

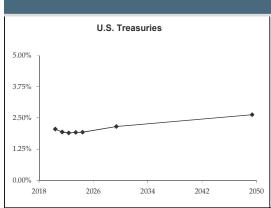
YIELD ANALYSIS

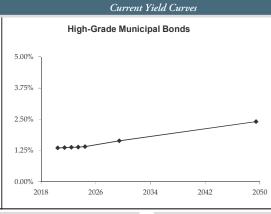
June 11, 2019

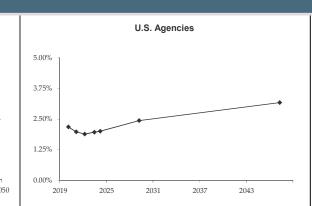
U.S. Treasury Yields			
Coupon	Maturity	YTM	
0.000%	05/21/20	2.05%	
2.125%	05/31/21	1.93%	
2.125%	05/15/22	1.90%	
2.750%	05/31/23	1.92%	
2.000%	05/31/24	1.93%	
2.375%	05/15/29	2.16%	
2.875%	05/15/49	2.63%	

Municipal Bond Yields ¹			
Maturity	YTM	Tax-Equiv. ²	
06/10/20	1.35%	1.93%	
06/10/21	1.37%	1.95%	
06/10/22	1.38%	1.97%	
06/10/23	1.39%	1.98%	
06/10/24	1.41%	2.01%	
06/10/29	1.64%	2.34%	
06/10/49	2.41%	3.44%	

U.S. Agency Yields - Active Bonds					
Agency	Coupon	Maturity	Price	YTM	To Muni (bp)
FNMA	1.500%	02/28/20	\$99.53	2.18%	+24
FNMA	1.375%	02/26/21	\$99.00	1.97%	+2
FHLB	2.250%	03/11/22	\$100.97	1.88%	-8
FHLMC	2.750%	06/19/23	\$103.05	1.96%	-2
FHLB	3.250%	03/08/24	\$105.64	2.00%	-1
FFCB	3.000%	03/14/29	\$104.90	2.43%	+9
FFCB	3.580%	04/11/47	\$107.14	3.17%	-27







Description	Price	YTM	To Treasury (bp)
WFC (A2/A-) 2.5% 3/4/2021	\$99.93	2.54%	+60
JPM (A2/A-) 3.56% 4/23/2024	\$102.82	2.86%	+94
BAC (A2/A-) 3.5% 4/19/2026	\$102.65	3.07%	+114
MS (A3/BBB+) 4.05% 3/13/2029	\$103.19	3.60%	+145
6.00% - 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	\$100.01	2.51%	2.51%
FHLB 1.5% 6/30/2021	06/18/19	\$98.31	2.27%	2.27%
FHLMC 2.82% 5/20/2024	11/20/19	\$100.12	2.79%	2.55%
FHLB 3.04% 2/28/2029	06/18/19	\$99.06	3.15%	3.15%
4.00% - 2.00% - 0.00%	•			
2019 2021	2023	2025	2027	2029

Bullet & Callable Agency Bond Yields ³