

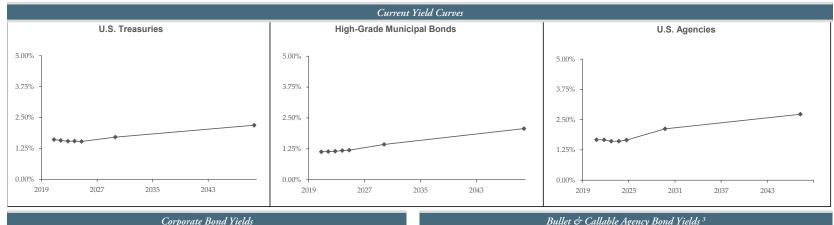
YIELD ANALYSIS

October 15, 2019

U.S. Treasury Yields				
Coupon	Maturity	YTM		
0.000%	10/08/20	1.61%		
1.500%	09/30/21	1.57%		
1.375%	10/15/22	1.54%		
2.875%	09/30/23	1.55%		
1.500%	09/30/24	1.53%		
1.625%	08/15/29	1.71%		
2.250%	08/15/49	2.19%		

Municipal Bond Yields ¹			
Maturity	YTM	Tax-Equiv. ²	
10/14/20	1.13%	1.62%	
10/14/21	1.14%	1.63%	
10/14/22	1.15%	1.65%	
10/14/23	1.18%	1.69%	
10/14/24	1.20%	1.71%	
10/14/29	1.43%	2.04%	
10/14/49	2.07%	2.96%	

U.S. Agency Yields - Active Bonds					
Agency	Coupon	Maturity	Price	YTM	To Muni (bp)
FHLB	2.625%	10/01/20	\$100.91	1.67%	+5
FNMA	1.375%	10/07/21	\$99.44	1.67%	+4
FNMA	1.375%	09/06/22	\$99.34	1.61%	-4
FNMA	2.875%	09/12/23	\$104.78	1.61%	-8
FHLB	2.875%	09/13/24	\$105.72	1.66%	-5
FFCB	2.430%	09/28/29	\$102.51	2.12%	+8
FFCB	3.580%	04/11/47	\$116.10	2.72%	-23



GOT FOTAN C BOTH THE ME						
Description	Price	YTM	To Treasury (bp)			
WFC (A2/A-) 2.1% 7/26/2021	\$100.05	2.07%	+50			
JPM (A2/A-) 3.32% 8/29/2024	\$100.78	2.98%	+144			
C (A3/BBB+) 3% 5/15/2026	\$98.60	3.19%	+165			
MS (A3/BBB+) 4.05% 3/13/2029	\$107.22	3.11%	+140			
4.00% - 2.00% - 0.00% - 2020 2022	2024 202	26	2028			

Bullet & Callable Agency Bond Yields ³					
Description	Call Date	Price	YTM	YTW	
FHLB 2.07% 9/16/2020	12/16/19	\$100.01	2.03%	2.03%	
FHLB 2.05% 9/23/2021	03/23/20	\$100.06	2.00%	2.00%	
FFCB 1.96% 9/16/2024	09/16/20	\$99.95	1.97%	1.97%	
FHLB 2.5% 9/28/2029	12/28/19	\$97.66	2.72%	2.77%	
6.00% 4.00% - 2.00% -				→	
2019 2021	2023 2025	2027	2029		