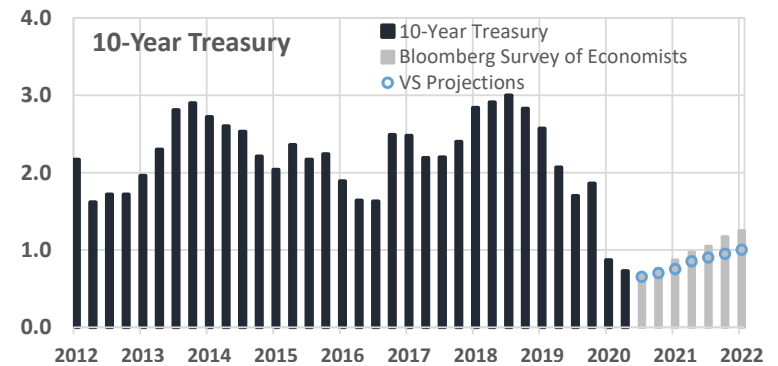
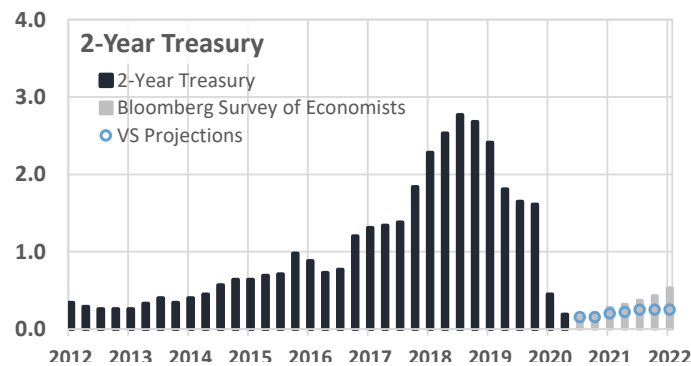
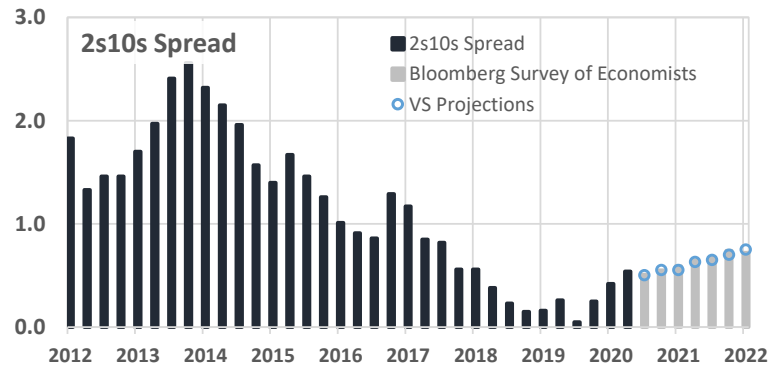
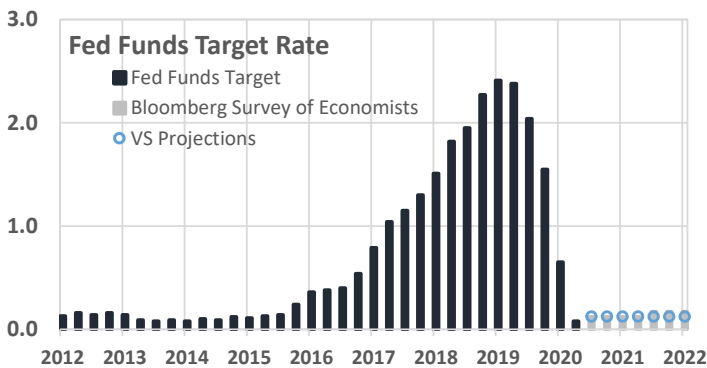
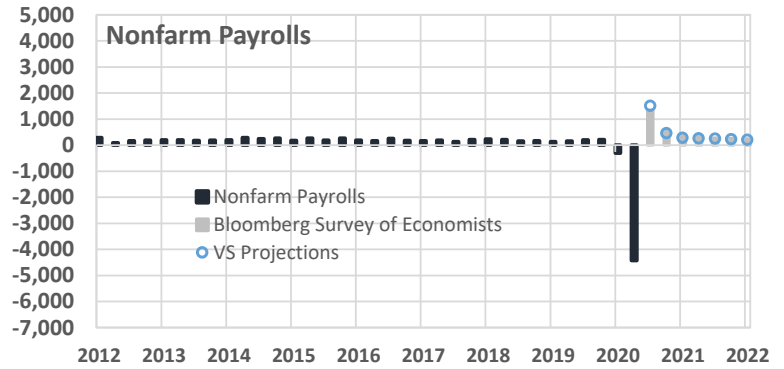
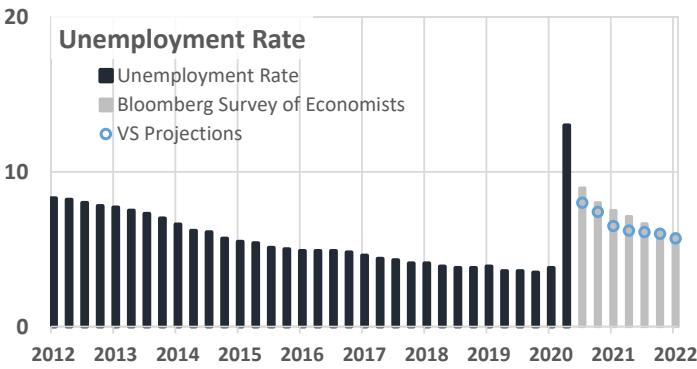
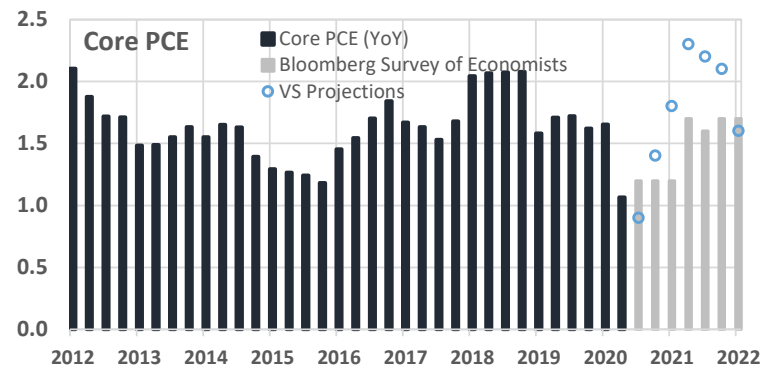
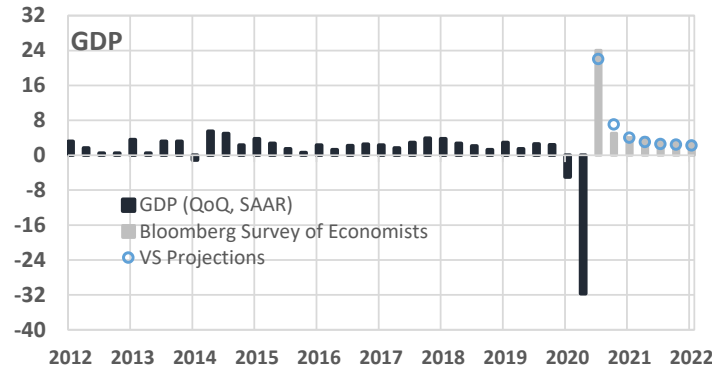


Vining Sparks Economic and Interest Rate Projections

September 2020

	Q320	Q420	Q121	Q221	Q321	Q421	2020	2021
GDP (QoQ, SAAR)	22.0	7.0	4.0	3.0	2.5	2.4	-5.9	2.9
Headline CPI (YoY)	1.4	1.6	1.8	2.3	2.2	1.8	1.0	2.3
Core PCE (YoY)	0.9	1.4	1.8	2.3	2.2	2.1	1.2	2.2
Unemployment Rate	8.0	7.4	6.5	6.2	6.1	6.0	8.3	6.2
Nonfarm Payrolls (Monthly)	1,500	450	280	260	240	220	-620	270

	Q320	Q420	Q121	Q221	Q321	Q421	Q122	Q222
Fed Funds Target	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
2-Year Treasury Yield	0.15	0.15	0.20	0.22	0.25	0.25	0.25	0.25
10-Year Treasury Yield	0.65	0.70	0.75	0.85	0.90	0.95	1.00	1.00
30-Year Treasury Yield	1.28	1.31	1.31	1.47	1.53	1.61	1.70	1.70
Prime Rate	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25
30-Year Mortgage Rate	2.75	2.70	2.65	2.65	2.70	2.75	2.80	2.80



Bloomberg Survey of Economists

September Survey

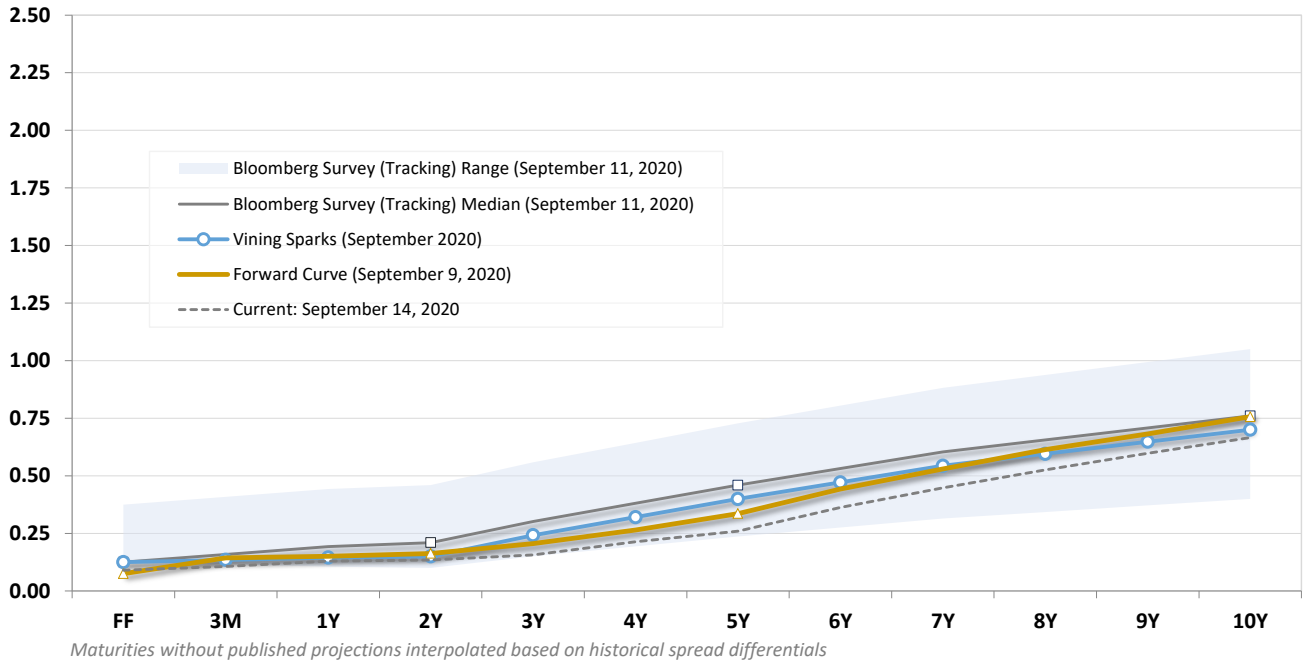
GDP		Q320	Q420	Q121	Q221	Q321	Q421	2020	2021
Vining Sparks Projections	9/14/2020	22.0	7.0	4.0	3.0	2.5	2.4	-5.9	2.9
September Survey	9/11/2020	25.0	5.1	4.0	4.0	3.2	3.0	-4.5	3.6
August Survey	8/14/2020	20.0	6.1	5.0	4.1	3.8	3.2	-5.1	3.7
Personal Consumption		Q320	Q420	Q121	Q221	Q321	Q421	2020	2021
September Survey	9/11/2020	32.2	4.7	3.6	3.5	3.2	3.0	-4.8	3.9
August Survey	8/14/2020	23.6	5.5	4.1	3.8	3.6	3.2	-5.2	3.6
Private Investment		Q320	Q420	Q121	Q221	Q321	Q421	2020	2021
September Survey	9/11/2020	18.5	9.9	7.9	6.4	5.9	4.9	-9.0	6.0
August Survey	8/14/2020	12.8	10.8	9.9	6.5	6.3	5.1	-9.5	6.1
Government Expenditures		Q320	Q420	Q121	Q221	Q321	Q421	2020	2021
September Survey	9/11/2020	-0.2	0.2	0.8	0.9	0.9	0.9	2.0	0.8
August Survey	8/14/2020	1.6	1.4	1.0	1.0	1.3	1.1	2.0	1.0
Headline CPI		Q320	Q420	Q121	Q221	Q321	Q421	2020	2021
Vining Sparks Projections	9/14/2020	1.4	1.6	1.8	2.3	2.2	1.8	1.0	2.3
September Survey	9/11/2020	1.1	1.0	1.3	2.4	1.9	2.0	1.1	1.8
August Survey	8/14/2020	0.8	0.7	1.2	2.1	1.9	2.0	1.0	1.6
Core PCE		Q320	Q420	Q121	Q221	Q321	Q421	2020	2021
Vining Sparks Projections	9/14/2020	0.9	1.4	1.8	2.3	2.2	2.1	1.2	2.2
September Survey	9/11/2020	1.2	1.2	1.3	1.7	1.6	1.7	1.3	1.5
August Survey	8/14/2020	0.9	0.9	0.9	1.4	1.5	1.6	1.1	1.3
Unemployment Rate		Q320	Q420	Q121	Q221	Q321	Q421	2020	2021
Vining Sparks Projections	9/14/2020	8.0	7.4	6.5	6.2	6.1	6.0	8.3	6.2
September Survey	9/11/2020	8.9	8.0	7.6	7.1	6.7	6.3	8.5	7.0
August Survey	8/14/2020	10.0	9.0	8.4	7.6	7.0	6.6	9.0	7.4
Nonfarm Payroll (Monthly)		Q320	Q420	Q121	Q221	Q321	Q421	2020	2021
Vining Sparks Projections	9/14/2020	1,500	450	280	260	240	220	-620	270
September Survey	9/11/2020	1,364	537	369	339	286	260	-703	306
August Survey	8/14/2020	1,228	605	342	354	292	250	-700	300
New Home Sales		Q320	Q420	Q121	Q221	Q321	Q421	2020	2021
September Survey	9/11/2020	831	800	788	794	782	790	756	789
August Survey	8/14/2020	696	700	716	704	725	727	691	728
Existing Home Sales		Q320	Q420	Q121	Q221	Q321	Q421	2020	2021
September Survey	9/11/2020	5,500	5,400	5,400	5,400	5,500	5,500	5,200	5,400
August Survey	8/14/2020	4,800	4,900	5,000	5,100	5,100	5,200	4,900	5,100
Fed Funds Target ¹		Q320	Q420	Q121	Q221	Q321	Q421	Q122	Q222
Vining Sparks Projections	9/14/2020	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
September Survey	9/11/2020	0.13	0.13	0.13	0.13	0.18	0.18	0.18	0.23
August Survey	8/14/2020	0.13	0.13	0.13	0.18	0.18	0.18	0.23	0.28
2-Year Treasury ¹		Q320	Q420	Q121	Q221	Q321	Q421	Q122	Q222
Vining Sparks Projections	9/14/2020	0.15	0.15	0.20	0.22	0.25	0.25	0.25	0.25
September Survey	9/11/2020	0.17	0.21	0.28	0.32	0.37	0.43	0.53	0.59
August Survey	8/14/2020	0.18	0.22	0.30	0.36	0.43	0.50	0.62	0.69
10-Year Treasury ¹		Q320	Q420	Q121	Q221	Q321	Q421	Q122	Q222
Vining Sparks Projections	9/14/2020	0.65	0.70	0.75	0.85	0.90	0.95	1.00	1.00
September Survey	9/11/2020	0.68	0.76	0.87	0.97	1.05	1.17	1.25	1.35
August Survey	8/14/2020	0.66	0.76	0.89	0.99	1.08	1.19	1.29	1.39

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

Year-End Rate Projections

September 2020

YE2020 Treasury Yield Projections



Bloomberg Survey Tracking Index and Vining Projections

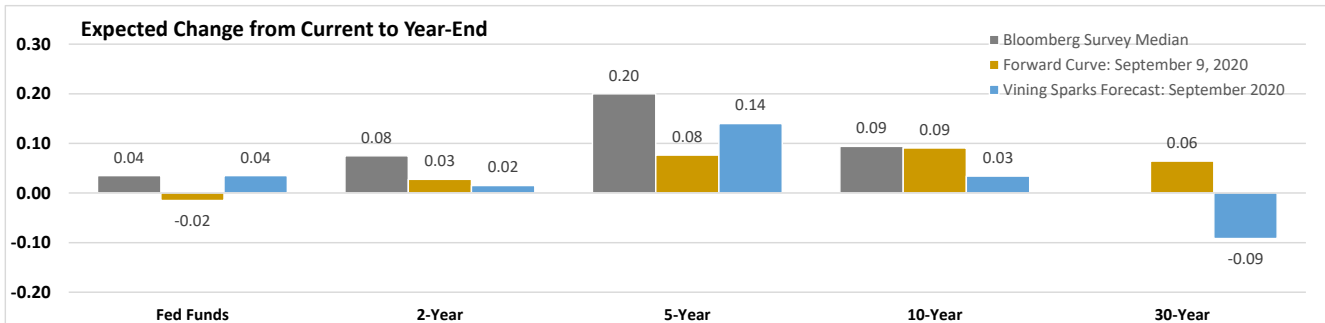
Interest Rate Projections

September 9, 2020

	Fed Funds	3M T-Bill	1-Year	2-Year	3-Year	5-Year	7-Year	10-Year	30-Year
Bloomberg Survey - Tracking: September 11, 2020									
Low Forecast	0.13			0.10		0.24		0.40	
Median Forecast	0.13			0.21		0.46		0.76	
High Forecast	0.38			0.46		0.73		1.05	
Forward Curve: September 9, 2020	0.08	0.14	0.15	0.16	0.21	0.34	0.53	0.76	1.47
Vining Sparks Forecast: September 2020	0.13	0.14	0.15	0.15	0.24	0.40	0.54	0.70	1.31
Current: September 14, 2020	0.09	0.11	0.13	0.14	0.16	0.26	0.45	0.67	1.41

Projected Δ by Year-End

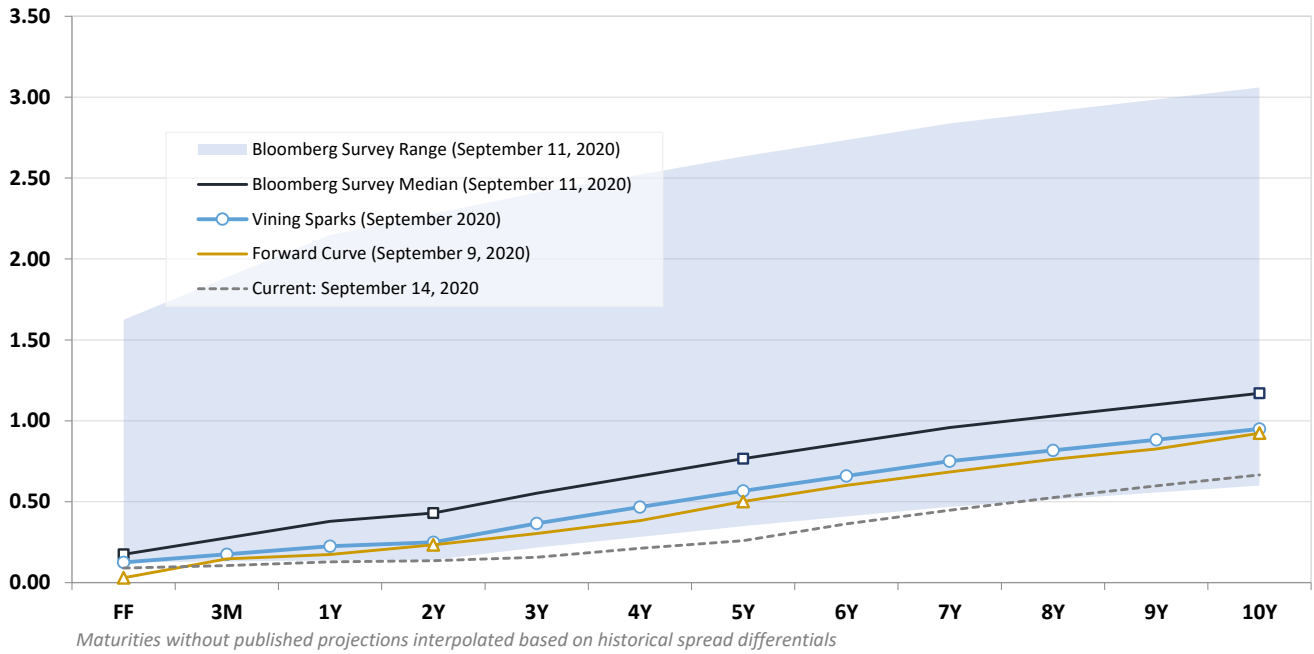
	Fed Funds	3M T-Bill	1-Year	2-Year	3-Year	5-Year	7-Year	10-Year	30-Year
Bloomberg Survey - Tracking: September 11, 2020									
Low Forecast	0.04			-0.04		-0.02		-0.27	
Median Forecast	0.04			0.08		0.20		0.09	
High Forecast	0.29			0.33		0.47		0.38	
Forward Curve: September 9, 2020	-0.02	0.04	0.02	0.03	0.05	0.08	0.08	0.09	0.06
Vining Sparks Forecast: September 2020	0.04	0.03	0.02	0.02	0.09	0.14	0.10	0.03	-0.09



Year-End Rate Projections

September 2020

YE2021 Treasury Yield Projections



Bloomberg Survey Tracking Index and Vining Projections

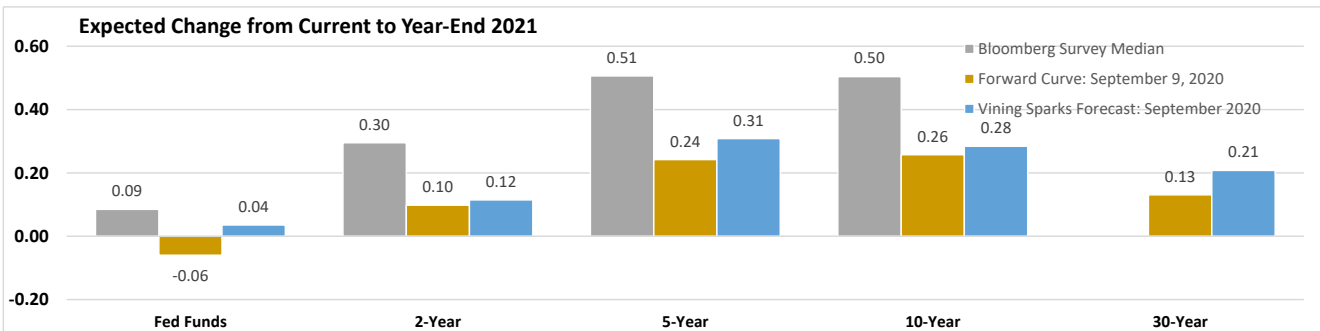
Interest Rate Projections

September 9, 2020

	Fed Funds	3M T-Bill	1-Year	2-Year	3-Year	5-Year	7-Year	10-Year	30-Year
Bloomberg Survey - Tracking: September 11, 2020									
Low Forecast	0.13			0.14		0.35		0.60	
Median Forecast	0.18			0.43		0.77		1.17	
High Forecast	1.63			2.28		2.63		3.06	
Forward Curve: September 9, 2020	0.03	0.15	0.17	0.23	0.30	0.50	0.68	0.92	1.54
Vining Sparks Forecast: September 2020	0.13	0.18	0.23	0.25	0.37	0.57	0.75	0.95	1.61
Current: September 14, 2020	0.09	0.11	0.13	0.14	0.16	0.26	0.45	0.67	1.41

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: September 11, 2020									
Low Forecast	0.04			0.01		0.09		-0.07	
Median Forecast	0.09			0.30		0.51		0.50	
High Forecast	1.54			2.15		2.37		2.39	
Forward Curve: September 9, 2020	-0.06	0.04	0.05	0.10	0.15	0.24	0.24	0.26	0.13
Vining Sparks Forecast: September 2020	0.04	0.07	0.10	0.12	0.21	0.31	0.30	0.28	0.21



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

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