

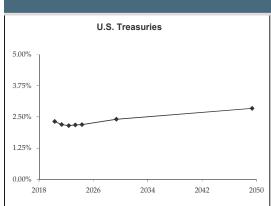
## YIELD ANALYSIS

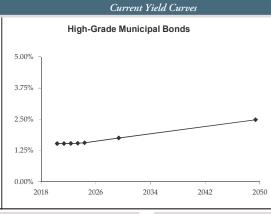
May 14, 2019

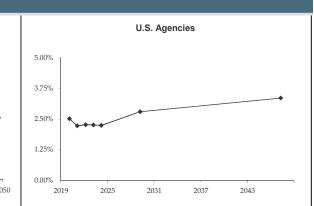
U.S. Treasury Yields				
Coupon	Maturity	YTM		
0.000%	04/23/20	2.32%		
2.250%	04/30/21	2.19%		
2.125%	05/15/22	2.15%		
2.750%	04/30/23	2.18%		
2.250%	04/30/24	2.19%		
2.375%	05/15/29	2.41%		
2.875%	05/15/49	2.84%		

Municipal Bond Yields <sup>1</sup>			
Maturity	YTM	Tax-Equiv. <sup>2</sup>	
05/13/20	1.53%	2.18%	
05/13/21	1.53%	2.18%	
05/13/22	1.53%	2.19%	
05/13/23	1.54%	2.20%	
05/13/24	1.56%	2.23%	
05/13/29	1.75%	2.50%	
05/13/49	2.48%	3.54%	

U.S. Agency Yields - Active Bonds					
Agency	Coupon	Maturity	Price	YTM	To Muni (bp)
FNMA	1.500%	02/28/20	\$99.22	2.51%	+33
FNMA	1.375%	02/26/21	\$98.53	2.22%	+4
FHLB	2.250%	03/11/22	\$99.96	2.26%	+7
FHLB	2.750%	03/10/23	\$101.79	2.26%	+6
FHLB	3.250%	03/08/24	\$104.60	2.24%	+1
FFCB	3.000%	03/14/29	\$101.73	2.80%	+29
FFCB	3.580%	04/11/47	\$103.70	3.35%	-19







Description	Price	YTM	To Treasury (bp)
WFC (A2/A-) 2.5% 3/4/2021	\$99.52	2.77%	+58
JPM (A2/A-) 3.56% 4/23/2024	\$101.86	3.10%	+92
BAC (A2/A-) 3.5% 4/19/2026	\$101.30	3.29%	+110
MS (A3/BBB+) 4.05% 3/13/2029	\$100.89	3.89%	+149
4.00% - 2.00% -	•	_	
2020 2022	2024 20	26	2028

Corporate Bond Yields

Description	Call Date	Price	YTM	YTW
FHLB 2.58% 3/20/2020	09/20/19	\$99.97	2.57%	2.57%
FHLB 2.65% 3/11/2021	06/11/19	\$99.97	2.65%	2.65%
FHLMC 3.05% 3/11/2024	06/11/19	\$100.07	3.02%	2.08%
FHLB 3.04% 2/28/2029	05/21/19	\$99.95	3.05%	3.05%
4.00% - 2.00% - 0.00%				
2019 2021	2023	2025	2027	2029

Bullet & Callable Agency Bond Yields <sup>3</sup>