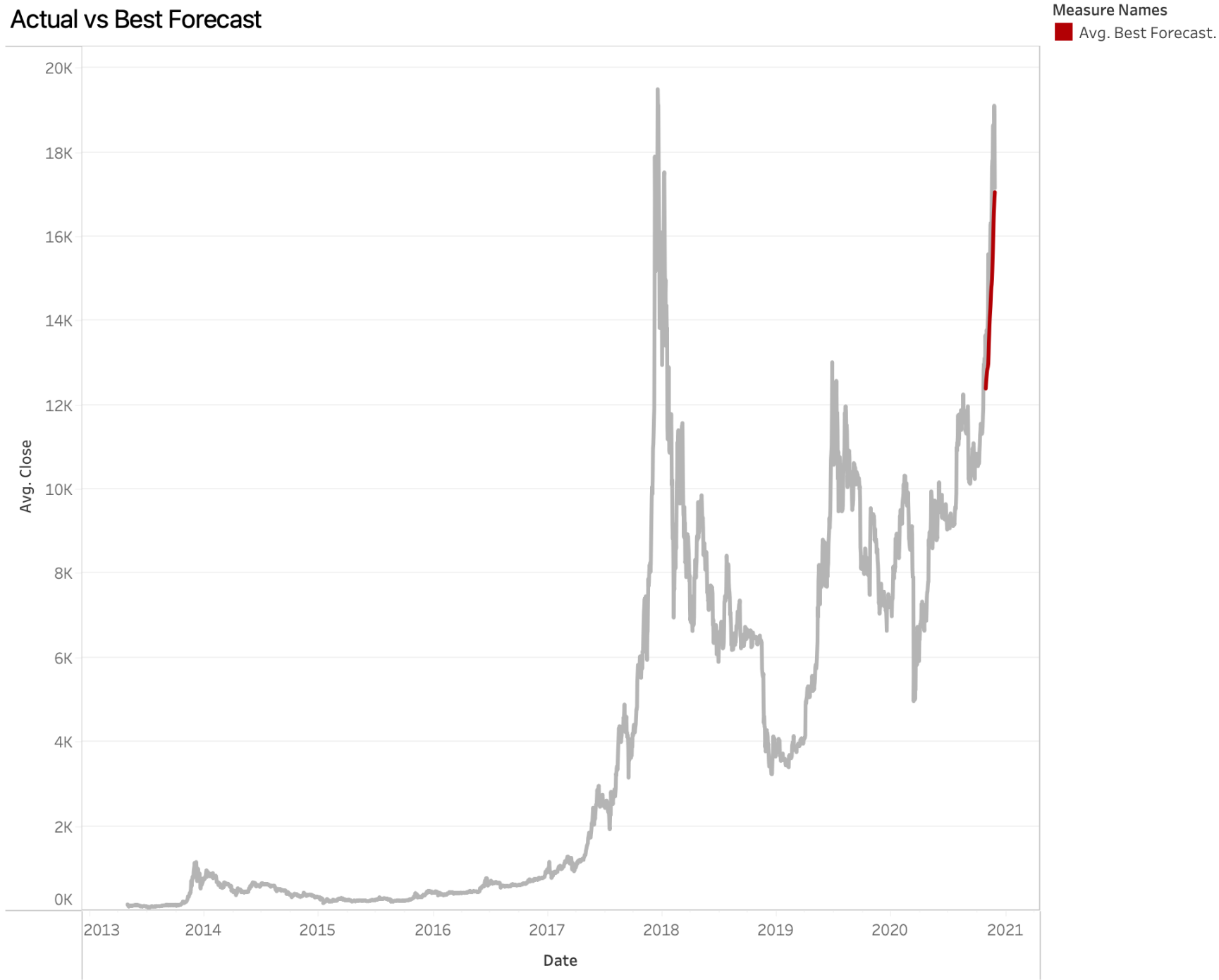
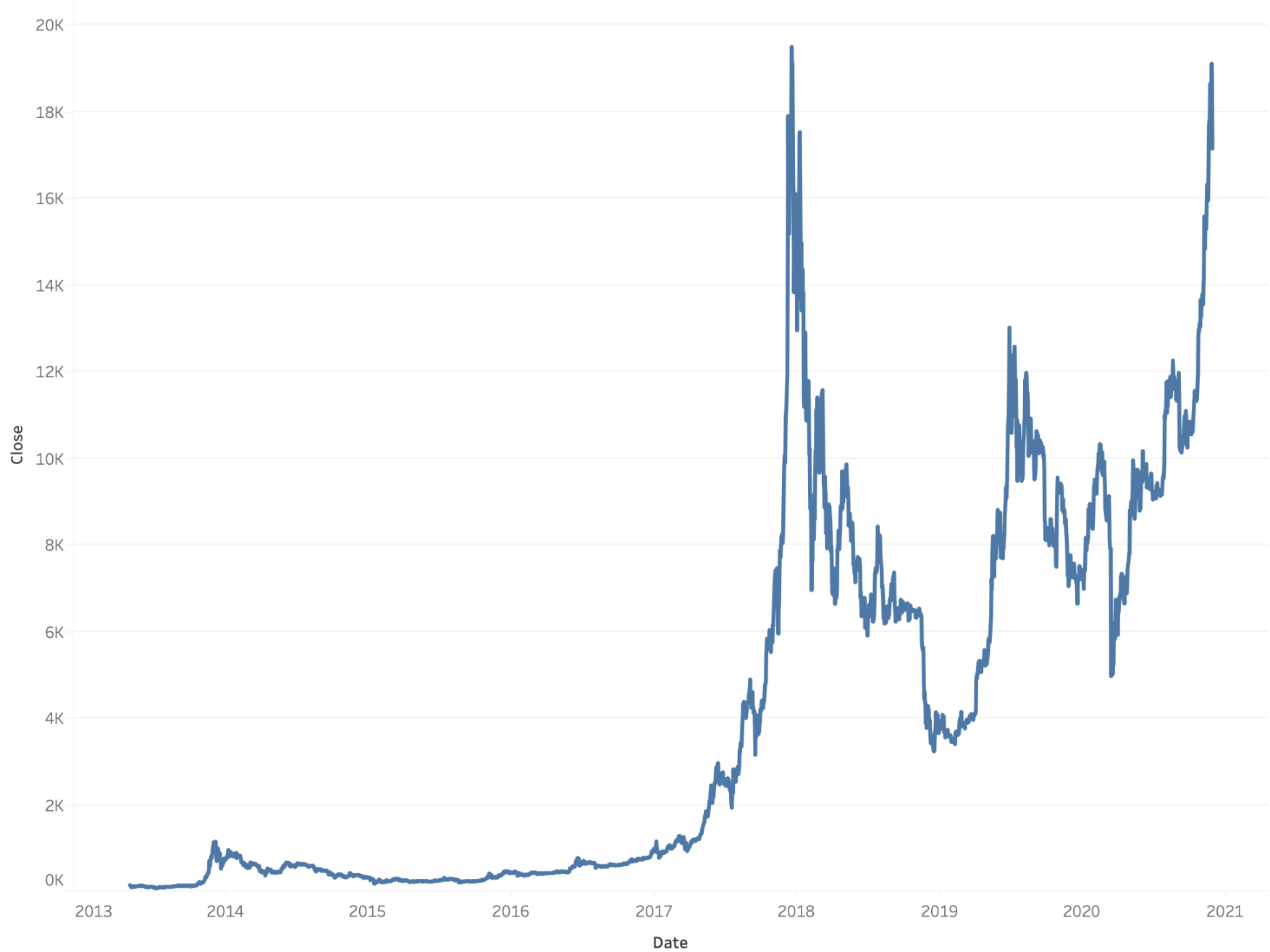
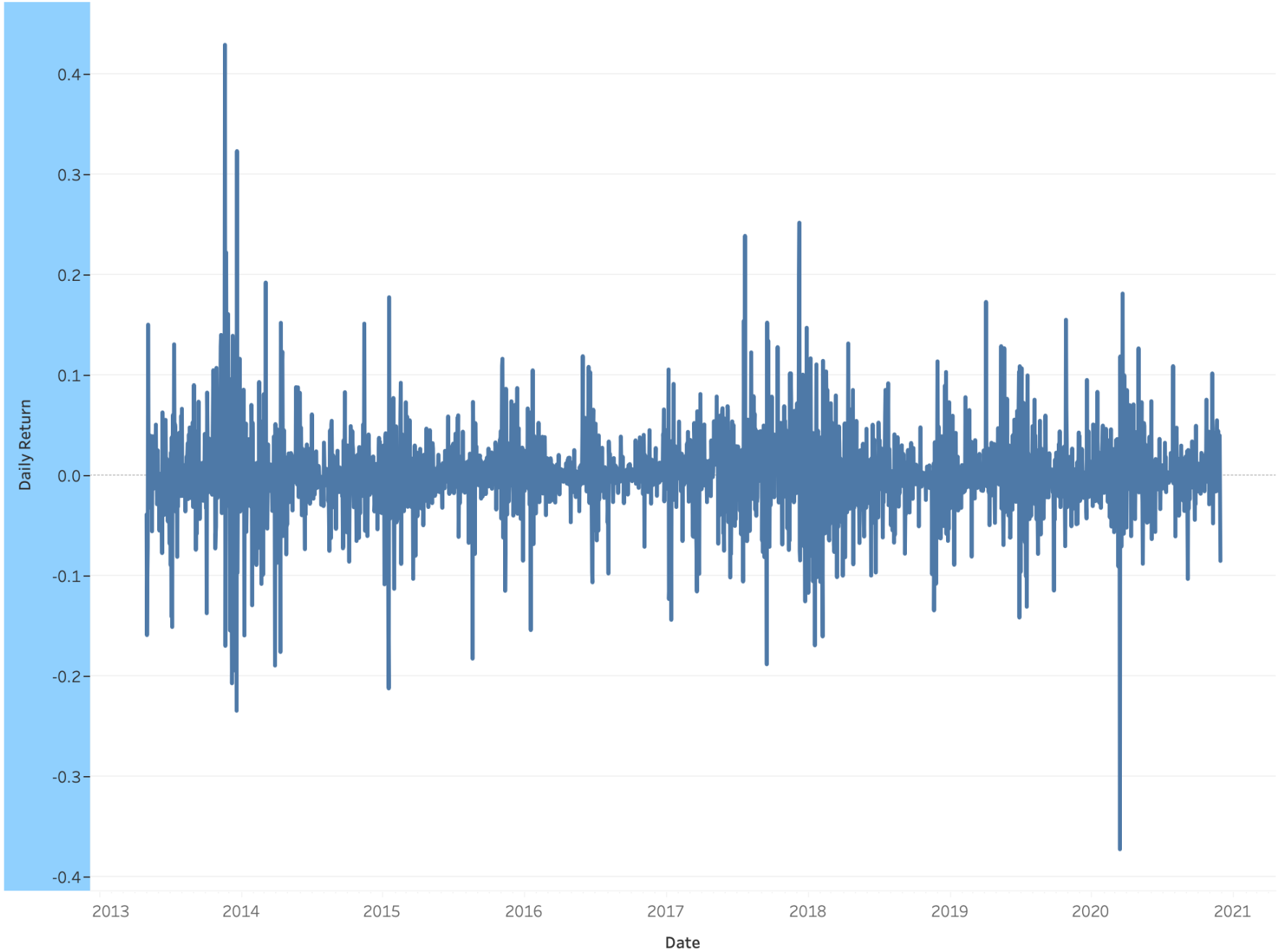
# Actual vs Best Forecast



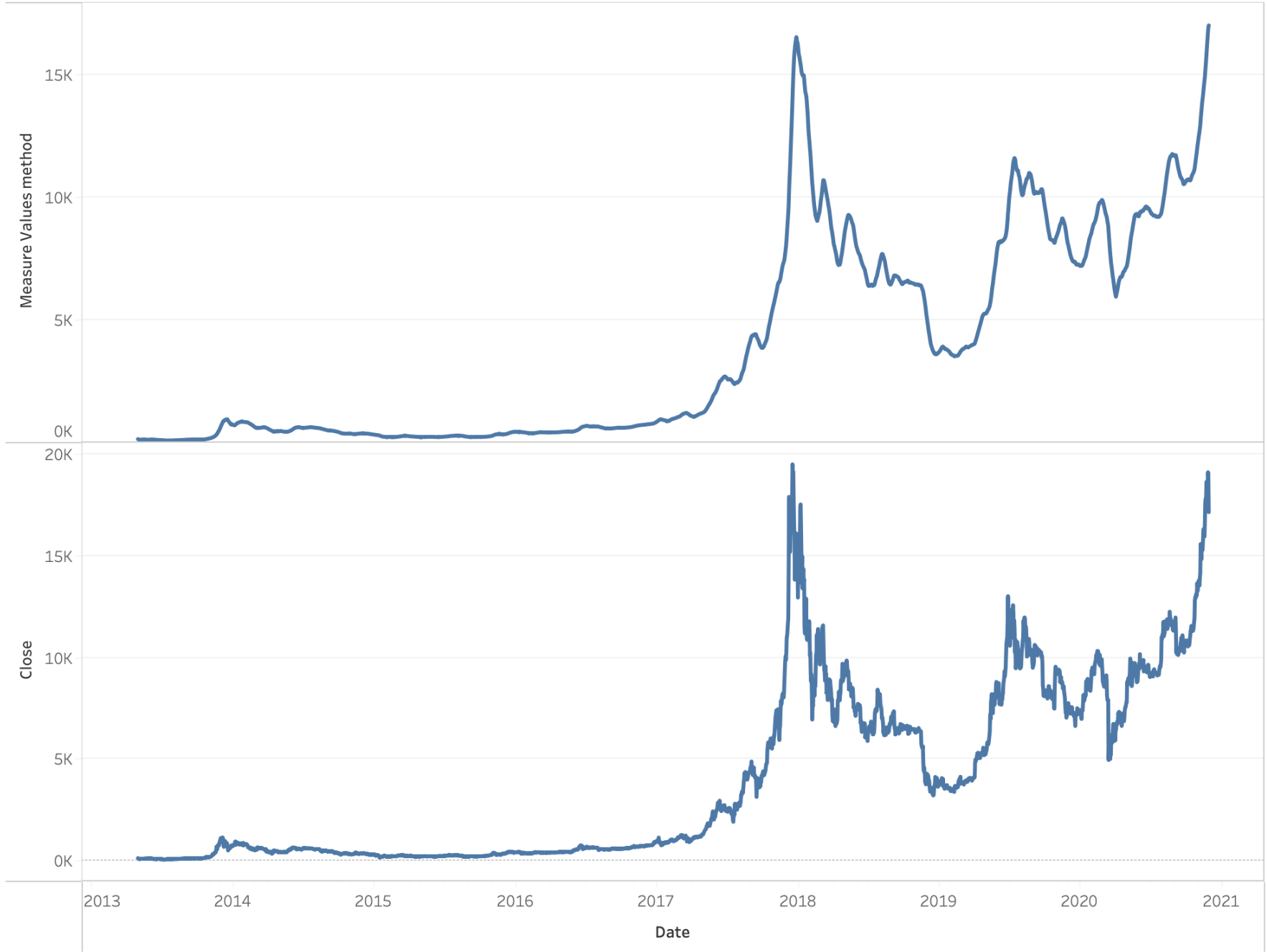
## Historical Bitcoin Price Trend

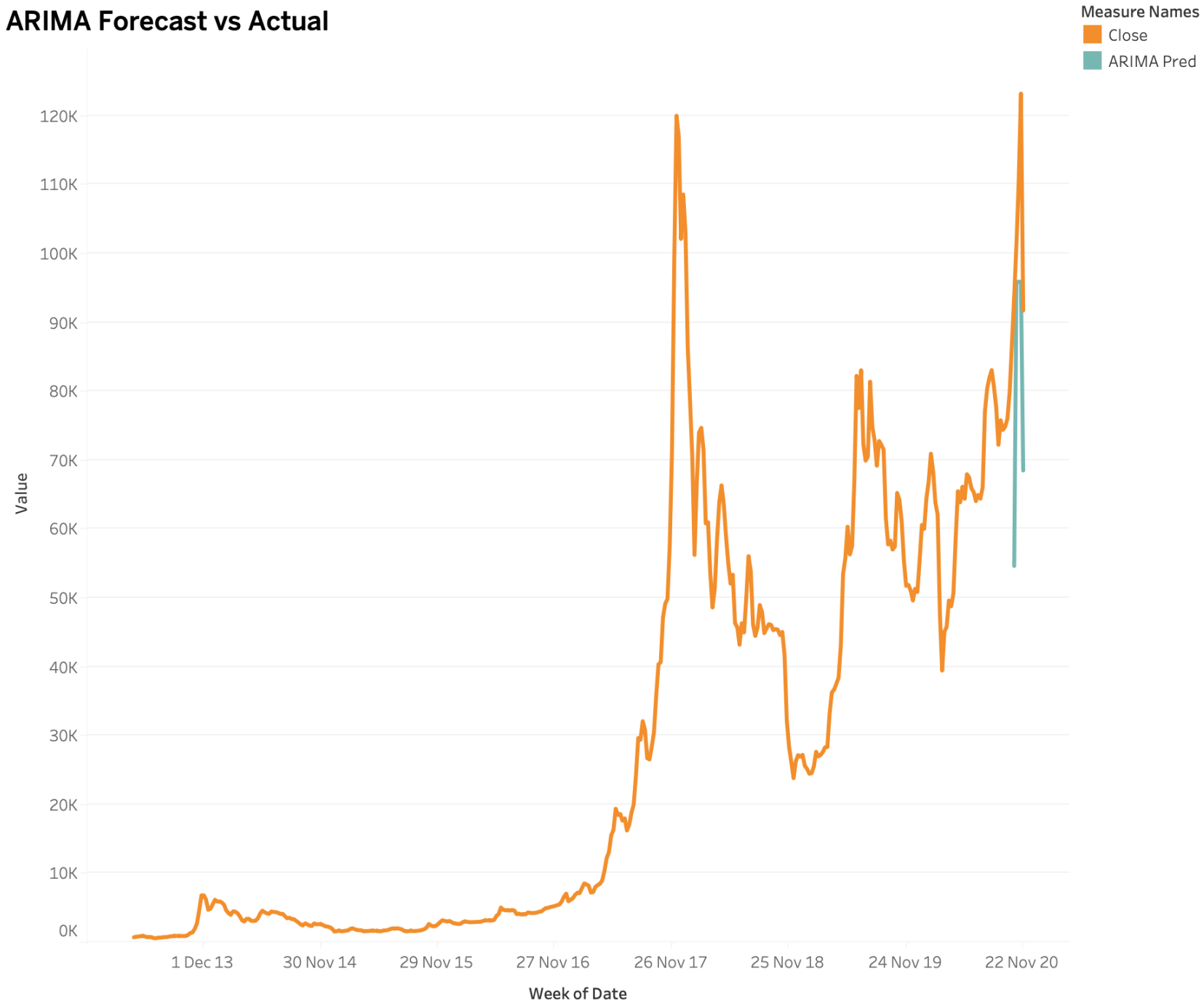


## Daily Returns (Volatility) Over Time

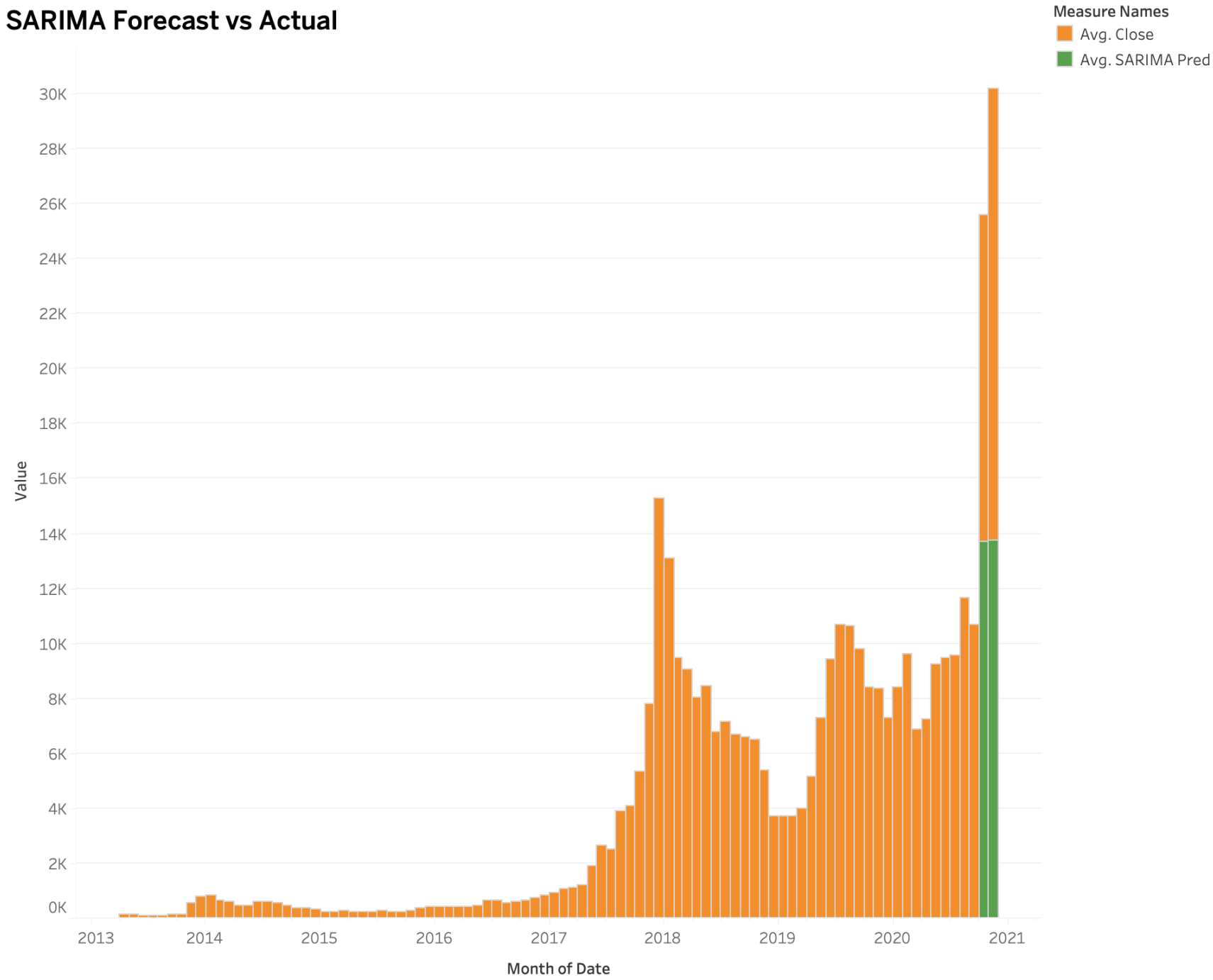


## Trend using Moving Averages

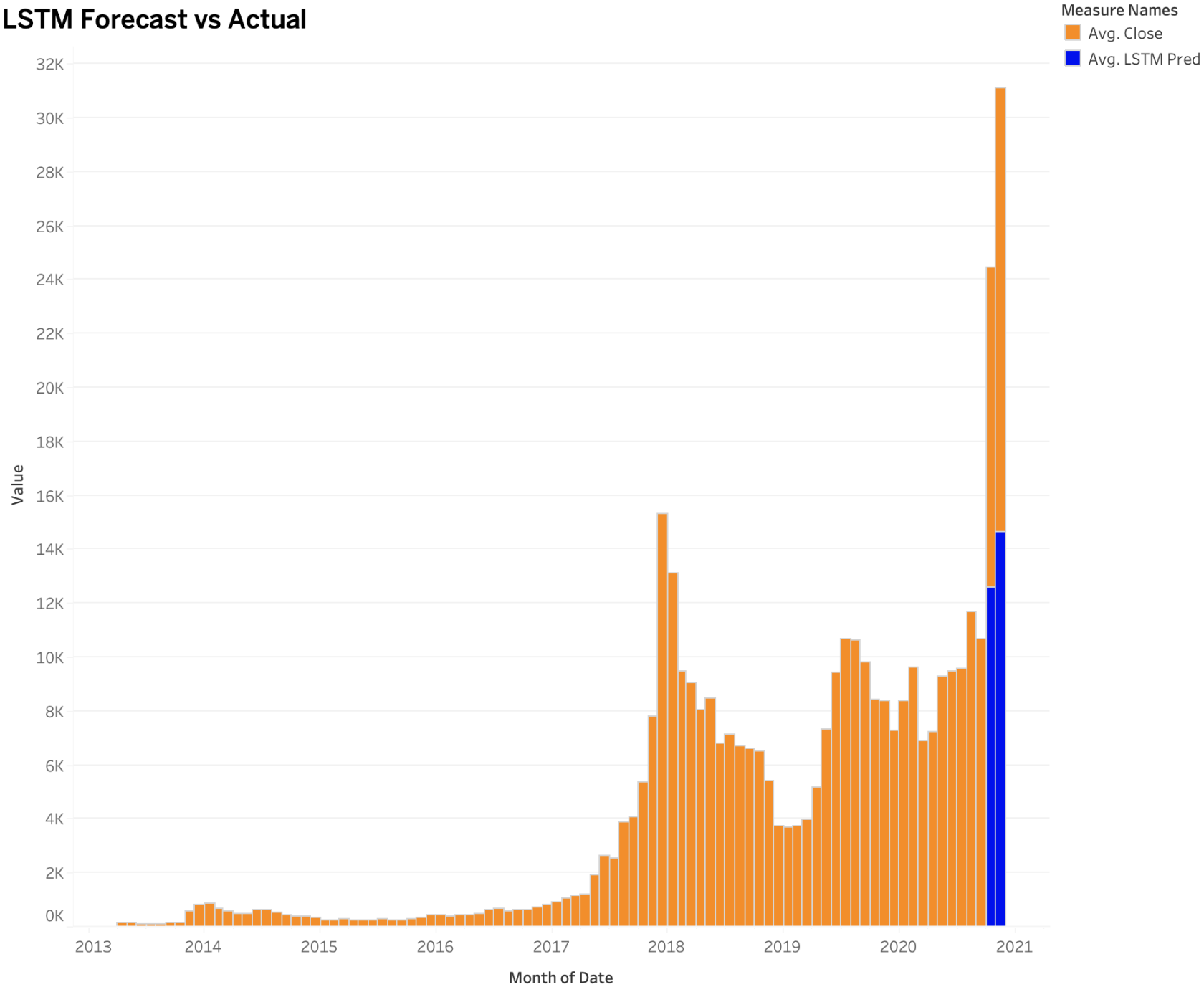



ARIMA Forecast vs Actual
Measure Names
Close
ARIMA Pred
120K
110K
100K
90K
80K
70K
60K
50K
40K
30K
20K
10K
0K
Value
1 Dec 13
30 Nov 14
29 Nov 15
27 Nov 16
26 Nov 17
25 Nov 18
24 Nov 19
22 Nov 20
Week of Date

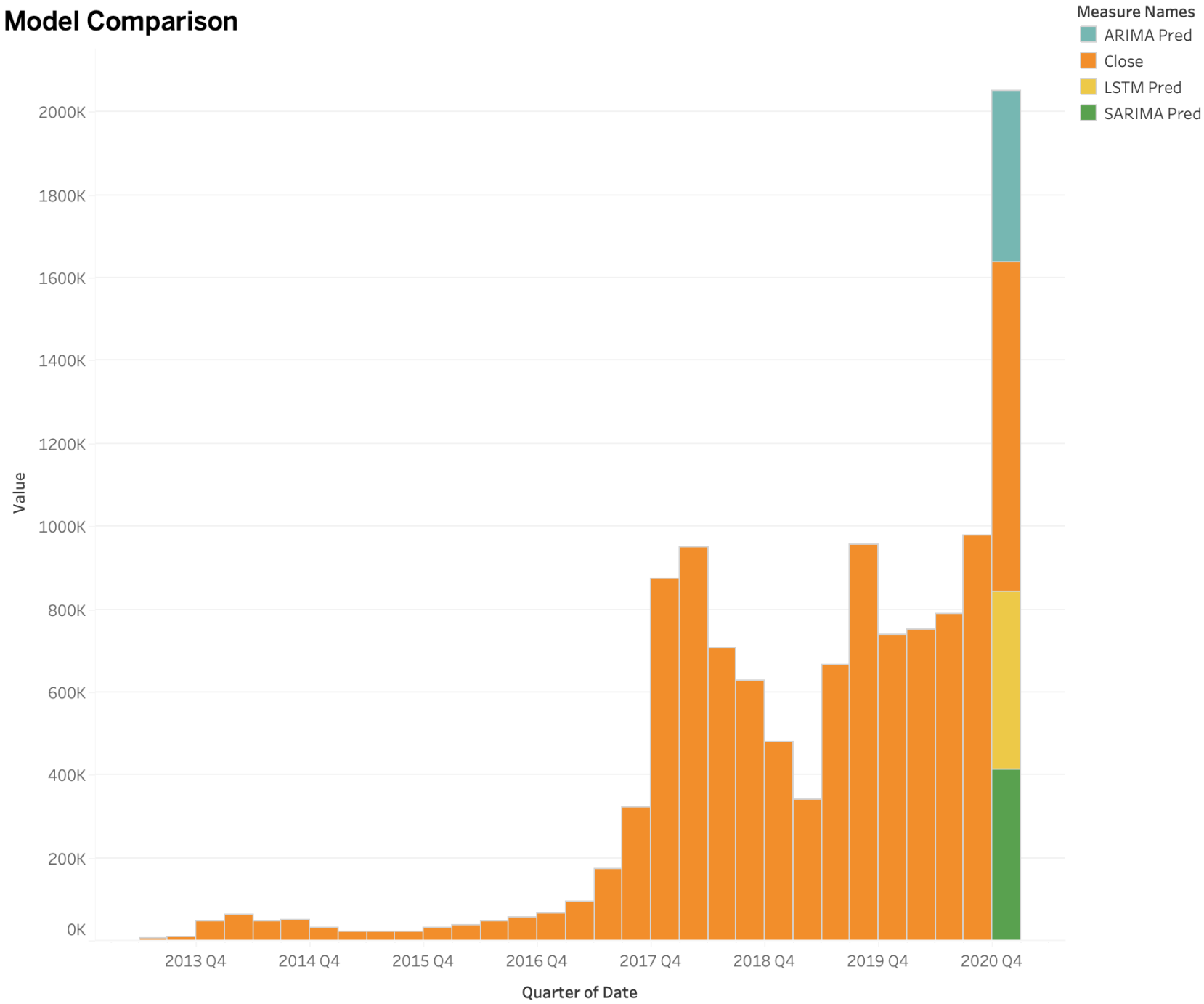
# SARIMA Forecast vs Actual



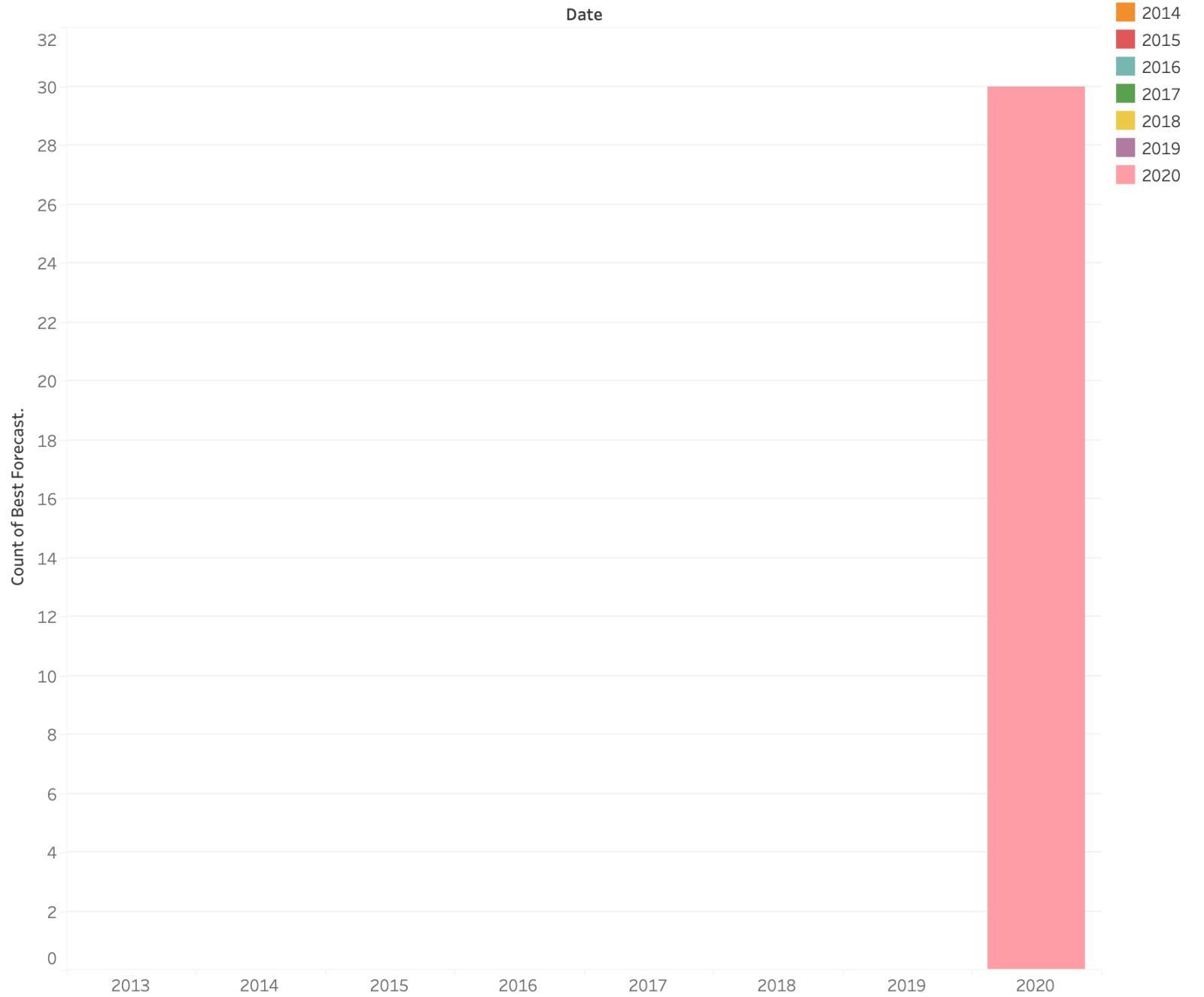
# LSTM Forecast vs Actual



# Model Comparison



# Future Forecast

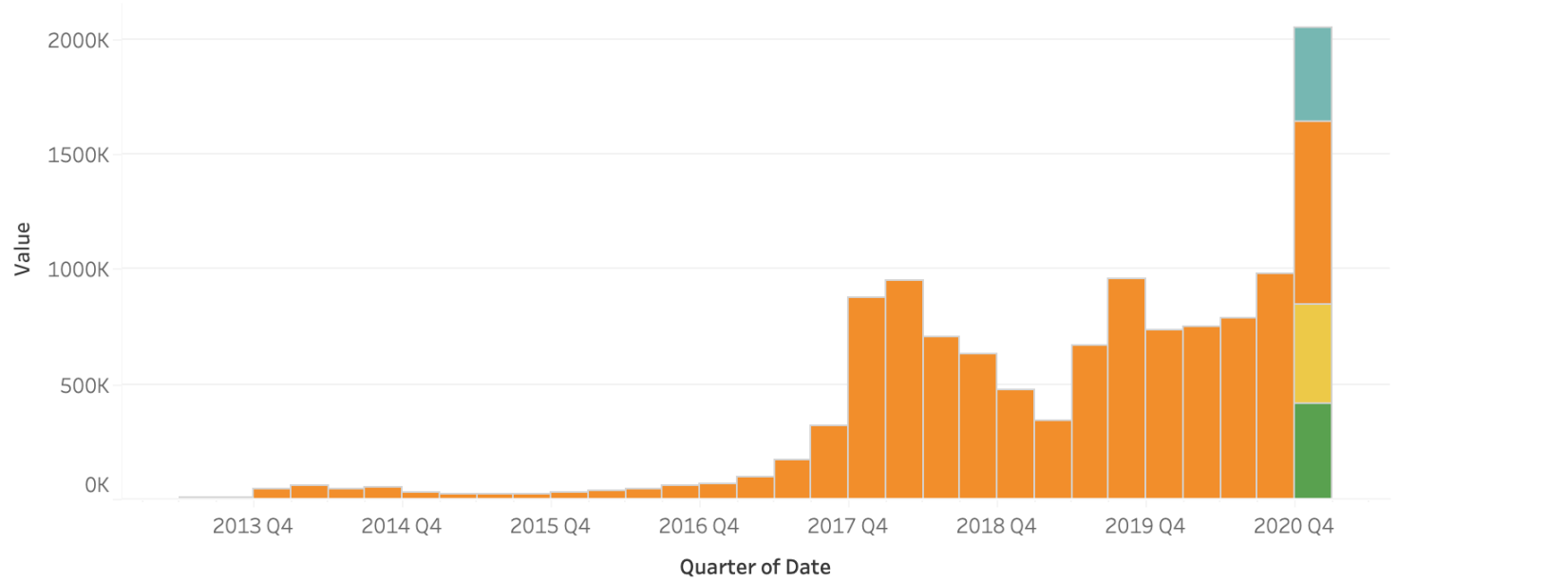


# Insights & Conclusion

**Key Insights**
Bitcoin price shows strong long-term uptrend with high volatility
Major spikes observed around 2017–2018 and 2020–2021..

**Best Model (Conclusion)**
Best performing model: **LSTM / SARIMA / ARIMA** (choose your best)
Reason: Lower prediction error compared to other models..

**Limitations**
Crypto market is highly unpredictable
Sudden news/events cause sharp price jumps
Model accuracy reduces during extreme volatility periods

**Future Scope**
Add real-time API live price streaming
Include sentiment analysis from Twitter/News
Improve forecasting using hybrid models + attention networks

## Model Comparison