

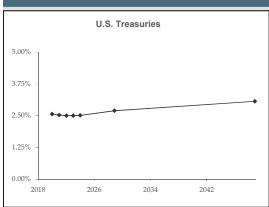
## YIELD ANALYSIS

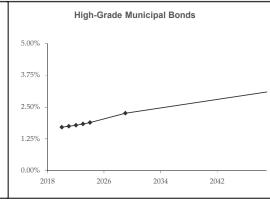
January 15, 2019

	U.S. Treasury Y	ields
Coupon	Maturity	YTM
0.000%	01/02/20	2.56%
2.500%	12/31/20	2.52%
2.500%	01/15/22	2.50%
2.125%	12/31/22	2.50%
2.625%	12/31/23	2.51%
3.125%	11/15/28	2.70%
3.375%	11/15/48	3.06%

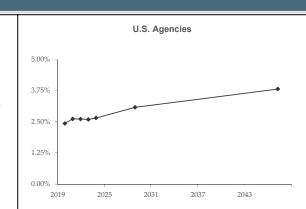
Municipal Bond Yields <sup>1</sup>			
Maturity	YTM	Tax-Equiv. <sup>2</sup>	
01/14/20	1.71%	2.44%	
01/14/21	1.75%	2.49%	
01/14/22	1.79%	2.55%	
01/14/23	1.84%	2.62%	
01/14/24	1.89%	2.70%	
01/14/29	2.26%	3.23%	
01/14/49	3.09%	4.42%	

U.S. Agency Yields - Active Bonds					
Agency	Coupon	Maturity	Price	YTM	To Muni (bp)
FHLB	2.400%	12/17/19	\$100.00	2.43%	-1
FNMA	1.875%	12/28/20	\$98.60	2.62%	+12
FHLB	2.625%	12/10/21	\$100.04	2.61%	+6
FHLB	3.000%	12/09/22	\$101.49	2.59%	-3
FFCB	3.500%	12/20/23	\$103.89	2.65%	-5
FHLB	3.500%	12/08/28	\$103.54	3.08%	-15
FFCB	3.580%	04/11/47	\$95.64	3.81%	-60

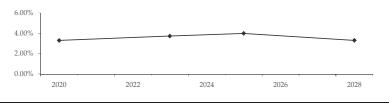




Current Yield Curves



Corporate Bond Yields					
Description	Price	YTM	To Treasury (bp)		
JPM (A2/A-) 4.25% 10/15/2020	\$101.58	3.31%	+78		
C (Baa1 *+/BBB+) 3.88% 10/25/2023	\$100.61	3.73%	+123		
BAC (A3 *+/A-) 3.88% 8/1/2025	\$99.34	3.99%	+148		
MS (A3/BBB+) 4.02% 5/11/2028	\$100.04	3.31%	+62		
C 000/					
6.00%					



Bullet & Callable Agency Bond Yields <sup>3</sup>					
Description	Call Date	Price	YTM	YTW	
FFCB 1.16% 11/1/2019	N/A	\$98.82	2.67%	2.67%	
FHLB 2.84% 9/25/2020	09/25/19	\$99.87	2.89%	2.89%	
FHLMC 3.375% 8/16/2023	02/16/19	\$100.04	3.36%	2.89%	
FFCB 3.7% 10/4/2028	10/04/23	\$99.69	3.73%	3.74%	
6.00%					

