

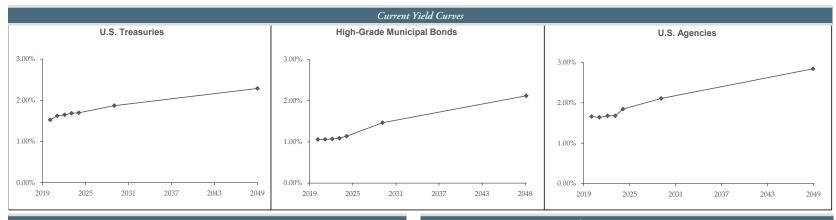
YIELD ANALYSIS

December 17, 2019

U.S. Treasury Yields					
Coupon	Maturity	YTM			
0.000%	12/03/20	1.52%			
1.500%	11/30/21	1.62%			
1.625%	12/15/22	1.65%			
2.875%	11/30/23	1.68%			
1.500%	11/30/24	1.70%			
1.750%	11/15/29	1.87%			
2.375%	11/15/49	2.29%			

Municipal Bond Yields ¹				
Maturity	YTM	Tax-Equiv. ²		
12/16/20	1.06%	1.51%		
12/16/21	1.06%	1.52%		
12/16/22	1.07%	1.53%		
12/16/23	1.09%	1.56%		
12/16/24	1.14%	1.63%		
12/16/29	1.47%	2.09%		
12/16/49	2.12%	3.03%		

U.S. Agency Yields - Active Bonds					
Agency	Coupon	Maturity	Price	YTM	To Muni (bp)
FHLMC	1.875%	11/17/20	\$100.17	1.66%	+15
FHLB	1.875%	11/29/21	\$100.42	1.64%	+12
FHLB	2.500%	12/09/22	\$102.33	1.68%	+14
FHLB	2.250%	12/08/23	\$102.14	1.68%	+12
FFCB	1.625%	12/03/24	\$98.67	1.84%	+22
FHLB	2.125%	12/14/29	\$99.98	2.11%	+1
FFCB	2.625%	10/15/49	\$95.08	2.84%	-19



Corporate Bond Yields					
Description		Price	YTM	To Treasury (bp)	
WFC (A2/A-) 2.1% 7/26/2021		\$100.15	1.98%	+36	
JPM (A2/A-) 3.11% 8/29/2024		\$101.64	2.68%	+99	
C (A3/BBB+) 3% 5/15/2026		\$101.27	2.73%	+104	
MS (A3/BBB+) 4.05% 3/13/2029		\$108.29	2.97%	+110	
4.00% 3.00% - 2.00% - 1.00% - 0.00%	—	•			
2020 2022	2024	2026	2028	2030	

Bullet & Callable Agency Bond Yields ³					
Description	Call Date	Price	YTM	YTW	
FNMA 1.35% 12/18/2020	01/18/20	\$99.24	1.98%	1.98%	
FFCB 1.59% 12/10/2021	12/10/20	\$99.88	1.63%	1.63%	
FHLB 2% 12/11/2024	09/11/20	\$99.95	2.00%	2.01%	
FFCB 2.65% 11/13/2029	02/13/20	\$100.10	2.64%	2.01%	
4.00% 3.00% 2.00% 1.00% 0.00% 2020 2022	2024 2	026	2028	2030	