

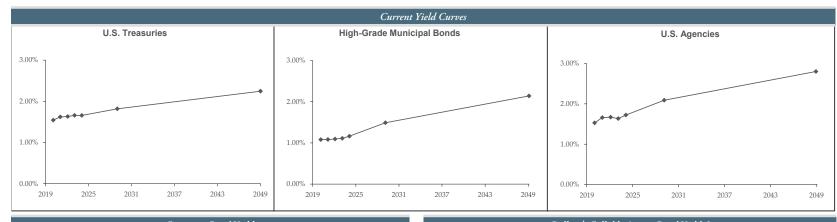
## YIELD ANALYSIS

December 10, 2019

U.S. Treasury Yields					
Coupon	Maturity	YTM			
0.000%	12/03/20	1.54%			
1.500%	11/30/21	1.62%			
1.625%	12/15/22	1.63%			
2.875%	11/30/23	1.66%			
1.500%	11/30/24	1.66%			
1.750%	11/15/29	1.82%			
2.375%	11/15/49	2.24%			

Municipal Bond Yields <sup>1</sup>				
Maturity	YTM	Tax-Equiv. <sup>2</sup>		
12/09/20	1.08%	1.54%		
12/09/21	1.08%	1.54%		
12/09/22	1.09%	1.56%		
12/09/23	1.11%	1.59%		
12/09/24	1.16%	1.66%		
12/09/29	1.49%	2.13%		
12/09/49	2.14%	3.06%		

U.S. Agency Yields - Active Bonds					
Agency	Coupon	Maturity	Price	YTM	To Muni (bp)
FHLMC	1.875%	11/17/20	\$100.32	1.53%	-1
FHLB	1.875%	11/29/21	\$100.42	1.66%	+11
FHLB	2.500%	12/09/22	\$102.42	1.67%	+10
FHLB	2.250%	12/08/23	\$102.37	1.64%	+5
FFCB	1.625%	12/03/24	\$99.54	1.72%	+6
FHLB	2.125%	12/14/29	\$100.33	2.09%	-4
FFCB	2.625%	10/15/49	\$95.88	2.80%	-26



Corporate Bond Yields					
Description		Price	YTM	To Treasury (bp)	
WFC (A2/A-) 2.1% 7/26/2021	Ş	5100.18	1.99%	+37	
JPM (A2/A-) 3.11% 8/29/2024	9	5101.43	2.72%	+106	
C (A3/BBB+) 3% 5/15/2026	9	103.07	2.48%	+82	
MS (A3/BBB+) 4.05% 3/13/2029	9	5108.38	2.96%	+114	
4.00% 3.00% - 2.00% - 1.00% - 0.00%	•	•		<b></b>	
2020 2022	2024	2026	2028	2030	

Bullet & Callable Agency Bond Yields <sup>3</sup>					
Description	Call Date	Price	YTM	YTW	
FNMA 1.35% 12/18/2020	01/18/20	\$99.20	2.00%	2.00%	
FFCB 1.59% 12/10/2021	12/10/20	\$99.98	1.60%	1.60%	
FHLB 2% 12/11/2024	09/11/20	\$100.19	1.96%	1.75%	
FFCB 2.65% 11/13/2029	02/13/20	\$100.04	2.64%	2.42%	
4.00% 3.00% - 2.00% - 1.00% - 0.00% 2020 2022	2024	2026	2028	2030	