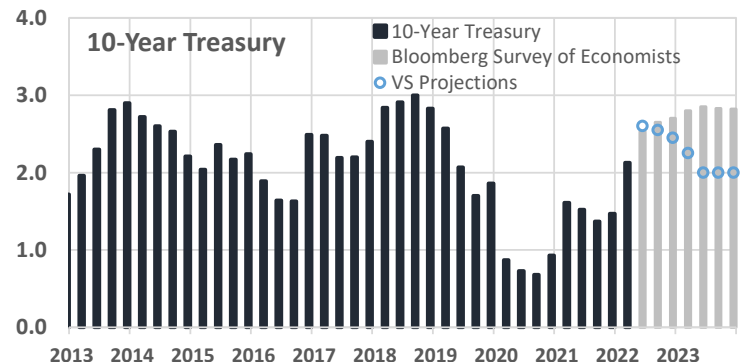
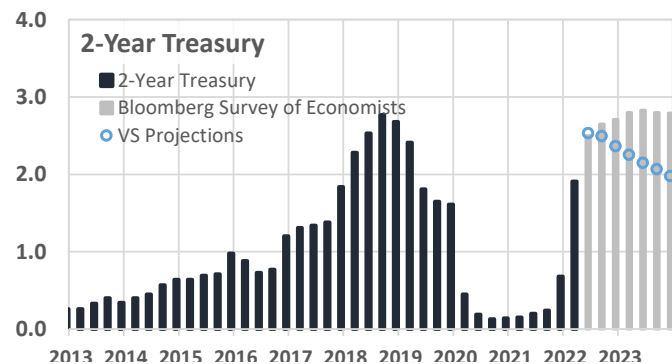
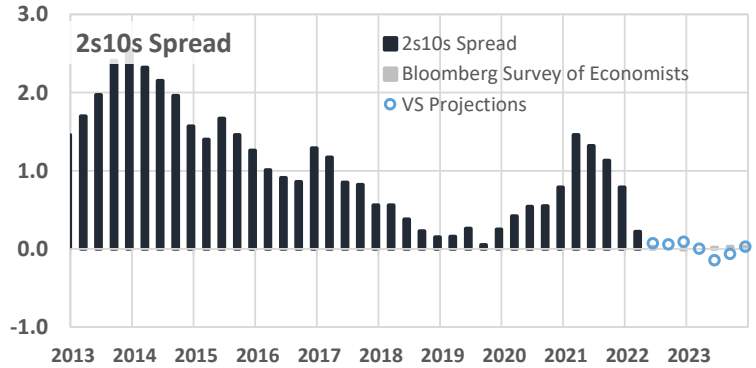
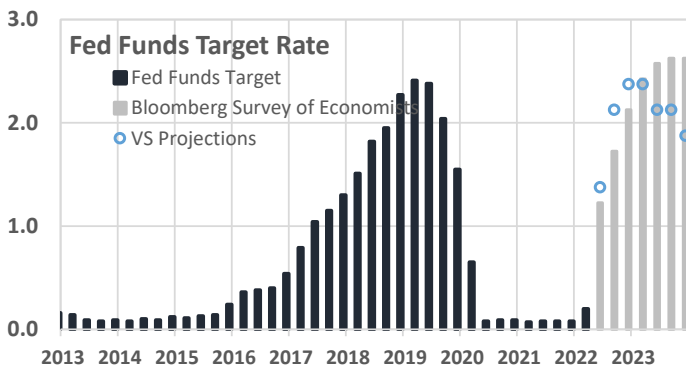
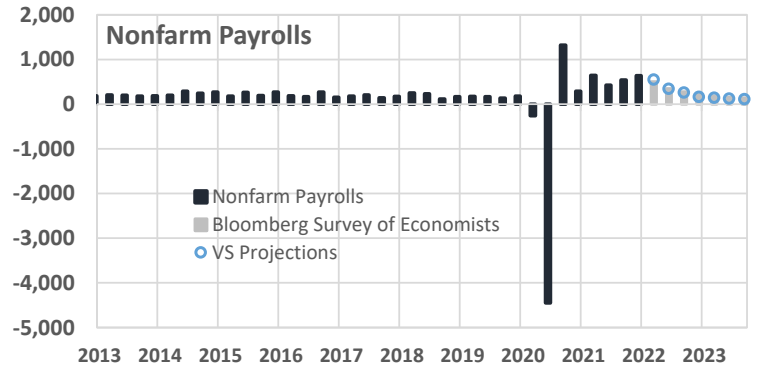
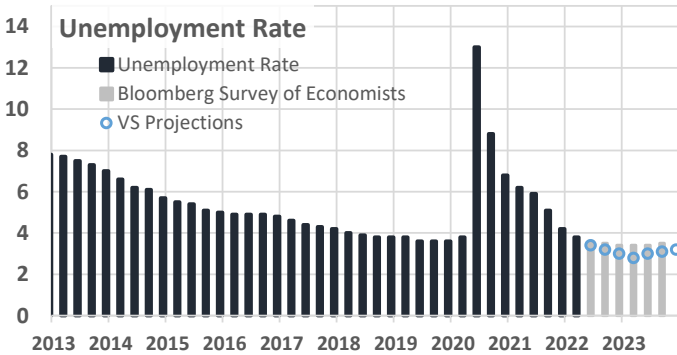
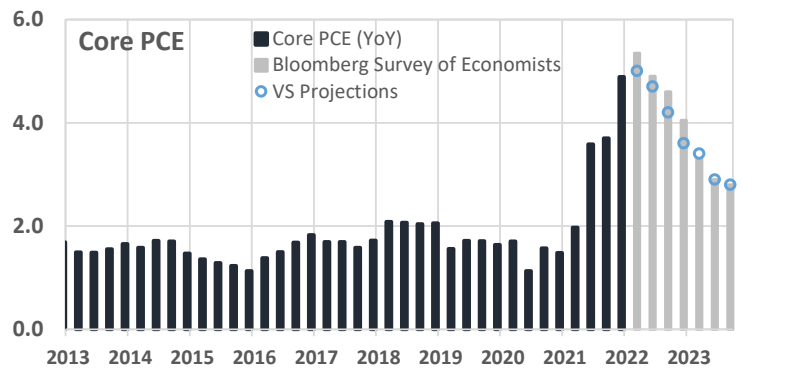
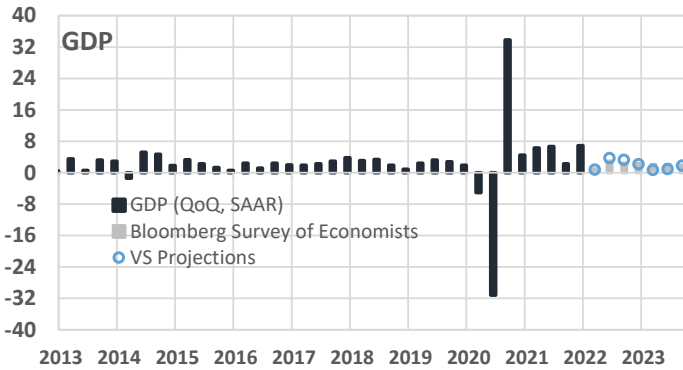


Vining Sparks Economic and Interest Rate Projections

April 2022

	Q122	Q222	Q322	Q422	Q123	Q223	2022	2023
GDP (QoQ, SAAR)	0.7	3.7	3.2	2.1	0.6	0.9	2.5	1.0
Headline CPI (YoY)		6.7	6.1	5.0	3.6	3.2	5.9	3.1
Core PCE (YoY)	5.0	4.7	4.2	3.6	3.4	2.9	4.4	2.9
Unemployment Rate		3.4	3.2	3.0	2.8	3.0	3.4	2.9
Nonfarm Payrolls (Monthly)		340	260	160	140	120	310	118

	Q122	Q222	Q322	Q422	Q123	Q223	Q323	Q423
Fed Funds Target		1.38	2.13	2.38	2.38	2.13	2.13	1.88
2-Year Treasury Yield		2.53	2.49	2.36	2.25	2.15	2.07	1.98
10-Year Treasury Yield		2.60	2.55	2.45	2.25	2.00	2.00	2.00
30-Year Treasury Yield		2.92	2.89	2.78	2.53	2.22	2.22	2.25
Prime Rate		4.50	5.25	5.50	5.50	5.25	5.25	5.00
30-Year Mortgage Rate		4.17	4.15	4.10	3.95	3.70	3.70	3.70



Bloomberg Survey of Economists

April BBG Survey

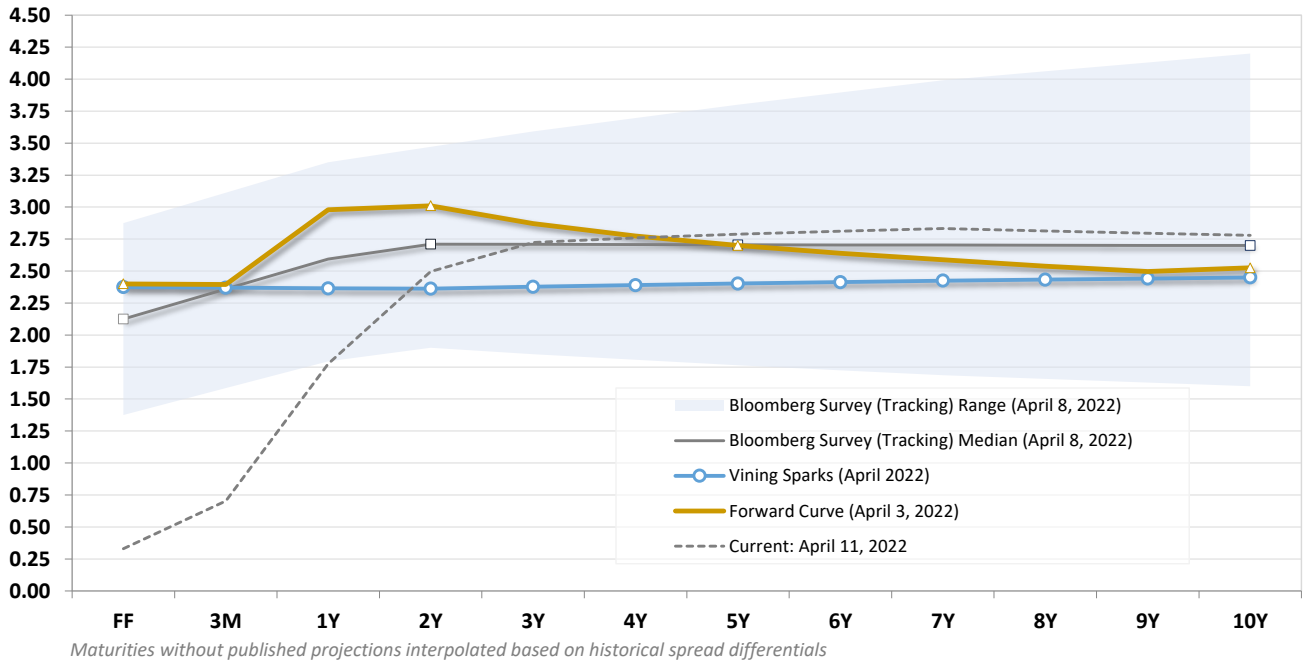
GDP		Q122	Q222	Q322	Q422	Q123	Q223	2022	2023
Vining Sparks Projections	4/11/2022	0.7	3.7	3.2	2.1	0.6	0.9	2.5	1.0
April BBG Survey	4/8/2022	1.0	3.0	2.5	2.4	2.1	2.0	3.3	2.2
March BBG Survey	3/9/2022	1.5	3.3	3.0	2.5	2.4	2.1	3.6	2.3
Personal Consumption		Q122	Q222	Q322	Q422	Q123	Q223	2022	2023
April BBG Survey	4/8/2022	3.0	2.3	2.4	2.1	2.0	2.0	3.0	2.2
March BBG Survey	3/9/2022	2.5	2.9	2.8	2.5	2.3	2.3	3.2	2.5
Private Investment		Q122	Q222	Q322	Q422	Q123	Q223	2022	2023
April BBG Survey	4/8/2022	3.9	5.5	4.5	4.1	2.4	3.0	8.3	3.1
March BBG Survey	3/9/2022	4.4	5.3	4.7	4.5	2.9	3.3	7.1	3.6
Government Expenditures		Q122	Q222	Q322	Q422	Q123	Q223	2022	2023
April BBG Survey	4/8/2022	0.5	1.5	1.3	1.5	1.4	1.4	0.4	1.4
March BBG Survey	3/9/2022	1.0	1.6	1.4	1.5	1.2	1.4	0.5	1.2
Headline CPI		Q122	Q222	Q322	Q422	Q123	Q223	2022	2023
Vining Sparks Projections	4/11/2022		6.7	6.1	5.0	3.6	3.2	5.9	3.1
April BBG Survey	4/8/2022		7.6	6.7	5.7	4.0	3.0	6.9	3.0
March BBG Survey	3/9/2022	7.7	6.8	5.9	4.5	3.3	2.5	6.1	2.6
Core PCE		Q122	Q222	Q322	Q422	Q123	Q223	2022	2023
Vining Sparks Projections	4/11/2022	5.0	4.7	4.2	3.6	3.4	2.9	4.4	2.9
April BBG Survey	4/8/2022	5.4	5.0	4.7	4.1	3.4	3.0	4.8	2.9
March BBG Survey	3/9/2022	5.3	4.8	4.4	3.9	3.0	2.6	4.6	2.7
Unemployment Rate		Q122	Q222	Q322	Q422	Q123	Q223	2022	2023
Vining Sparks Projections	4/11/2022		3.4	3.2	3.0	2.8	3.0	3.4	2.9
April BBG Survey	4/8/2022		3.6	3.5	3.4	3.4	3.4	3.6	3.5
March BBG Survey	3/9/2022	3.8	3.7	3.5	3.4	3.4	3.4	3.6	3.4
Nonfarm Payroll (Monthly)		Q122	Q222	Q322	Q422	Q123	Q223	2022	2023
Vining Sparks Projections	4/11/2022		340	260	160	140	120	310	118
April BBG Survey	4/8/2022		350	275	210	183	156	353	156
March BBG Survey	3/9/2022	503	340	259	215	193	168	341	169
New Home Sales		Q122	Q222	Q322	Q422	Q123	Q223	2022	2023
April BBG Survey	4/8/2022	782	792	793	793	788	770	789	785
March BBG Survey	3/9/2022	811	804	799	805	813	790	802	826
Existing Home Sales		Q122	Q222	Q322	Q422	Q123	Q223	2022	2023
April BBG Survey	4/8/2022	6,200	6,100	6,100	6,100	5,900	5,800	6,100	5,900
March BBG Survey	3/9/2022	6,200	6,200	6,200	6,100	6,000	6,100	6,200	6,000
Fed Funds Target ¹		Q122	Q222	Q322	Q422	Q123	Q223	Q323	Q423
Vining Sparks Projections	4/11/2022	0.38	1.38	2.13	2.38	2.38	2.13	2.13	1.88
April BBG Survey	4/8/2022	0.53	1.23	1.73	2.13	2.43	2.58	2.63	2.63
March BBG Survey	3/9/2022	0.53	1.03	1.43	1.68	1.78	1.93	2.03	2.18
2-Year Treasury ¹		Q122	Q222	Q322	Q422	Q123	Q223	Q323	Q423
Vining Sparks Projections	4/11/2022	2.51	2.53	2.49	2.36	2.25	2.15	2.07	1.98
April BBG Survey	4/8/2022	1.63	2.50	2.65	2.71	2.80	2.83	2.80	2.79
March BBG Survey	3/9/2022	1.63	1.72	1.86	1.96	2.09	2.19	2.26	2.32
10-Year Treasury ¹		Q122	Q222	Q322	Q422	Q123	Q223	Q323	Q423
Vining Sparks Projections	4/11/2022	2.40	2.60	2.55	2.45	2.25	2.00	2.00	2.00
April BBG Survey	4/8/2022	2.08	2.53	2.65	2.70	2.80	2.85	2.83	2.82
March BBG Survey	3/9/2022	2.08	2.16	2.22	2.30	2.40	2.51	2.55	2.56

*Sources: Bloomberg Survey of Economists, ¹ Economists' Real-Time Updates, Vining Sparks

Year-End Rate Projections

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YE2022 Treasury Yield Projections



Bloomberg Survey Tracking Index and Vining Projections

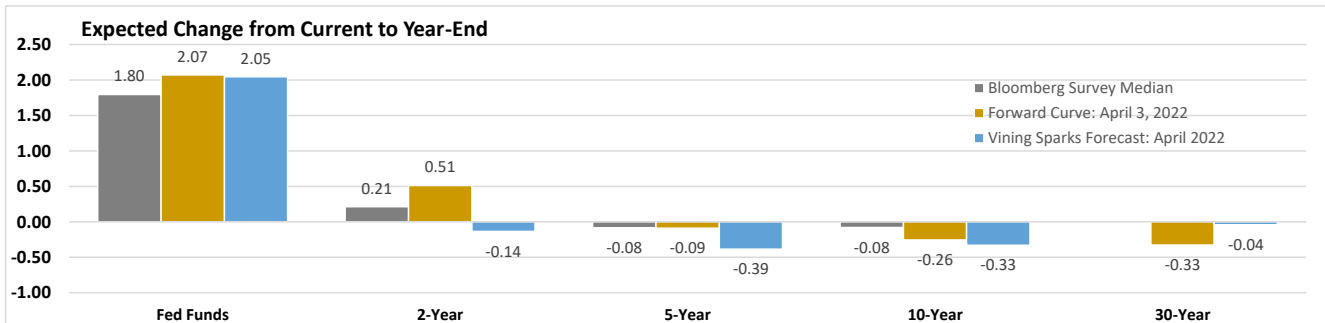
Interest Rate Projections

April 3, 2022

	Fed Funds	3M T-Bill	1-Year	2-Year	3-Year	5-Year	7-Year	10-Year	30-Year
Bloomberg Survey - Tracking: April 8, 2022									
Low Forecast	1.38			1.90		1.76		1.60	
Median Forecast	2.13			2.71		2.71		2.70	
High Forecast	2.88			3.47		3.80		4.20	
Forward Curve: April 3, 2022	2.40	2.40	2.98	3.01	2.87	2.70	2.59	2.53	2.49
Vining Sparks Forecast: April 2022	2.38	2.37	2.37	2.36	2.38	2.40	2.43	2.45	2.78
Current: April 11, 2022	0.33	0.70	1.78	2.50	2.72	2.79	2.83	2.78	2.82

Projected Δ by Year-End

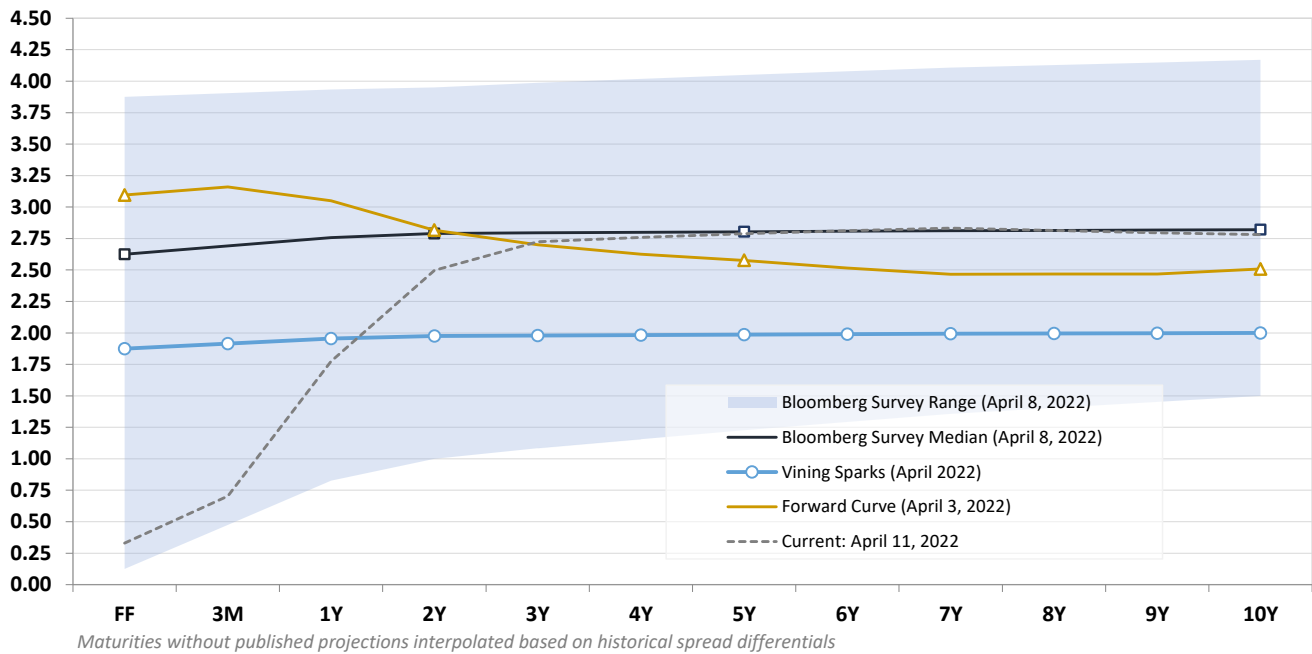
	Fed Funds	3M T-Bill	1-Year	2-Year	3-Year	5-Year	7-Year	10-Year	30-Year
Bloomberg Survey - Tracking: April 8, 2022									
Low Forecast	1.05			-0.60		-1.02		-1.18	
Median Forecast	1.80			0.21		-0.08		-0.08	
High Forecast	2.55			0.97		1.01		1.42	
Forward Curve: April 3, 2022	2.07	1.69	1.21	0.51	0.15	-0.09	-0.24	-0.26	-0.33
Vining Sparks Forecast: April 2022	2.05	1.67	0.59	-0.14	-0.35	-0.39	-0.41	-0.33	-0.04



Year-End Rate Projections

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YE2023 Treasury Yield Projections



Bloomberg Survey Tracking Index and Vining Projections

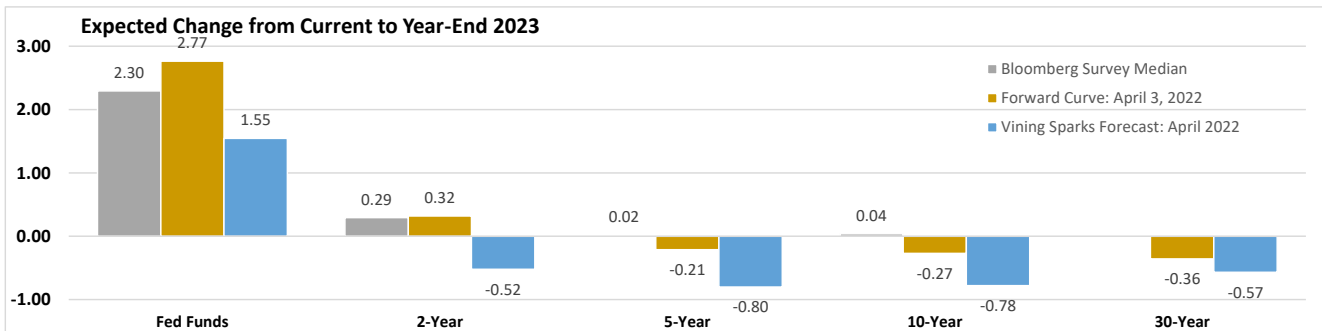
Interest Rate Projections

April 3, 2022

	Fed Funds	3M T-Bill	1-Year	2-Year	3-Year	5-Year	7-Year	10-Year	30-Year
Bloomberg Survey - Tracking: April 8, 2022									
Low Forecast	0.13			1.00		1.23		1.50	
Median Forecast	2.63			2.79		2.80		2.82	
High Forecast	3.88			3.95		4.05		4.17	
Forward Curve: April 3, 2022	3.10	3.16	3.05	2.82	2.70	2.58	2.47	2.51	2.46
Vining Sparks Forecast: April 2022	1.88	1.92	1.96	1.98	1.98	1.99	1.99	2.00	2.25
Current: April 11, 2022	0.33	0.70	1.78	2.50	2.72	2.79	2.83	2.78	2.82

Projected Δ by Year-End

	Fed Funds	3M T-Bill	1-Year	2-Year	3-Year	5-Year	7-Year	10-Year	30-Year
Bloomberg Survey - Tracking: April 8, 2022									
Low Forecast	-0.21			-1.50		-1.56		-1.28	
Median Forecast	2.30			0.29		0.02		0.04	
High Forecast	3.55			1.45		1.26		1.39	
Forward Curve: April 3, 2022	2.77	2.46	1.28	0.32	-0.02	-0.21	-0.37	-0.27	-0.36
Vining Sparks Forecast: April 2022	1.55	1.21	0.18	-0.52	-0.74	-0.80	-0.84	-0.78	-0.57



Sources: Bloomberg Survey of Economists Real-Time Tracking Index, Vining Sparks

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