08	2.1	1.6%	-2.6%	-6.1%	
In 2y for 7y       1.52       Fx to Flt       2.40       +0.88       4.1       3.6%       -4.6%       -11.9%         20nc9       101.78       2.83       2.60       19.8       8.8       11.8       10.8%       -12.7%       -34.0%       1.42       Fx to Flt       2.60       +1.18       4.5       3.2%       -5.8%       -15.2%		14nc9	97.38	2.18	2.40	14.3	14.3	11.1	11.0%	-11.2%	-29.7%	In 1y for 8y	1.44	Fx to Flt	2.40	+0.96	3.1	2.6%	-3.6%	-9.0%	
Spot         1.27         Flt         +1.36         3.6         2.3%         -4.9%         -12.5%           20nc9         101.78         2.83         2.60         19.8         8.8         11.8         10.8%         -12.7%         -34.0%         In 1v for 8v         1.42         Fx to Flt         2.60         +1.18         4.5         3.2%         -5.8%         -15.2%												In 2y for 7y	1.52	Fx to Flt	2.40	+0.88	4.1	3.6%	-4.6%	-11.9%	
20nc9 101.78 2.83 2.60 19.8 8.8 11.8 10.8% -12.7% -34.0% In 1v for 8v 1.42 Fx to Flt 2.60 +1.18 4.5 3.2% -5.8% -15.2%												9y spot	1.27	Flt		+1.36	3.6	2.3%	-4.9%	-12.5%	
		20nc9	101.78	2.83	2.60	19.8	8.8	11.8	10.8%	-12.7%	-34.0%	In 1y for 8y	1.42	Fx to Flt	2.60	+1.18	4.5	3.2%	-5.8%	-15.2%	
In 2y for 7y 1.51 Fx to Flt 2.60 +1.09 5.5 4.2% -6.7% -18.0%												In 2y for 7y	1.51	Fx to Flt	2.60	+1.09	5.5	4.2%	-6.7%	-18.0%	

(1) Indicative levels as of 11/8/21; may not represent executable levels.

(2) Taxable equivalent yields represent zero cost of funds and 21% marginal federal tax rate.
 (3) Interest rate swap maturities match the first call date of the security.

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(4) Price shocks represent an immediate parallel curve shock.

(5) Information presented above regarding interest rate derivatives is considered general and factual. Please see further disclosures on the last page of this presentation.



Tax-Exempt Municipal

Taxable Muni

Floating Rate Security	Approximate DM/ Comment on Availability	Synthetic Fixed Rate Swapped to Floating Comp	Approximate DM
Agency SOFR Floater	Very limited availability	Fixed Rate Agency Debenture Swapped to Floating	SOFR +39 (10y bullet)
Post-Reset Hybrid ARM	Very limited availability		
Agency CMO SOFR Floater	SOFR + 40 (3% cap), 30y 3.0 loan bal collateral		
HECM Floating Pool	Very limited availability, super high premium		
HECM Floating CMO	SOFR + 25 @ 100hpc, high premium, generally 1mL or 1yL floating collateral		
Par SBA Floater	Very limited availability		
Premium SBA Floater	49bp yield		
Freddie K-Deal SOFR Floater	SOFR +20 to +24; Limited secondary supply	Freddie K-Deal A2/AM Fixed Rate Swapped to Floating	SOFR +33 to +65
Fannie ACE Floater	1mL+30; fixed rate collat swapped to floating in deal structure		
Fannie DUS TBA SOFR Floater	SOFR +20 to +22	Fannie DUS Fixed Rate Swapped to Floating	SOFR +40 for 10/9.5

STIFEL | Fixed Income Capital Markets

Page 34 (1) Indicative pricing; may not be executable levels (2) Discount margins subject to prepayment assumptions on the underlying exposure (3) Information presented above regarding interest rate derivatives is considered general and factual. Please see further disclosures on the last page of this presentation.

Floating Rate Security	Approximate DM/ Comment on Availability	Synthetic Fixed Rate Swapped to Floating Comp	Approximate DM
Student Loan ABS	Discounts 1mL +40 to +50, premiums 1mL +50 to +65, limited availability and in small pieces		
Corporate Floater (Financial)	SOFR + 59 (5y)	Corporate Fixed Rate Swapped to Floating	SOFR +43 (5y)
AA/AAA CLO	3mL + 115 (AAA) to +168 (AA)		
Private Label CMBS Floater	1mL + 65	Private Label CMBS Fixed Rate Swapped to Floating	SOFR +87
Municipal VRDOs	Money market fund asset, weekly or monthly reset on SIFMA, 2-8 bp yield	Taxable and or Tax-exempt Municipal swapped to floating	SOFR +75 to +108 (for AA 15nc10, depending on coupon



Page 35 (1) Indicative pricing; may not be executable levels (2) Discount margins subject to prepayment assumptions on the underlying exposure (3) Information presented above regarding interest rate derivatives is considered general and factual. Please see further disclosures on the last page of this presentation.

Last of Layer Hedging - FASB Accounting Expansion



# Portfolio Layer Approach: Last Dollar Outstanding Analysis

- As stated in the codification, an analysis must be completed that supports the last dollar amount will be outstanding at the stated maturity of the hedging relationship based upon current expectations of the portfolio or collateral performance.
- The chart below illustrates the performance of Sample Institution's \$100mm first mortgage 3.15 WAC fixed loan pool (which includes both newer and more seasoned loans and excludes loans with maturities in the next five years) using the ZM prepayment expectations of 11cpr/5.4y WAL. This analysis would be completed quarterly to serve as part of the hedge effectiveness testing for the associated hedge.



(1) <u>http://www.fasb.org/jsp/FASB/Document\_C/DocumentPage?cid=1176169282347&acceptedDisclaimer=true</u>

(2) Information presented above regarding interest rate derivatives is considered general and factual. Please see further disclosures on the last page of this presentation.

#### Portfolio Layer Method Update

#### Proposed Portfolio Layer Method

- In May of this year (2021), Financial Accounting Standards Board (FASB) released its proposed Accounting Standards Update (ASU) entitled "Derivatives and Hedging (Topic 815) - Fair Value Hedging - Portfolio Layer Method."<sup>1</sup>
- This proposed codification expands on the current Last of Layer Hedging rule and would allow for multiple layers (swaps) with different notional and maturity dates underlying a hedged loan pool, providing institutions a better hedging tool to increase risk management effectiveness.
- The proposed rule if finalized in its current form would also allow banks and financial institutions a one time chance to reclassify debt securities from held to maturity (HTM) to available for sale (AFS) in transition if the reclassified securities would qualify to be hedged under the portfolio layer method and per the November 10, 2021 board meeting tentative decisions, is hedged within 30 days of adoption.<sup>2</sup>

#### **Application**

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- The Portfolio Layer hedging method creates a more effective hedging tool for fixed rate pre-payable financial assets, allowing institutions to better manage fair value changes and hedge interest rate exposure to:
  - Consumer Loan Pools (Fixed Rate Mortgages, Auto Loan pools etc.)
  - AFS Mortgage-Backed Securities held in Investment Portfolio



#### (1) https://www.fasb.org/cs/Satellite?c=FASBContent C&cid=1176176621078&pagename=FASB%2FFASBContent C%2FNewsPage

(2) https://www.fasb.org/jsp/FASB/Document\_C/DocumentPage?cid=1176176621264&acceptedDisclaimer=true

# Portfolio Layer Approach: Last Dollar Outstanding Analysis

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<sup>(1) &</sup>lt;u>http://www.fasb.org/jsp/FASB/Document\_C/DocumentPage?cid=1176169282347&acceptedDisclaimer=true</u>

<sup>(2)</sup> Information presented above regarding interest rate derivatives is considered general and factual. Please see further disclosures on the last page of this presentation.

- Would you consider hedging in the current environment in light of recent inflation/rate posturing by the Federal Reserve and the upcoming FASB ruling on the portfolio layer method?
- a) Yes

b) No



# PPP Loan Sale and Current Loan Offerings



# **Recently PPP Pool Sale**

• An institution recently sold their PPP loan pool through Stifel Loan group.

#### Why Sell?

- Earlier recognition of fee income
- Delever the institution and drop below FDICIA threshold
- In 2020 the FDIC gave relief to institutions from the Part 363 Audit and Reporting requirements due to institutions experiencing growth due to participation in PPP.
  - However, without the extension of this relief into 2022 (which has yet to be provided), the FDICIA requirements for an institution greater than \$500mm or \$1billion in total assets on the first day of their fiscal year beginning in 2022 would be subject to these

	Minimum A	mount: All or none				
Loan both Locat	Purpose: Relief program to provide small business first and second draw loans. ion: 87% PA	oans to eligible borrowers affected by the COVID-19 pand	emic. Include			
Loan 2/16/	Loan Portfolio Size: \$56,334,408 Weighted Average Coupon: 1.00% Weighted Loan Size: \$65,202 Weighted Maturity Date: 2/16/26 Amortization: Monthly (deferred during advance and 10 month grace period) Pass Through Rate: 1.00%					
Amor						
Sale F	Price: \$99.50 + Accrued Interest to Date of Sale Yield	to maturity (assumes no forgiveness): 1.24%				
	Offered as a whole loan, servicing rele	eased by the originator (as required by the SBA)				
Purcl with	haser Yield Scenarios with purchase at \$99.50 various forgiveness assumptions	assuming 1% pass through cpn and 2/16/26 maturity				
60% forgi	iveness in January 2022/40% no forgiveness	1.51% yield/ 1.03 WAL 70% forgiveness in Januar	y 2022/30%			
no forgiv	veness 1.63% yield/0.83 WAL 80% f yie *Scenarios are meant to illustrate only: **Cash flow assumptions used t	orgiveness in January 2022/20% no forgiveness I d/ 0.63 WAL a few of many possible outcomes, not an exhaustive list o arrive at yields can be provided upon request	1.82%			
	PPP Loans are 100% SBA Guaranteed (full faith an	d credit of the US Government).				
	Only SBA Approved Lenders are eligible purchaser	°S				
	Each loan has a 2-year final or a 5-year maturity	and a 1% coupon. Loans may pay off sooner if the loan me	ets the SBA			
fo	rgiveness criteria.					
	Loans may be prepaid in full or in part by the SBA	at any time.				
		aby IOIs will be executed by buyers subject to completion	of due			

SBA Paycheck Protection Program Pool Size: \$56,334,408

 As a result, clients slightly above key FDICIA thresholds are selling PPP portfolios in order to deleverage the institution prior to January 1, 2022

#### Why Purchase?

• Place excess cash into earning assets with shorter duration relative to current investment environment



## Loan Offering- C&I Loan Portfolio

Below is a current live loan offering from Stifel's Loan Trading Desk ٠

		F	or Institutional Investors Or	ly		011 10000			
CTITI						Offer # 3023	Transaction Notes		
SITFEL Fixed Income Capital Markets			Whole Loan Offering		1. Our client is seeking lending partners to fund minimum commitments of \$2-3 million/month of twoically 5 year term forward flow IVE / Fortility treatment consumer				
				November 2021	financing Offered Servicing Retained client will work with Credit Union lenders to				
		\$76 Million Flo	pating Rate C&I	l oan Portfolio	, ,		memberize borrowers. Client is targeting a \$30-50 mm portfolio within 18 months.		
	Strong Cash F	low Coverage	Negotiated Tra	nsaction - Ser	, vicing Release	d	2 Our client is a fintech platform which provides concurrent financing to prime borrowers		
		Medical Indust	ry Concentratio	n - Bank Selle	r		for IVF / Fertility treatment bundled with valued added services in fertility coaching and		
		Dortfo	lie Characteri	ation		l	payment services (direct disbursement to providers).		
		Portio	lio Characteri	SUCS	400.044.045				
	Original Amount				\$88,314,315		From inception through September 2021, seller has originated over \$32 MM: \$3 MM in		
	Current Princip	al Balance		\$76,050,694			2018, \$6.5 MM in 2019, \$7.5 MM in 2020, and anticipates exceeding \$25 MM in 2021.		
	Unfunded Avail	Unfunded Available			\$5,165,138		Expected annual loss rates range from 1.33% to approximately 2.00%. Historical lifetime		
	Number of Loar	ns			23		prepay speed ranges from ~8 to ~14 CPR to date.		
	Number of Lend	ding Relationships			6		2. The product structure includes direct dishursement of leap proceeds to fastility slinics		
	Average Loan S	Average Loan Size					5. The product structure includes direct disbursement of loan proceeds to fertility clinics, pharmacies and direct to borrower over the first 60-90 days of the contract (similar to a		
	Average Relationship Size				\$12,675,116		delayed-draw structure). The payment and interest rate remain fixed based on the		
WAC				4.667%		approved maximum loan amount - the cumulative principal disbursed and final			
	WA Margin (Indexed mostly to 1M LIBOR) WA Seasoning 26			4.223%		amortization are determined at end of 90 day draw period.			
					26 months		4. Max DTI is 45%. Any credit applicant with a FICO score below 740 must have reported		
	WA Months to F	Rate Reset (Mostly	1M LIBOR)		0 months		income verified by providing a W2, 1040, 1099, or recent pay stub. Applicant cannot be		
	WA Maturity				34 months		bankrupt within last two years, must be US citizen / permanent resident / current visa with		
	WA Remaining Months to Amortization				131 months		ACH payments.		
	WA Adj. EBITDA / Annual P&I *			5.40x					
* EBITDA is annualized and based on Summer 2021 YTD borrower financials.							5. Top States: CA (29%), TX (19%), CO (9%), PA (5%), NY (5%), VA (4%), 37 Other States		
	Annuar Forns carculated based the annualized last payment made at the loan level						(30%).		
	Custom Yield	d Table - Servicing	Retained (1.50%	Servicing), Assu	mes No Loss	6. Stifel's standard confidentiality agreement is acceptable for this transaction. Detailed			
	Price	CPR	CPR	CPR	CPR		due diligence materials, including historical cumulative loss and prepayment performance,		
	103.00	6	8	12	15		will be available to potential lending partners under NDA.		
	BE Yield	7.144%	7.099%	7.004%	6.928%				
	Avg Life	2.48	2.39	2.23	2.12				
	Duration	2.20	2.13	2.00	1.91				
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### Loan Offering - Financing Partnership

#### • Below is a current live loan offering from Stifel's Loan Trading Desk

For	Institutional Investors Only
	Offer # 3022
STIFEL Fixed Income Capital Markets	Forward Flow Opportunity
	October 2021

\$2-3 Million/Month Forward Flow - Fertility Treatment Consumer Financing Short Duration | Prime Credit Profile | Servicing Retained

Portfolio Characteristics				
Portfolio Target	\$30,000,000			
Average Loan Size	~\$18,000			
Average Gross Fixed Rate Coupon	9.900%			
Average Net Fixed Rate Coupon (1.50% Servicing Fee)	8.400%			
Average Borrower FICO (Minimum 680 Required)	750			
Average Original Term	5 years			
Average Income (Minimum \$55K for Patient + Partner)	\$132,000			

Custom Yield Table - Servicing Retained (1.50% Servicing), Assumes No Loss						
Price	CPR	CPR	CPR	CPR		
103.00	6	8	12	15		
BE Yield	7.144%	7.099%	7.004%	6.928%		
Avg Life	2.48	2.39	2.23	2.12		
Duration	2.20	2.13	2.00	1.91		

#### Transaction Notes

 Our client is seeking lending partners to fund minimum commitments of \$2-3 million/month of typically 5 year term, forward flow IVF / Fertility treatment consumer financing. Offered Servicing Retained, client will work with Credit Union lenders to memberize borrowers. Client is targeting a \$30-50 mm portfolio within 18 months.
 Our client is a fintech platform which provides consumer financing to prime borrowers for IVF / Fertility treatment bundled with valued added services in fertility coaching and payment services (direct disbursement to providers).

From inception through September 2021, seller has originated over \$32 MM: \$3 MM in 2018, \$6.5 MM in 2019, \$7.5 MM in 2020, and anticipates exceeding \$25 MM in 2021.

Expected annual loss rates range from 1.33% to approximately 2.00%. Historical lifetime prepay speed ranges from ~8 to ~14 CPR to date.

3. The product structure includes direct disbursement of loan proceeds to fertility clinics, pharmacies and direct to borrower over the first 60-90 days of the contract (similar to a delayed-draw structure). The payment and interest rate remain fixed based on the approved maximum loan amount - the cumulative principal disbursed and final amortization are determined at end of 90 day draw period.

4. Max DTI is 45%. Any credit applicant with a FICO score below 740 must have reported income verified by providing a W2, 1040, 1099, or recent pay stub. Applicant cannot be bankrupt within last two years, must be US citizen / permanent resident / current visa with term equal to or greater than the duration of the loan. 99% of borrowers are set up for ACH payments.

5. Top States: CA (29%), TX (19%), CO (9%), PA (5%), NY (5%), VA (4%), 37 Other States (30%).

6. Stifel's standard confidentiality agreement is acceptable for this transaction. Detailed due diligence materials, including historical cumulative loss and prepayment performance, will be available to potential lending partners under NDA.

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