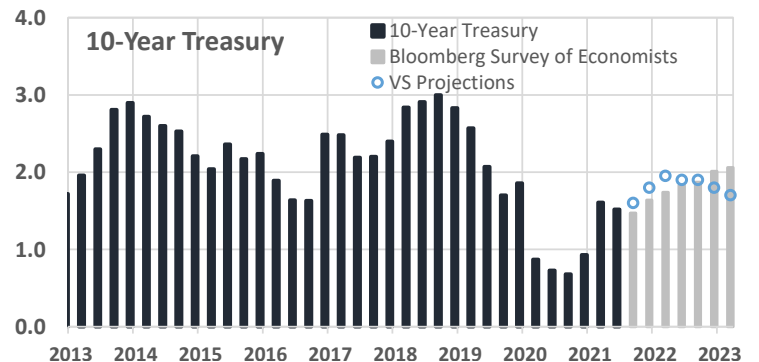
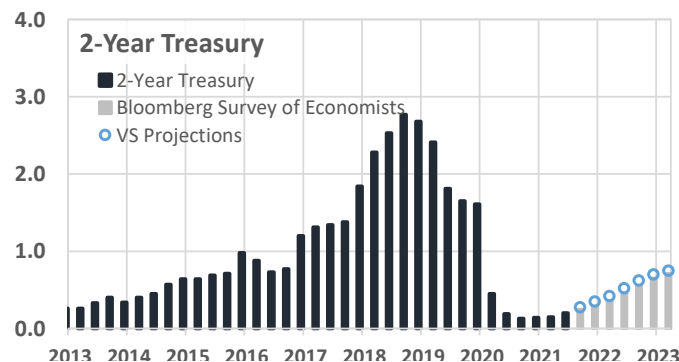
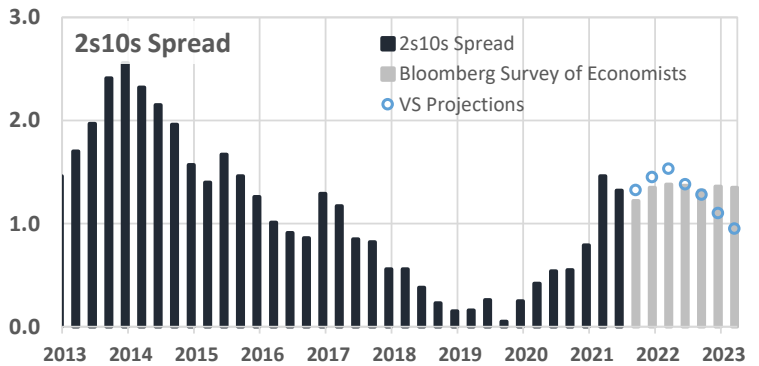
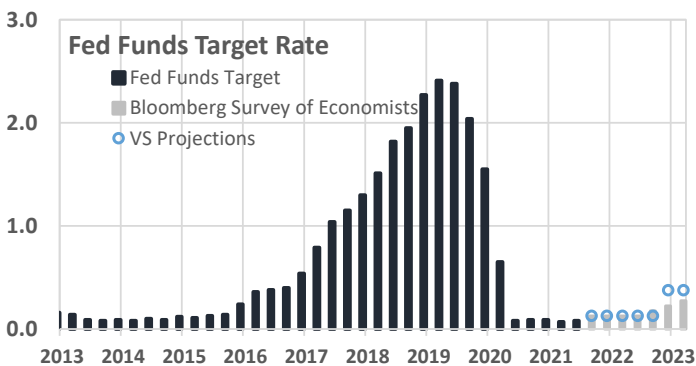
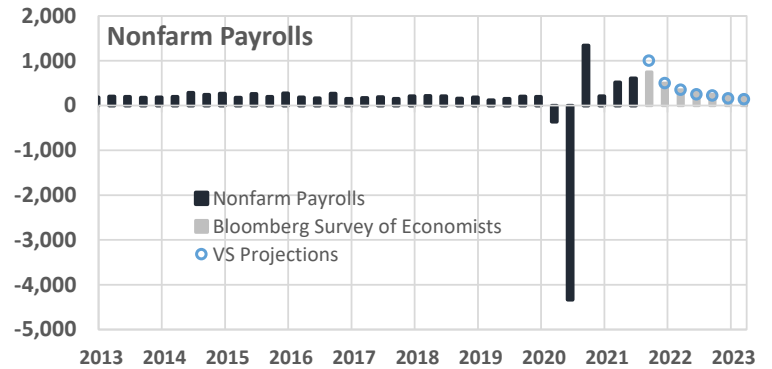
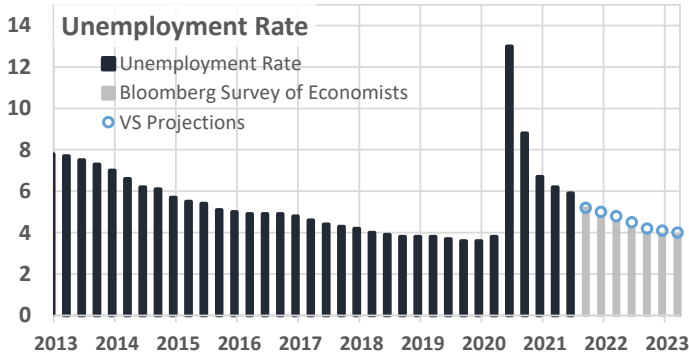
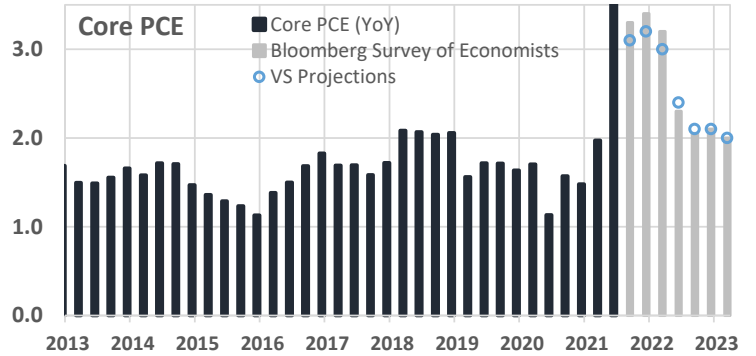
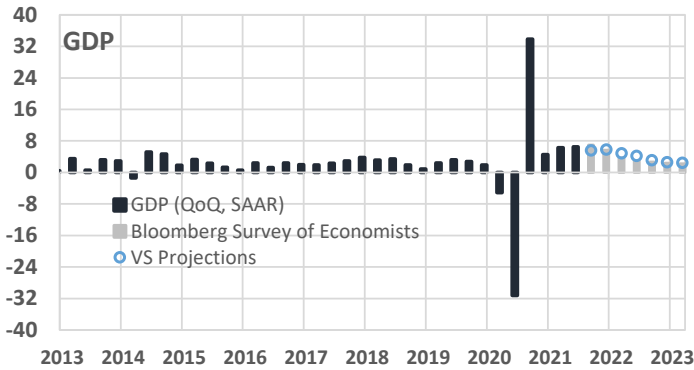


Vining Sparks Economic and Interest Rate Projections

August 2021

	Q321	Q421	Q122	Q222	Q322	Q422	2021	2022
GDP (QoQ, SAAR)	5.6	5.8	4.8	4.2	3.0	2.6	6.1	3.7
Headline CPI (YoY)	4.8	4.5	3.9	2.7	2.5	2.5	4.0	2.6
Core PCE (YoY)	3.1	3.2	3.0	2.4	2.1	2.1	2.7	2.3
Unemployment Rate	5.2	5.0	4.8	4.5	4.2	4.1	5.4	4.4
Nonfarm Payrolls (Monthly)	1,000	500	350	250	220	160	550	250

	Q321	Q421	Q122	Q222	Q322	Q422	Q123	Q223
Fed Funds Target	0.13	0.13	0.13	0.13	0.13	0.38	0.38	0.63
2-Year Treasury Yield	0.28	0.35	0.42	0.52	0.62	0.70	0.75	0.80
10-Year Treasury Yield	1.60	1.80	1.95	1.90	1.90	1.80	1.70	1.70
30-Year Treasury Yield	2.20	2.44	2.61	2.51	2.48	2.33	2.19	2.17
Prime Rate	3.25	3.25	3.25	3.25	3.25	3.50	3.50	3.75
30-Year Mortgage Rate	3.30	3.65	3.85	3.85	3.90	3.80	3.70	3.70



Bloomberg Survey of Economists

August BBG Survey

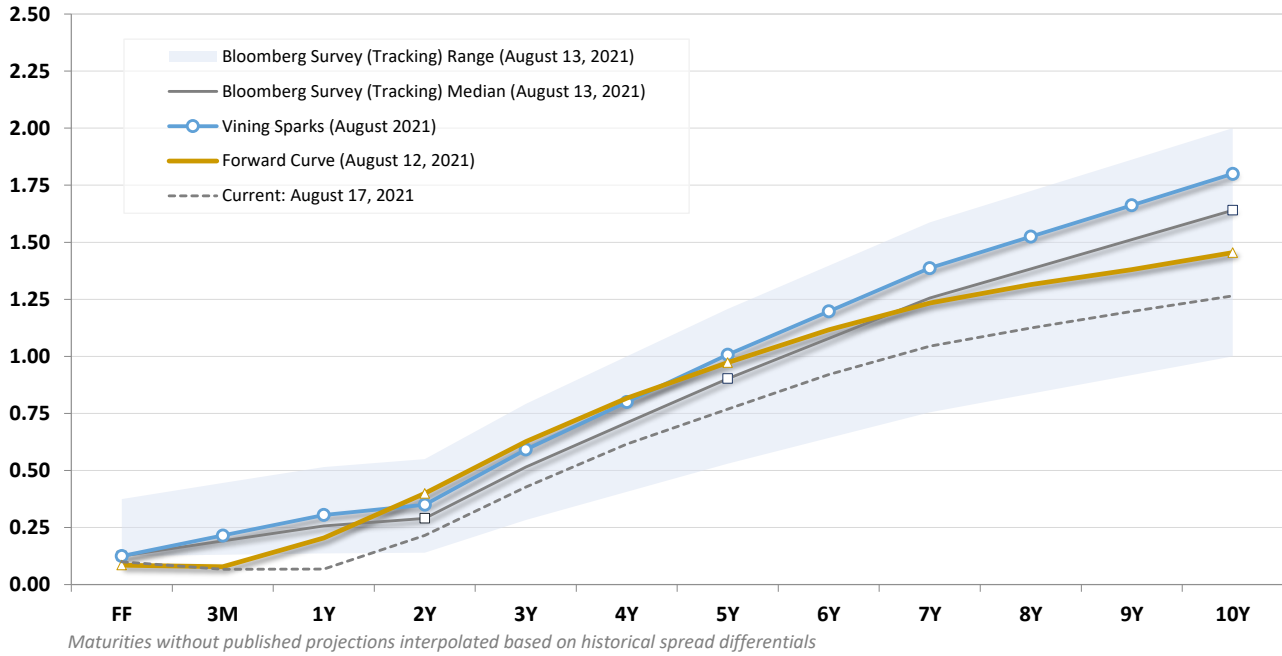
GDP		Q321	Q421	Q122	Q222	Q322	Q422	2021	2022
Vining Sparks Projections	8/17/2021	5.6	5.8	4.8	4.2	3.0	2.6	6.1	3.7
August BBG Survey	8/13/2021	6.8	5.6	3.7	3.0	2.6	2.3	6.2	4.3
July BBG Survey	7/9/2021	7.1	5.1	3.5	3.0	2.6	2.3	6.6	4.2
Personal Consumption		Q321	Q421	Q122	Q222	Q322	Q422	2021	2022
August BBG Survey	8/13/2021	4.5	4.3	3.3	2.8	2.5	2.4	8.2	3.8
July BBG Survey	7/9/2021	6.2	4.8	3.7	3.2	2.7	2.5	7.9	4.1
Private Investment		Q321	Q421	Q122	Q222	Q322	Q422	2021	2022
August BBG Survey	8/13/2021	15.7	9.0	5.9	4.4	4.2	3.3	8.8	7.3
July BBG Survey	7/9/2021	11.1	8.0	5.0	4.5	3.5	3.1	11.1	6.5
Government Expenditures		Q321	Q421	Q122	Q222	Q322	Q422	2021	2022
August BBG Survey	8/13/2021	2.0	2.0	1.8	1.7	1.4	1.5	1.1	1.5
July BBG Survey	7/9/2021	1.6	2.0	2.0	1.7	1.4	1.4	2.0	1.9
Headline CPI		Q321	Q421	Q122	Q222	Q322	Q422	2021	2022
Vining Sparks Projections	8/17/2021	4.8	4.5	3.9	2.7	2.5	2.5	4.0	2.6
August BBG Survey	8/13/2021	5.1	4.9	4.4	2.9	2.3	2.2	4.2	2.9
July BBG Survey	7/9/2021	4.4	4.3	3.8	2.5	2.2	2.2	3.7	2.7
Core PCE		Q321	Q421	Q122	Q222	Q322	Q422	2021	2022
Vining Sparks Projections	8/17/2021	3.1	3.2	3.0	2.4	2.1	2.1	2.7	2.3
August BBG Survey	8/13/2021	3.5	3.6	3.3	2.4	2.1	2.1	3.0	2.5
July BBG Survey	7/9/2021	3.0	3.2	3.0	2.2	2.0	2.1	2.8	2.3
Unemployment Rate		Q321	Q421	Q122	Q222	Q322	Q422	2021	2022
Vining Sparks Projections	8/17/2021	5.2	5.0	4.8	4.5	4.2	4.1	5.4	4.4
August BBG Survey	8/13/2021	5.2	4.8	4.5	4.2	4.1	3.9	5.5	4.2
July BBG Survey	7/9/2021	5.3	4.9	4.5	4.3	4.2	4.0	5.6	4.2
Nonfarm Payroll (Monthly)		Q321	Q421	Q122	Q222	Q322	Q422	2021	2022
Vining Sparks Projections	8/17/2021	1,000	500	350	250	220	160	550	250
August BBG Survey	8/13/2021	750	506	400	300	250	200	585	300
July BBG Survey	7/9/2021	650	500	350	300	260	222	551	290
New Home Sales		Q321	Q421	Q122	Q222	Q322	Q422	2021	2022
August BBG Survey	8/13/2021	750	800	819	805	811	820	801	821
July BBG Survey	7/9/2021	862	880	898	893	878	868	872	891
Existing Home Sales		Q321	Q421	Q122	Q222	Q322	Q422	2021	2022
August BBG Survey	8/13/2021	5,900	6,000	6,000	5,900	5,900	6,000	6,000	6,000
July BBG Survey	7/9/2021	6,000	6,000	6,000	5,900	5,900	5,900	6,000	5,900
Fed Funds Target ¹		Q321	Q421	Q122	Q222	Q322	Q422	Q123	Q223
Vining Sparks Projections	8/17/2021	0.13	0.13	0.13	0.13	0.13	0.38	0.38	0.63
August BBG Survey	8/13/2021	0.13	0.13	0.13	0.13	0.18	0.23	0.28	0.38
July BBG Survey	7/9/2021	0.13	0.13	0.13	0.18	0.18	0.23	0.33	0.43
2-Year Treasury ¹		Q321	Q421	Q122	Q222	Q322	Q422	Q123	Q223
Vining Sparks Projections	8/17/2021	0.28	0.35	0.42	0.52	0.62	0.70	0.75	0.80
August BBG Survey	8/13/2021	0.25	0.29	0.36	0.46	0.55	0.65	0.71	0.85
July BBG Survey	7/9/2021	0.27	0.32	0.40	0.48	0.55	0.65	0.73	0.85
10-Year Treasury ¹		Q321	Q421	Q122	Q222	Q322	Q422	Q123	Q223
Vining Sparks Projections	8/17/2021	1.60	1.80	1.95	1.90	1.90	1.80	1.70	1.70
August BBG Survey	8/13/2021	1.47	1.64	1.74	1.83	1.87	2.01	2.06	2.17
July BBG Survey	7/9/2021	1.68	1.80	1.89	1.96	2.00	2.09	2.16	2.27

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

Year-End Rate Projections

August 2021

YE2021 Treasury Yield Projections



Bloomberg Survey Tracking Index and Vining Projections

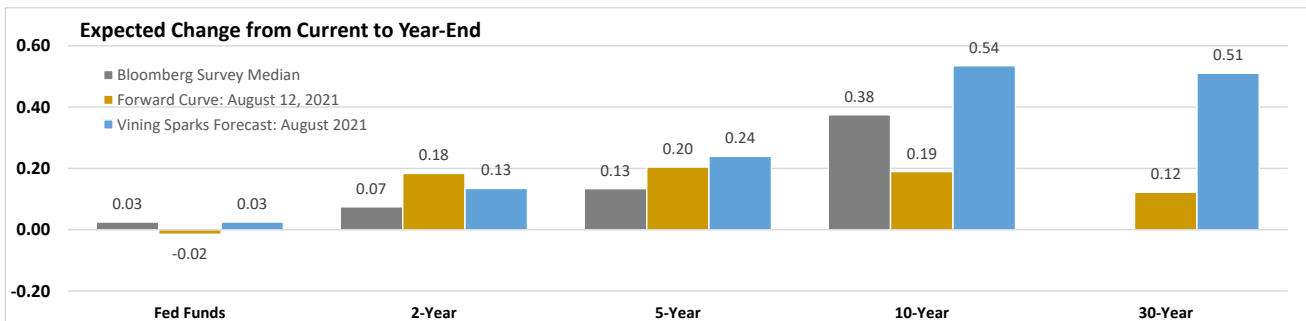
Interest Rate Projections

August 12, 2021

	Fed Funds	3M T-Bill	1-Year	2-Year	3-Year	5-Year	7-Year	10-Year	30-Year
Bloomberg Survey - Tracking: August 13, 2021									
Low Forecast	0.13			0.14		0.53		1.00	
Median Forecast	0.13			0.29		0.90		1.64	
High Forecast	0.38			0.55		1.21		2.00	
Forward Curve: August 12, 2021	0.09	0.08	0.20	0.40	0.63	0.97	1.23	1.45	2.05
Vining Sparks Forecast: August 2021	0.13	0.22	0.31	0.35	0.59	1.01	1.39	1.80	2.44
Current: August 17, 2021	0.10	0.07	0.07	0.22	0.43	0.77	1.04	1.27	1.92

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: August 13, 2021									
Low Forecast	0.03			-0.08		-0.24		-0.27	
Median Forecast	0.03			0.07		0.13		0.38	
High Forecast	0.28			0.33		0.44		0.74	
Forward Curve: August 12, 2021	-0.02	0.01	0.14	0.18	0.20	0.20	0.19	0.19	0.12
Vining Sparks Forecast: August 2021	0.03	0.15	0.24	0.13	0.16	0.24	0.34	0.54	0.51

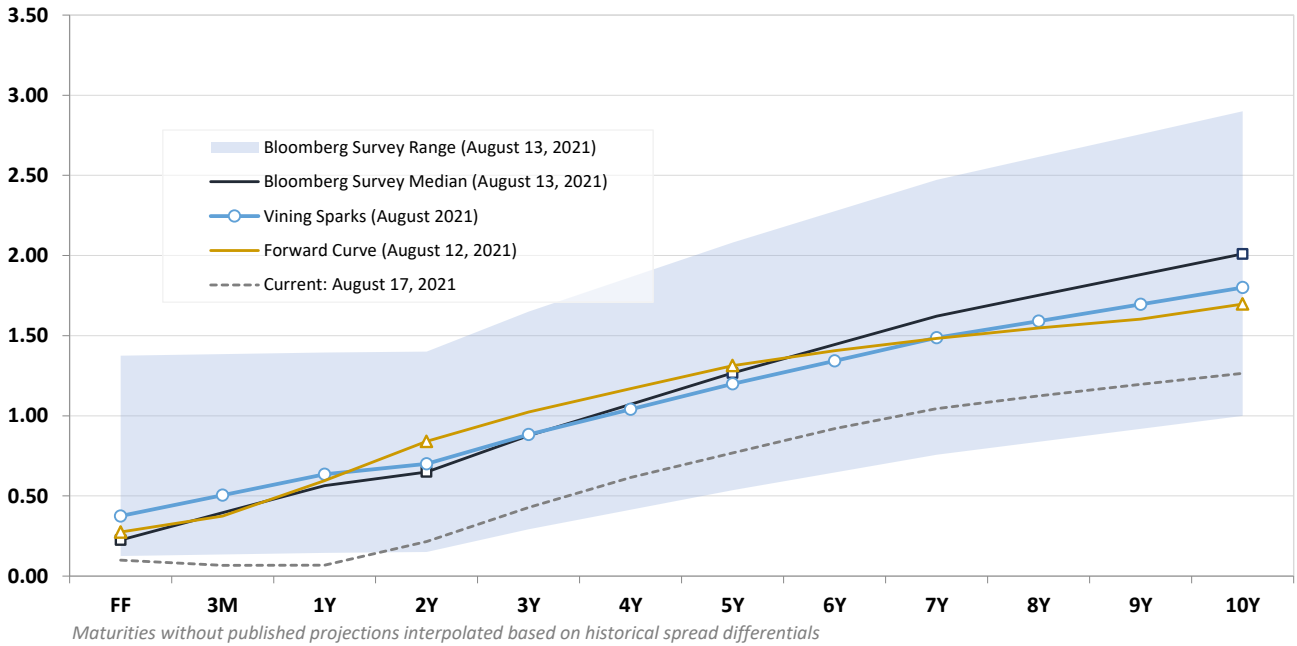


Sources: Bloomberg Survey of Economists Real-Time Tracking Index, Vining Sparks

Year-End Rate Projections

August 2021

YE2022 Treasury Yield Projections



Bloomberg Survey Tracking Index and Vining Projections

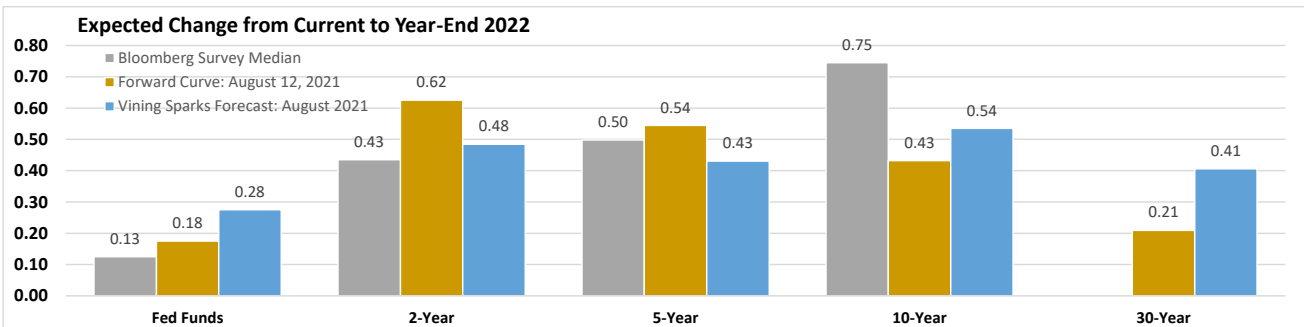
Interest Rate Projections

August 12, 2021

	Fed Funds	3M T-Bill	1-Year	2-Year	3-Year	5-Year	7-Year	10-Year	30-Year
Bloomberg Survey - Tracking: August 13, 2021									
Low Forecast	0.13			0.15		0.54		1.00	
Median Forecast	0.23			0.65		1.27		2.01	
High Forecast	1.38			1.40		2.08		2.90	
Forward Curve: August 12, 2021	0.28	0.37	0.60	0.84	1.02	1.31	1.48	1.70	2.13
Vining Sparks Forecast: August 2021	0.38	0.51	0.64	0.70	0.88	1.20	1.49	1.80	2.33
Current: August 17, 2021	0.10	0.07	0.07	0.22	0.43	0.77	1.04	1.27	1.92

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: August 13, 2021									
Low Forecast	0.03			-0.07		-0.23		-0.27	
Median Forecast	0.13			0.43		0.50		0.75	
High Forecast	1.28			1.18		1.31		1.64	
Forward Curve: August 12, 2021	0.18	0.31	0.53	0.62	0.60	0.54	0.44	0.43	0.21
Vining Sparks Forecast: August 2021	0.28	0.44	0.57	0.48	0.46	0.43	0.44	0.54	0.41



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

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