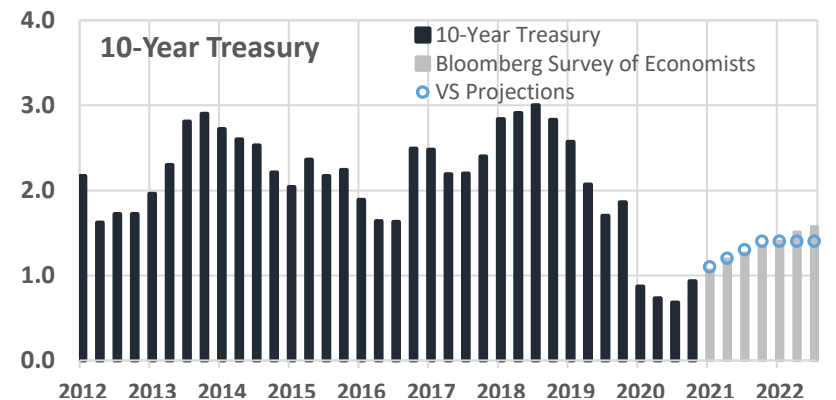
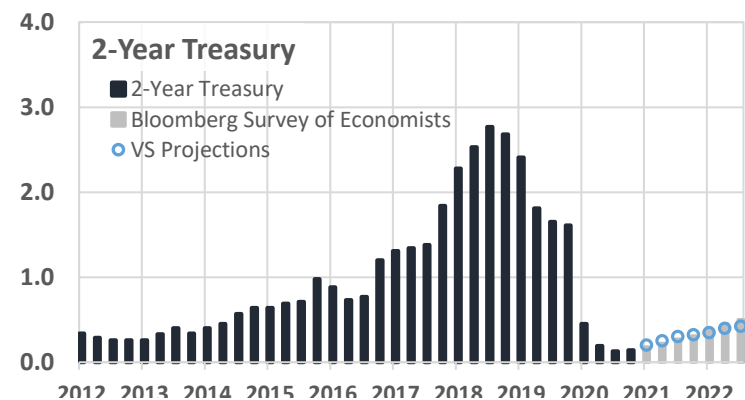
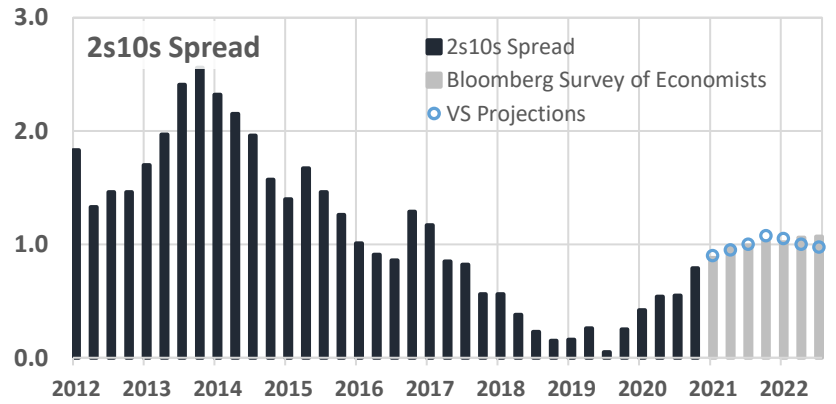
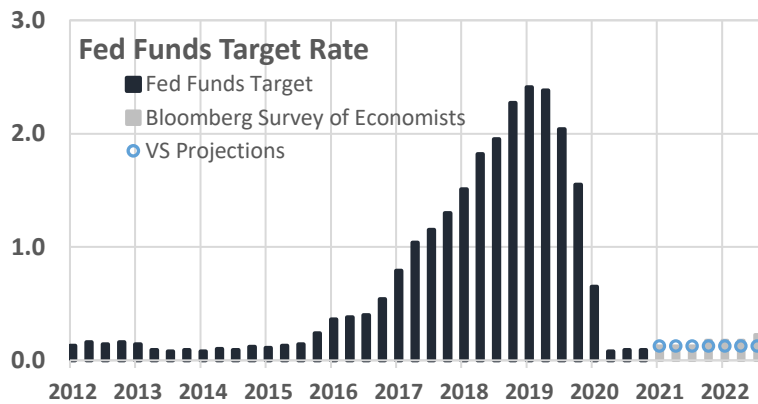
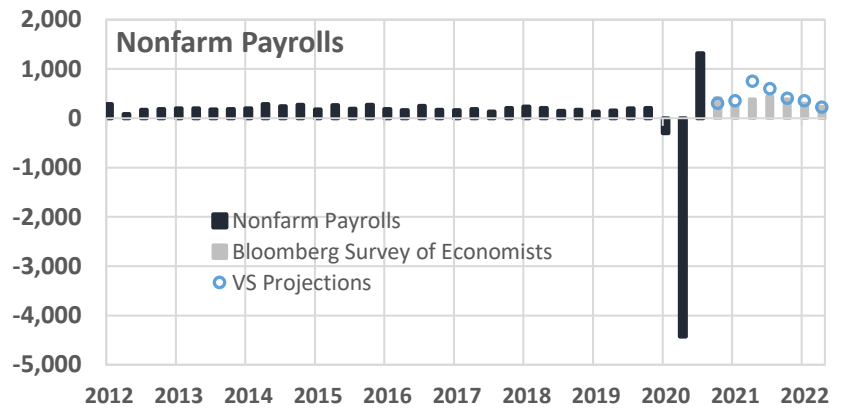
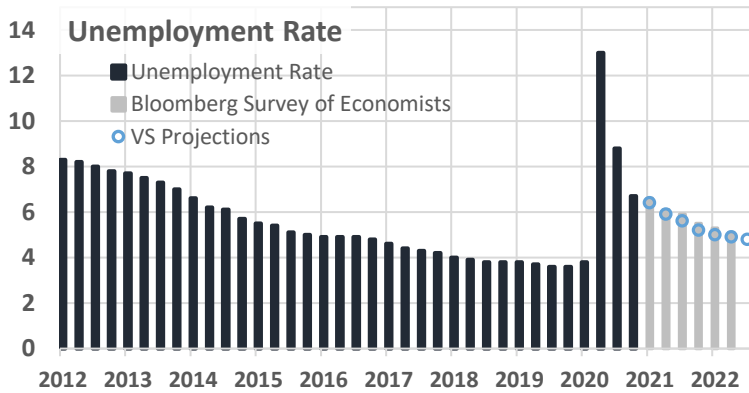
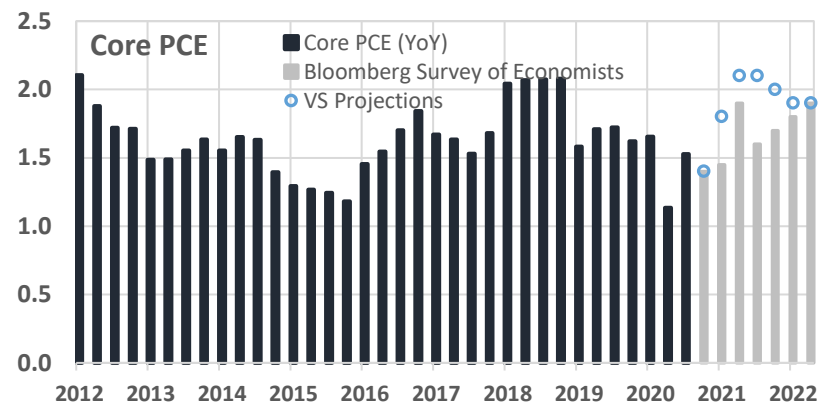
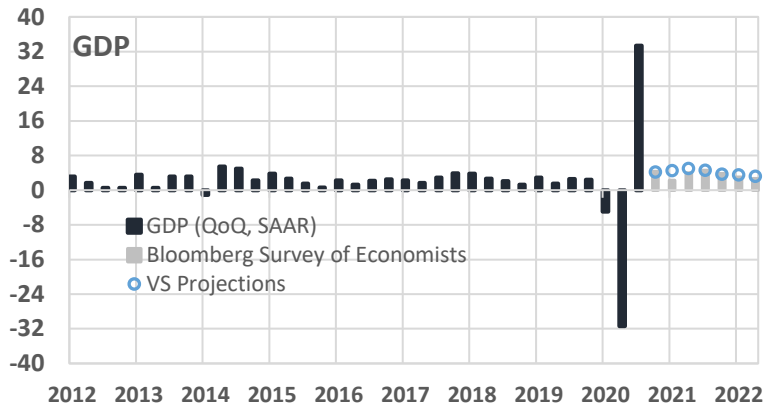


Vining Sparks Economic and Interest Rate Projections

January 2021

| | Q420 | Q121 | Q221 | Q321 | Q421 | Q122 | 2020 | 2021 |
|-----------------------------------|------|------|------|------|------|------|------|------|
| GDP (QoQ, SAAR) | 4.2 | 4.5 | 5.0 | 4.6 | 3.7 | 3.5 | -2.5 | 4.5 |
| Headline CPI (YoY) | 1.5 | 1.8 | 2.3 | 2.2 | 1.9 | 2.0 | 1.2 | 2.2 |
| Core PCE (YoY) | 1.4 | 1.8 | 2.1 | 2.1 | 2.0 | 1.9 | 1.4 | 2.1 |
| Unemployment Rate | 6.6 | 6.4 | 5.9 | 5.6 | 5.2 | 5.0 | 8.1 | 5.7 |
| Nonfarm Payrolls (Monthly) | 300 | 350 | 750 | 600 | 400 | 350 | -610 | 525 |

| | Q420 | Q121 | Q221 | Q321 | Q421 | Q122 | Q222 | Q322 |
|-------------------------------|------|------|------|------|------|------|------|------|
| 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 | 0.20 | 0.25 | 0.30 | 0.33 | 0.35 | 0.40 | 0.43 |
| 10-Year Treasury Yield | 0.95 | 1.10 | 1.20 | 1.30 | 1.40 | 1.40 | 1.40 | 1.40 |
| 30-Year Treasury Yield | 1.73 | 1.90 | 2.03 | 2.16 | 2.31 | 2.29 | 2.26 | 2.25 |
| Prime Rate | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 |
| 30-Year Mortgage Rate | 2.75 | 2.90 | 3.05 | 3.20 | 3.35 | 3.35 | 3.35 | 3.35 |



Bloomberg Survey of Economists

January Survey

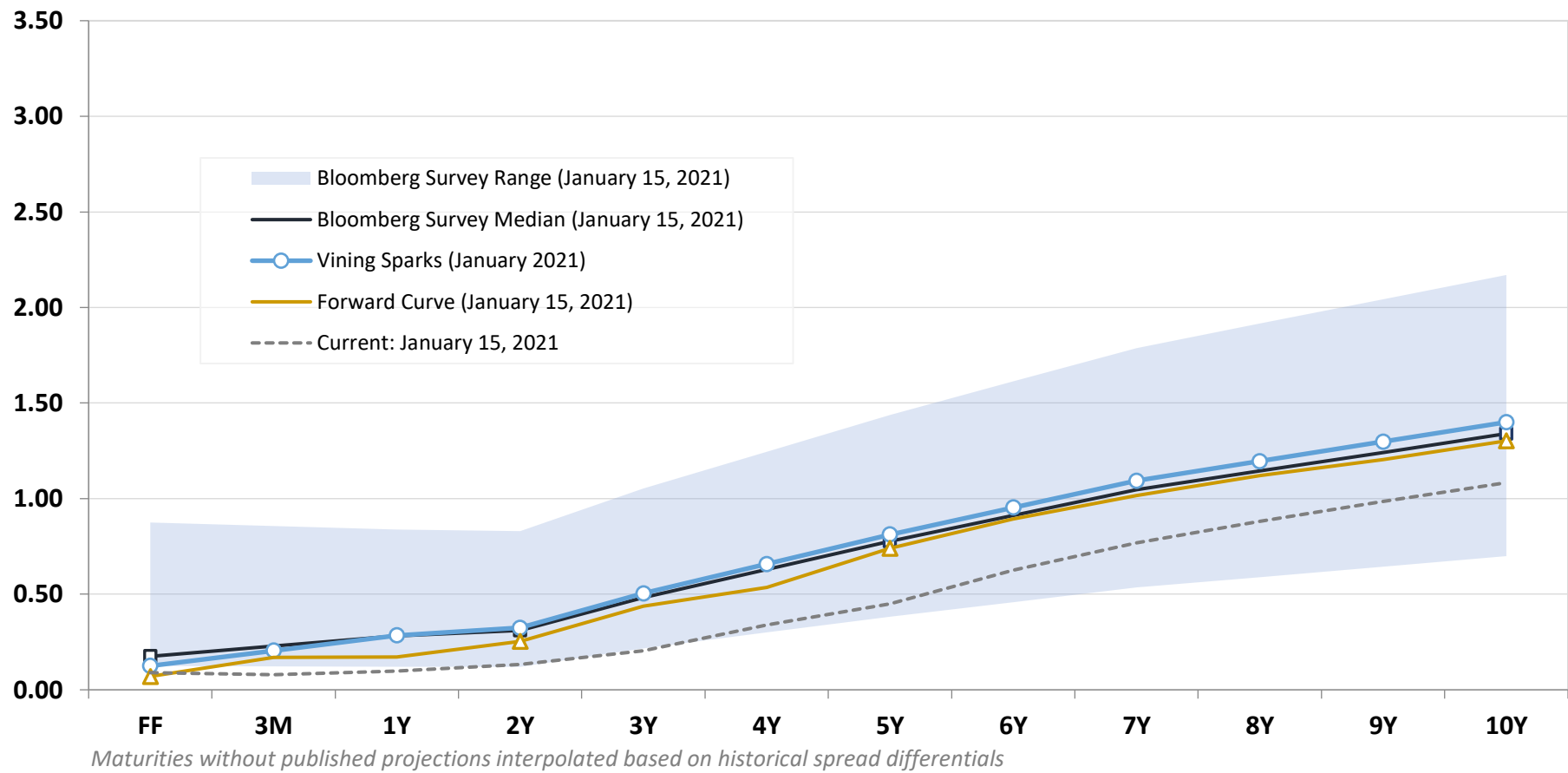
| | | Q420 | Q121 | Q221 | Q321 | Q421 | Q122 | 2020 | 2021 |
|-------------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| GDP | | | | | | | | | |
| Vining Sparks Projections | 1/15/2021 | 4.2 | 4.5 | 5.0 | 4.6 | 3.7 | 3.5 | -2.5 | 4.5 |
| January Survey | 1/15/2021 | 4.2 | 2.3 | 4.0 | 4.6 | 3.8 | 3.0 | -3.5 | 4.1 |
| December Survey | 12/11/2020 | 4.5 | 2.5 | 3.6 | 3.7 | 3.4 | 3.0 | -3.5 | 4.0 |
| Personal Consumption | | | | | | | | | |
| January Survey | 1/15/2021 | 3.8 | 2.0 | 4.7 | 5.6 | 4.2 | 3.0 | -3.8 | 5.0 |
| December Survey | 12/11/2020 | 4.9 | 1.7 | 4.1 | 4.4 | 4.0 | 3.2 | -3.8 | 4.6 |
| Private Investment | | | | | | | | | |
| January Survey | 1/15/2021 | 12.3 | 5.2 | 4.5 | 4.9 | 5.0 | 4.9 | -5.6 | 8.6 |
| December Survey | 12/11/2020 | 10.8 | 4.3 | 3.7 | 3.8 | 4.6 | 4.3 | -6.0 | 7.5 |
| Government Expenditures | | | | | | | | | |
| January Survey | 1/15/2021 | -1.2 | 1.3 | 0.8 | 1.0 | 1.0 | 0.7 | 1.1 | 0.1 |
| December Survey | 12/11/2020 | -1.4 | 0.9 | 0.8 | 1.1 | 1.2 | 0.7 | 1.1 | 0.0 |
| Headline CPI | | | | | | | | | |
| Vining Sparks Projections | 1/15/2021 | 1.5 | 1.8 | 2.3 | 2.2 | 1.9 | 2.0 | 1.2 | 2.2 |
| January Survey | 1/15/2021 | 1.2 | 1.6 | 2.7 | 2.1 | 2.1 | 2.1 | 1.2 | 2.1 |
| December Survey | 12/11/2020 | 1.2 | 1.5 | 2.6 | 2.0 | 2.0 | 2.0 | 1.2 | 2.0 |
| Core PCE | | | | | | | | | |
| Vining Sparks Projections | 1/15/2021 | 1.4 | 1.8 | 2.1 | 2.1 | 2.0 | 1.9 | 1.4 | 2.1 |
| January Survey | 1/15/2021 | 1.4 | 1.4 | 1.9 | 1.6 | 1.8 | 1.9 | 1.4 | 1.7 |
| December Survey | 12/11/2020 | 1.5 | 1.5 | 2.1 | 1.7 | 1.8 | 1.8 | 1.4 | 1.7 |
| Unemployment Rate | | | | | | | | | |
| Vining Sparks Projections | 1/15/2021 | 6.6 | 6.4 | 5.9 | 5.6 | 5.2 | 5.0 | 8.1 | 5.7 |
| January Survey | 1/15/2021 | 6.8 | 6.6 | 6.1 | 5.8 | 5.5 | 5.2 | 8.1 | 6.0 |
| December Survey | 12/11/2020 | 6.8 | 6.6 | 6.3 | 5.8 | 5.5 | 5.3 | 8.1 | 6.0 |
| Nonfarm Payroll (Monthly) | | | | | | | | | |
| Vining Sparks Projections | 1/15/2021 | 300 | 350 | 750 | 600 | 400 | 350 | -610 | 525 |
| January Survey | 1/15/2021 | 391 | 250 | 413 | 482 | 396 | 310 | -756 | 369 |
| December Survey | 12/11/2020 | 555 | 311 | 378 | 405 | 350 | 273 | -718 | 369 |
| New Home Sales | | | | | | | | | |
| January Survey | 1/15/2021 | 901 | 867 | 874 | 869 | 881 | 868 | 821 | 897 |
| December Survey | 12/11/2020 | 953 | 910 | 868 | 885 | 881 | 868 | 838 | 916 |
| Existing Home Sales | | | | | | | | | |
| January Survey | 1/15/2021 | 6,500 | 6,200 | 5,900 | 5,900 | 5,900 | 5,800 | 5,600 | 6,000 |
| December Survey | 12/11/2020 | 6,400 | 6,000 | 5,800 | 5,800 | 5,900 | 5,700 | 5,600 | 6,000 |
| Fed Funds Target¹ | | | | | | | | | |
| Vining Sparks Projections | 1/15/2021 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| January Survey | 1/15/2021 | 0.13 | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 | 0.18 | 0.23 |
| December Survey | 12/11/2020 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.18 | 0.18 |
| 2-Year Treasury¹ | | | | | | | | | |
| Vining Sparks Projections | 1/15/2021 | 0.15 | 0.20 | 0.25 | 0.30 | 0.33 | 0.35 | 0.40 | 0.43 |
| January Survey | 1/15/2021 | 0.17 | 0.18 | 0.22 | 0.27 | 0.31 | 0.38 | 0.45 | 0.50 |
| December Survey | 12/11/2020 | 0.17 | 0.20 | 0.24 | 0.28 | 0.33 | 0.39 | 0.43 | 0.50 |
| 10-Year Treasury¹ | | | | | | | | | |
| Vining Sparks Projections | 1/15/2021 | 0.95 | 1.10 | 1.20 | 1.30 | 1.40 | 1.40 | 1.40 | 1.40 |
| January Survey | 1/15/2021 | 0.87 | 1.06 | 1.19 | 1.26 | 1.34 | 1.40 | 1.51 | 1.57 |
| December Survey | 12/11/2020 | 0.87 | 0.96 | 1.07 | 1.14 | 1.24 | 1.28 | 1.36 | 1.45 |

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

Year-End Rate Projections

January 2021

YE2021 Treasury Yield Projections



Bloomberg Survey Tracking Index and Vining Projections

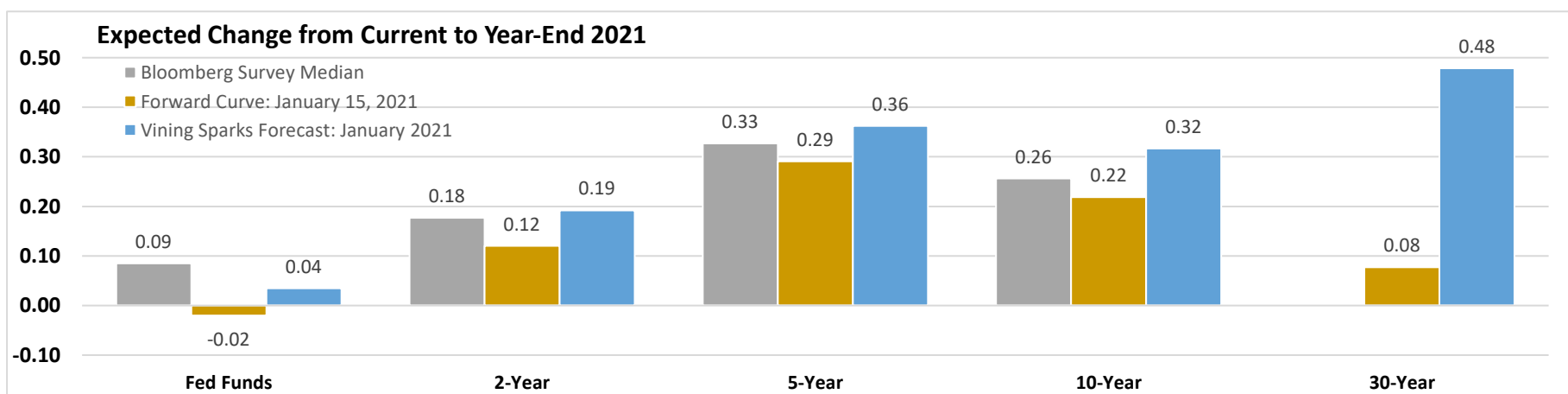
Interest Rate Projections

January 15, 2021

| | Fed Funds | 3M T-Bill | 1-Year | 2-Year | 3-Year | 5-Year | 7-Year | 10-Year | 30-Year |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Bloomberg Survey - Tracking: January 15, 2021 | | | | | | | | | |
| Low Forecast | 0.13 | | | 0.12 | | 0.38 | | 0.70 | |
| Median Forecast | 0.18 | | | 0.31 | | 0.78 | | 1.34 | |
| High Forecast | 0.88 | | | 0.83 | | 1.44 | | 2.17 | |
| Forward Curve: January 15, 2021 | 0.07 | 0.17 | 0.17 | 0.25 | 0.44 | 0.74 | 1.02 | 1.30 | 1.91 |
| Vining Sparks Forecast: January 2021 | 0.13 | 0.21 | 0.29 | 0.33 | 0.50 | 0.81 | 1.09 | 1.40 | 2.31 |
| Current: January 15, 2021 | 0.09 | 0.08 | 0.10 | 0.13 | 0.20 | 0.45 | 0.77 | 1.08 | 1.83 |

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: January 15, 2021 | | | | | | | | | |
| Low Forecast | 0.04 | | | -0.01 | | -0.07 | | -0.38 | |
| Median Forecast | 0.09 | | | 0.18 | | 0.33 | | 0.26 | |
| High Forecast | 0.79 | | | 0.70 | | 0.99 | | 1.09 | |
| Forward Curve: January 15, 2021 | -0.02 | 0.09 | 0.07 | 0.12 | 0.23 | 0.29 | 0.25 | 0.22 | 0.08 |
| Vining Sparks Forecast: January 2021 | 0.04 | 0.13 | 0.19 | 0.19 | 0.30 | 0.36 | 0.33 | 0.32 | 0.48 |



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

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