

Stock Analysis of IFAST

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```
getSymbols("AIY.SI",src="yahoo", from="2020-01-01",to="2020-11-02")
```

```
## 'getSymbols' currently uses auto.assign=TRUE by default, but will
## use auto.assign=FALSE in 0.5-0. You will still be able to use
## 'loadSymbols' to automatically load data. getOption("getSymbols.env")
## and getOption("getSymbols.auto.assign") will still be checked for
## alternate defaults.
##
## This message is shown once per session and may be disabled by setting
## options("getSymbols.warning4.0"=FALSE). See ?getSymbols for details.
```

```
## [1] "AIY.SI"
```

```
tail(AIY.SI)
```

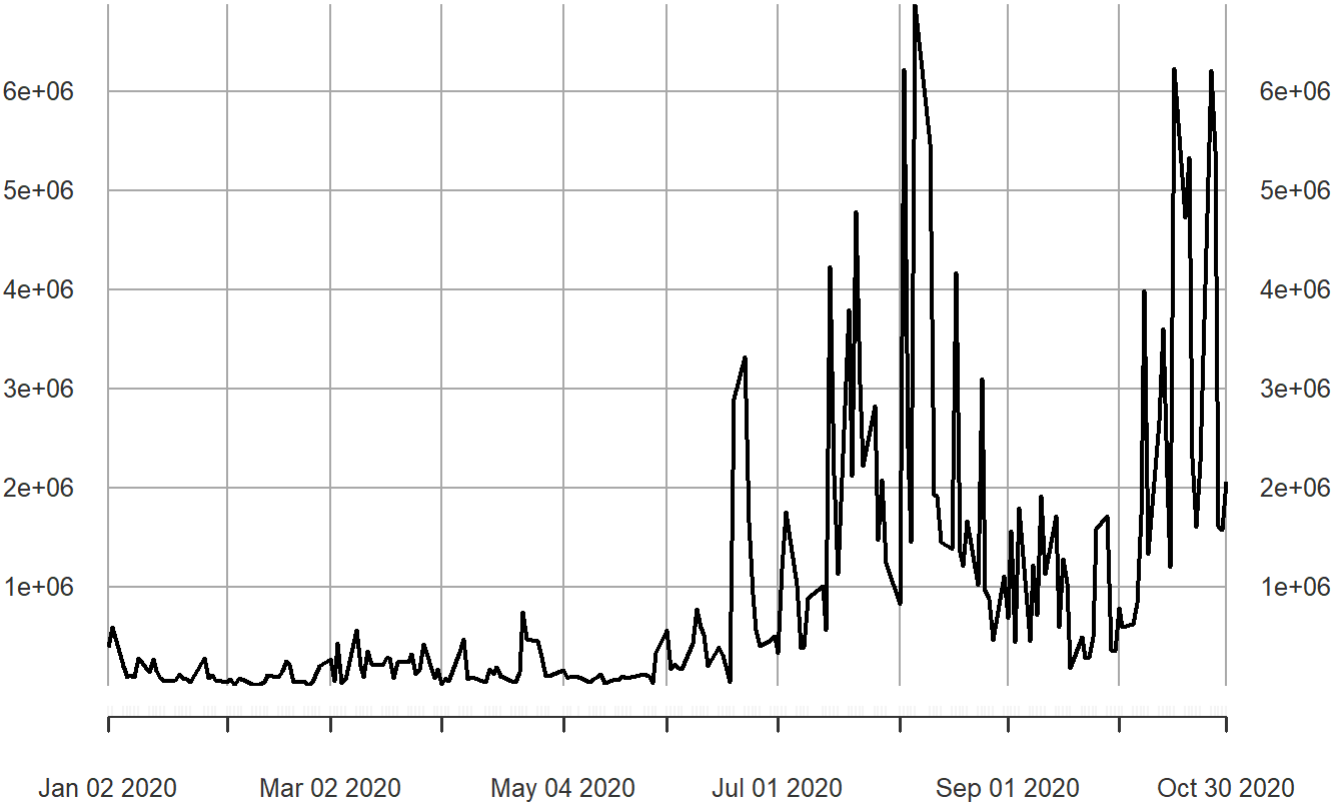
```
##           AIY.SI.Open AIY.SI.High AIY.SI.Low AIY.SI.Close AIY.SI.Volume
## 2020-10-23           3.16          3.33      3.12          3.23          2265300
## 2020-10-26           3.25          3.73      3.25          3.70          6205300
## 2020-10-27           3.72          3.96      3.72          3.76          5397900
## 2020-10-28           3.81          3.85      3.74          3.82          1617700
## 2020-10-29           3.81          3.90      3.73          3.83          1577300
## 2020-10-30           3.87          3.87      3.67          3.69          2063400
##           AIY.SI.Adjusted
## 2020-10-23           3.222997
## 2020-10-26           3.691978
## 2020-10-27           3.751848
## 2020-10-28           3.811718
## 2020-10-29           3.821697
## 2020-10-30           3.682000
```

1 Technical Analysis Chart

```
plot(AIY.SI$AIY.SI.Volume)
```

AIY.SI\$AIY.SI.Volume

2020-01-02 / 2020-10-30



```
lineChart(AIY.SI, theme = chartTheme("black"))
```



```
chartSeries(AIY.SI,theme = "black")
```



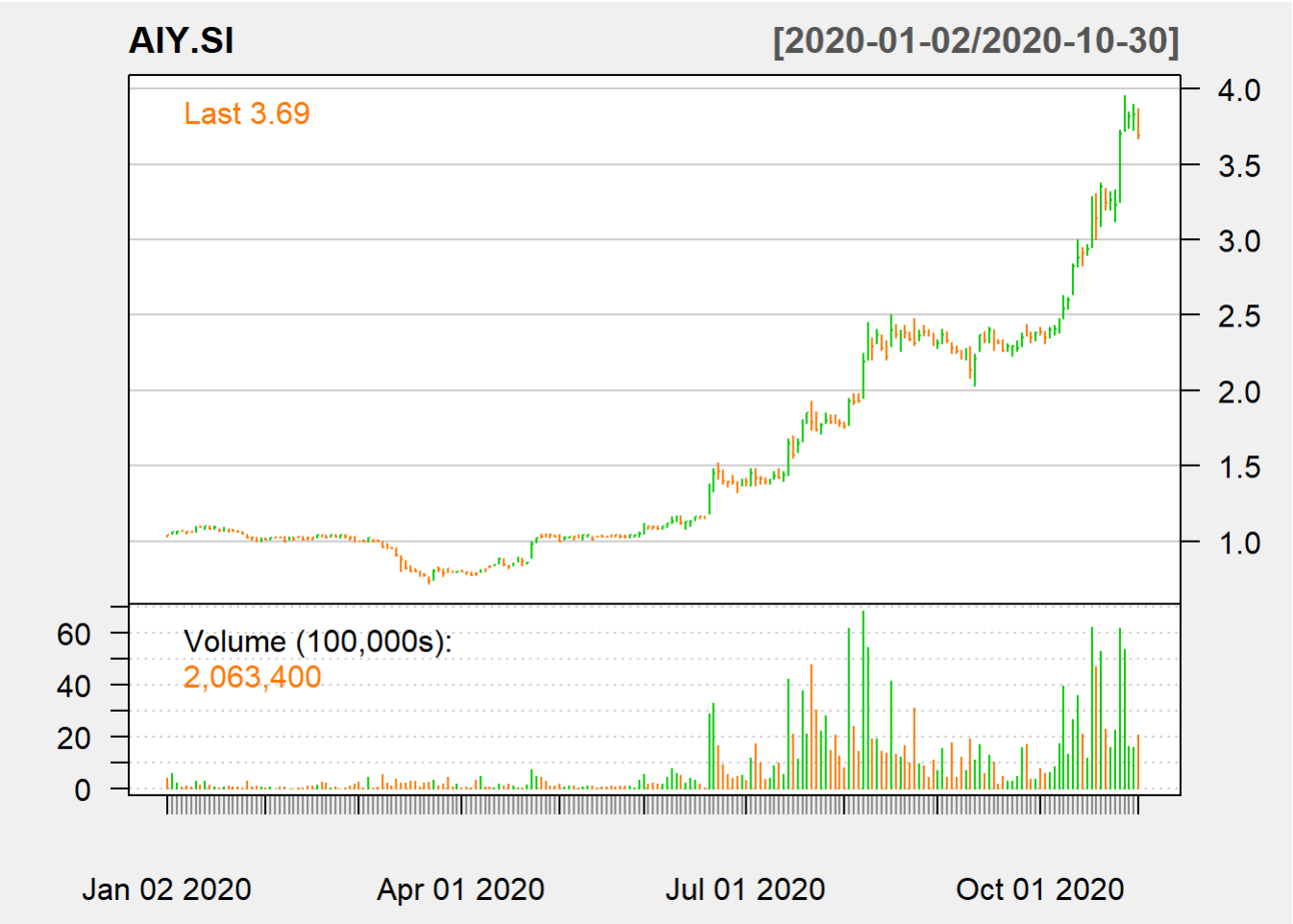
```
barChart(AIY.SI, theme=chartTheme("black"))
```



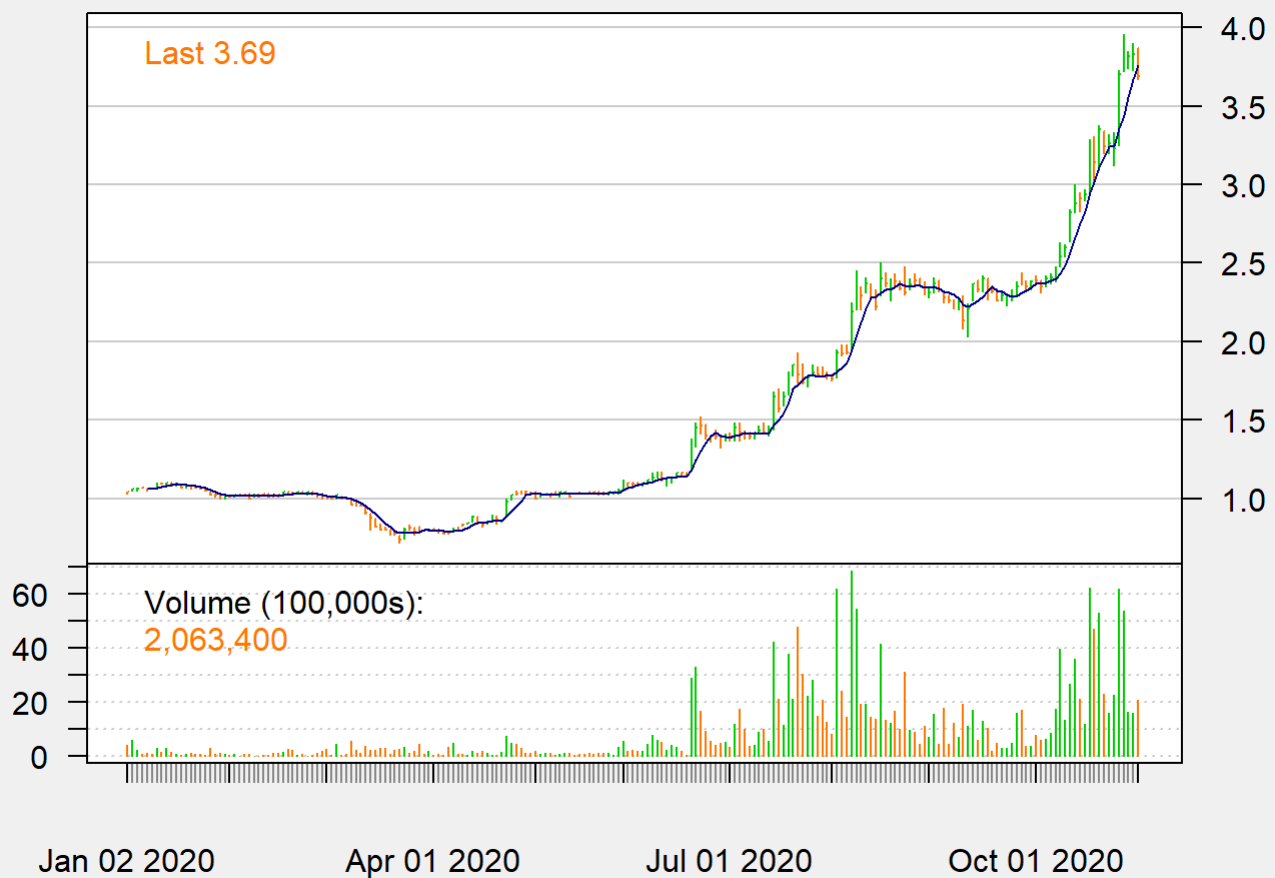
2 Lagging Stock technical indicators

2.1 Simple Moving Average

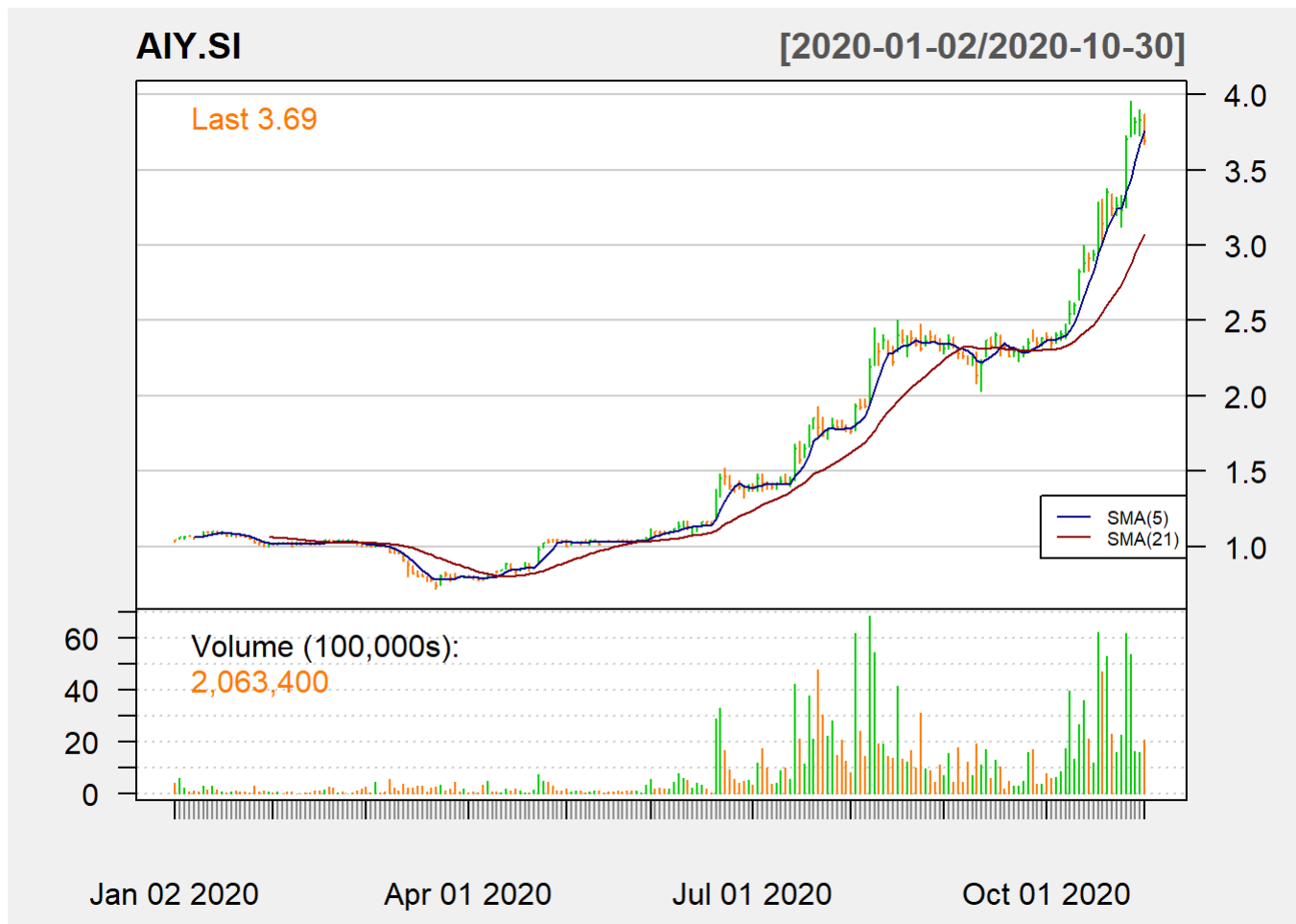
```
barChart(AIY.SI,theme=chartTheme("white"))
```



```
addSMA(n=5, col="darkblue")
```

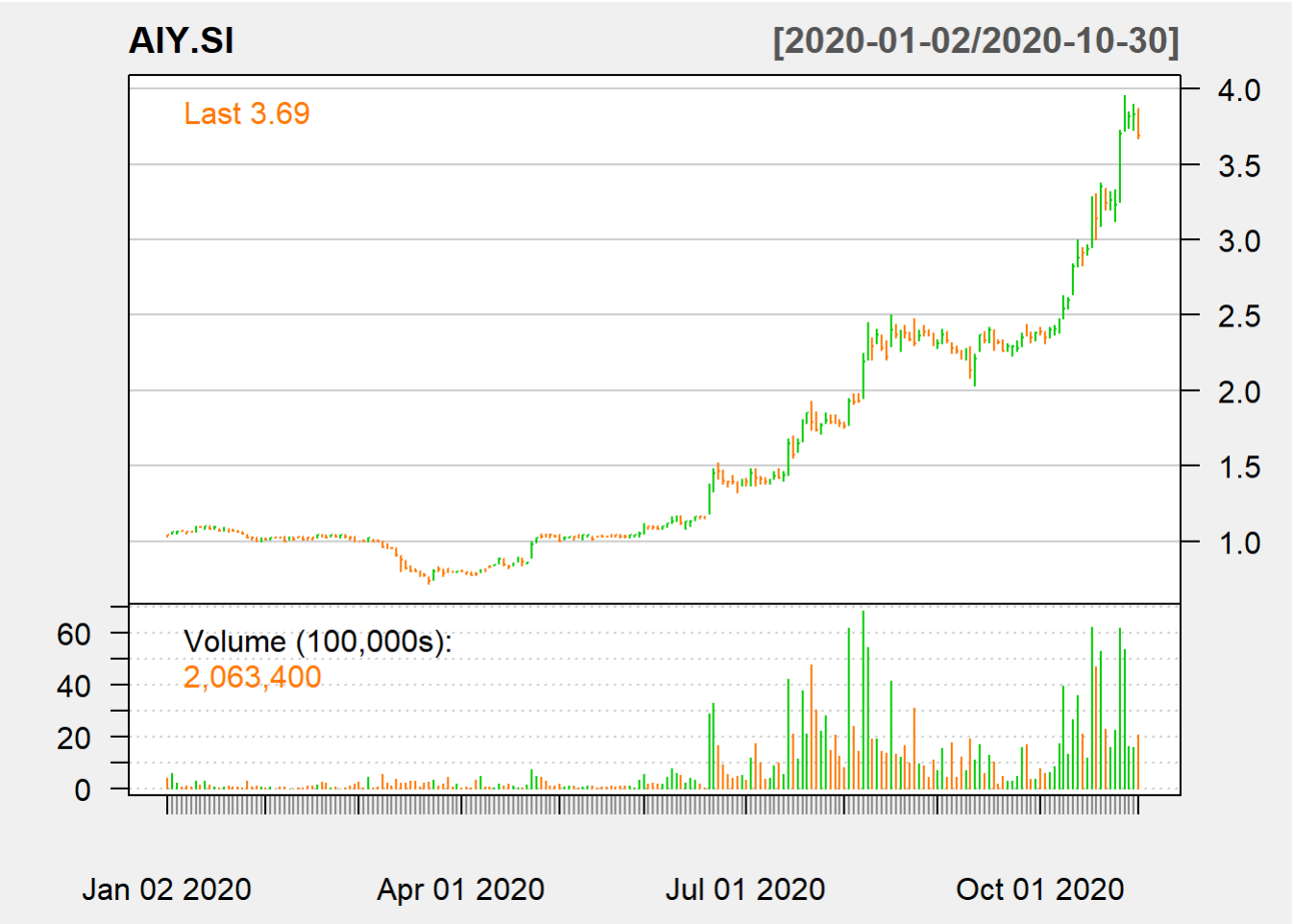
AIY.SI**[2020-01-02/2020-10-30]**

```
addSMA(n=21, col="darkred")
legend("bottomright", col=c("darkblue", "darkred"), lty=1, legend = c("SMA(5)", "SMA(21)"), cex=0.6)
```



2.2 Exponential Moving Average

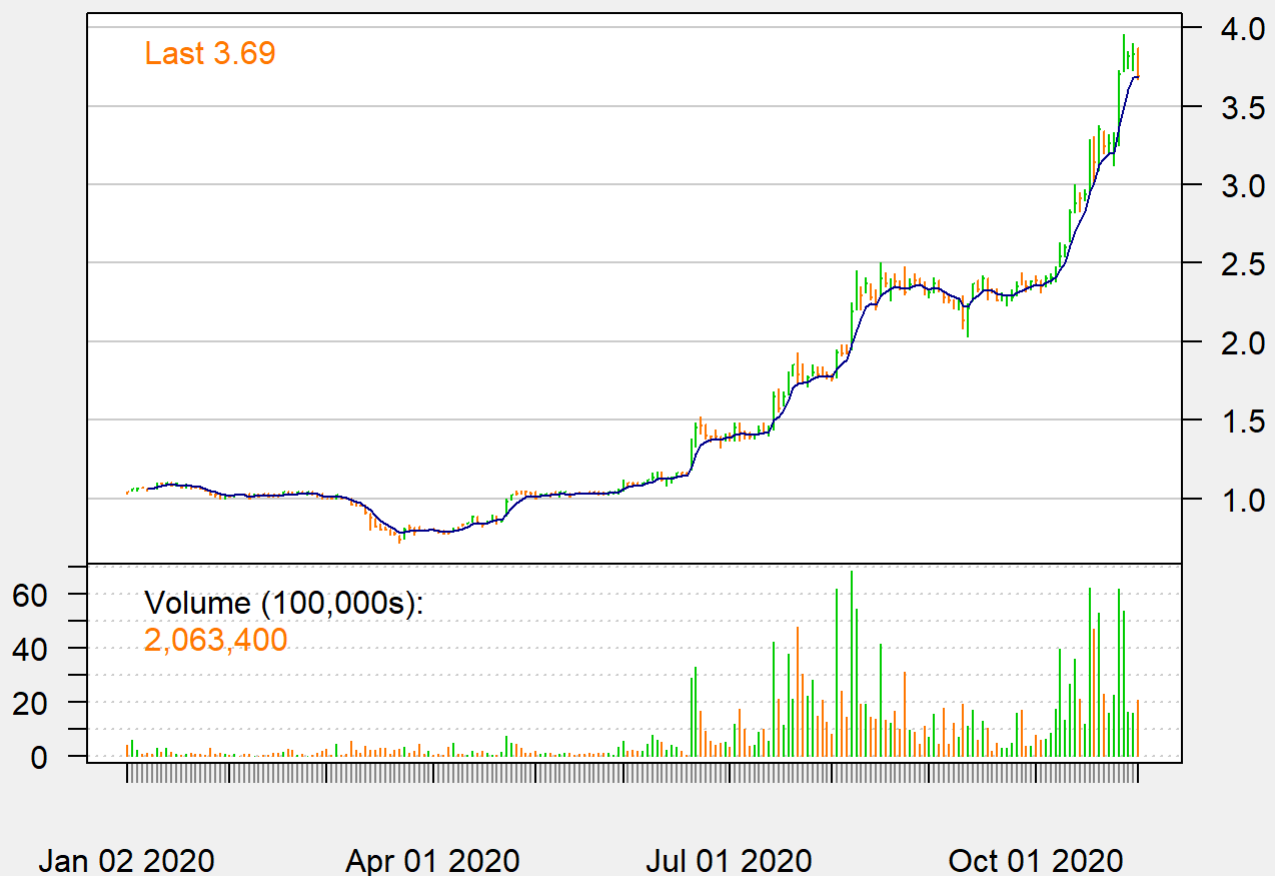
```
barChart(AIY.SI, theme=chartTheme("white"))
```

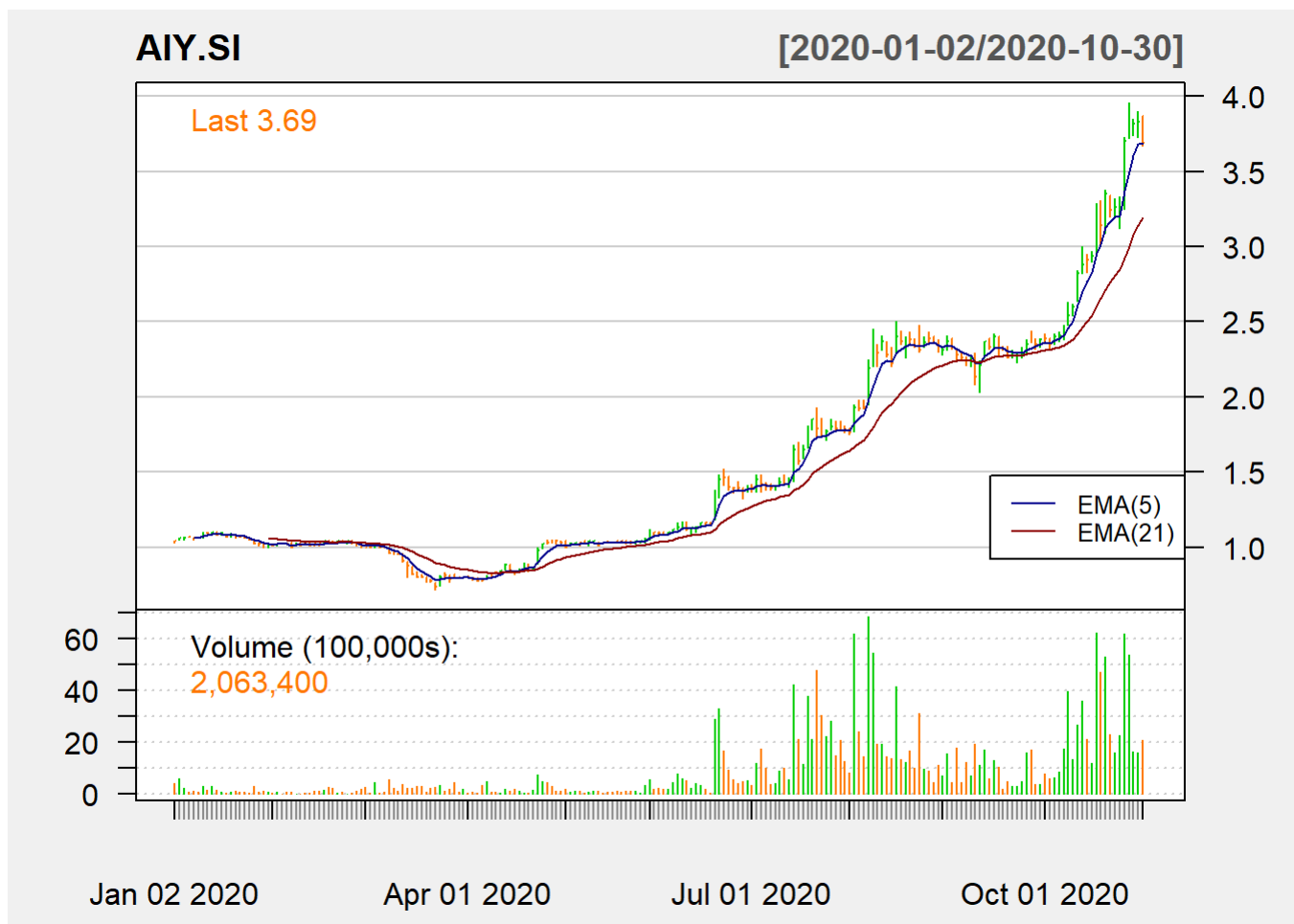
```
addEMA(n=5,col="darkblue")
```

AIY.SI

[2020-01-02/2020-10-30]



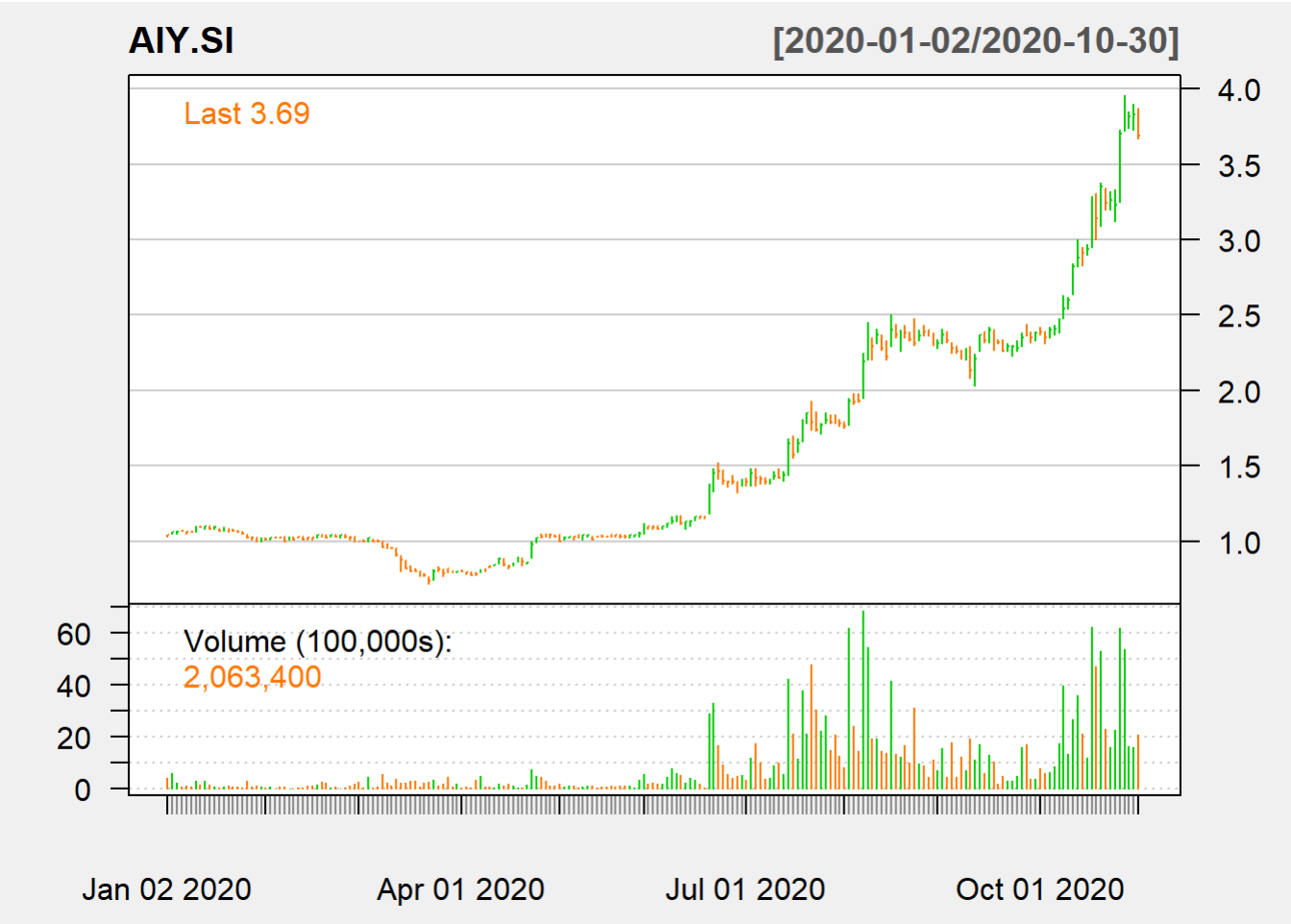
```
addEMA(n=21,col="darkred")
legend("bottomright",col=c("darkblue","darkred"),lty=1,legend = c("EMA(5)","EMA(21)"),cex=0.8)
```



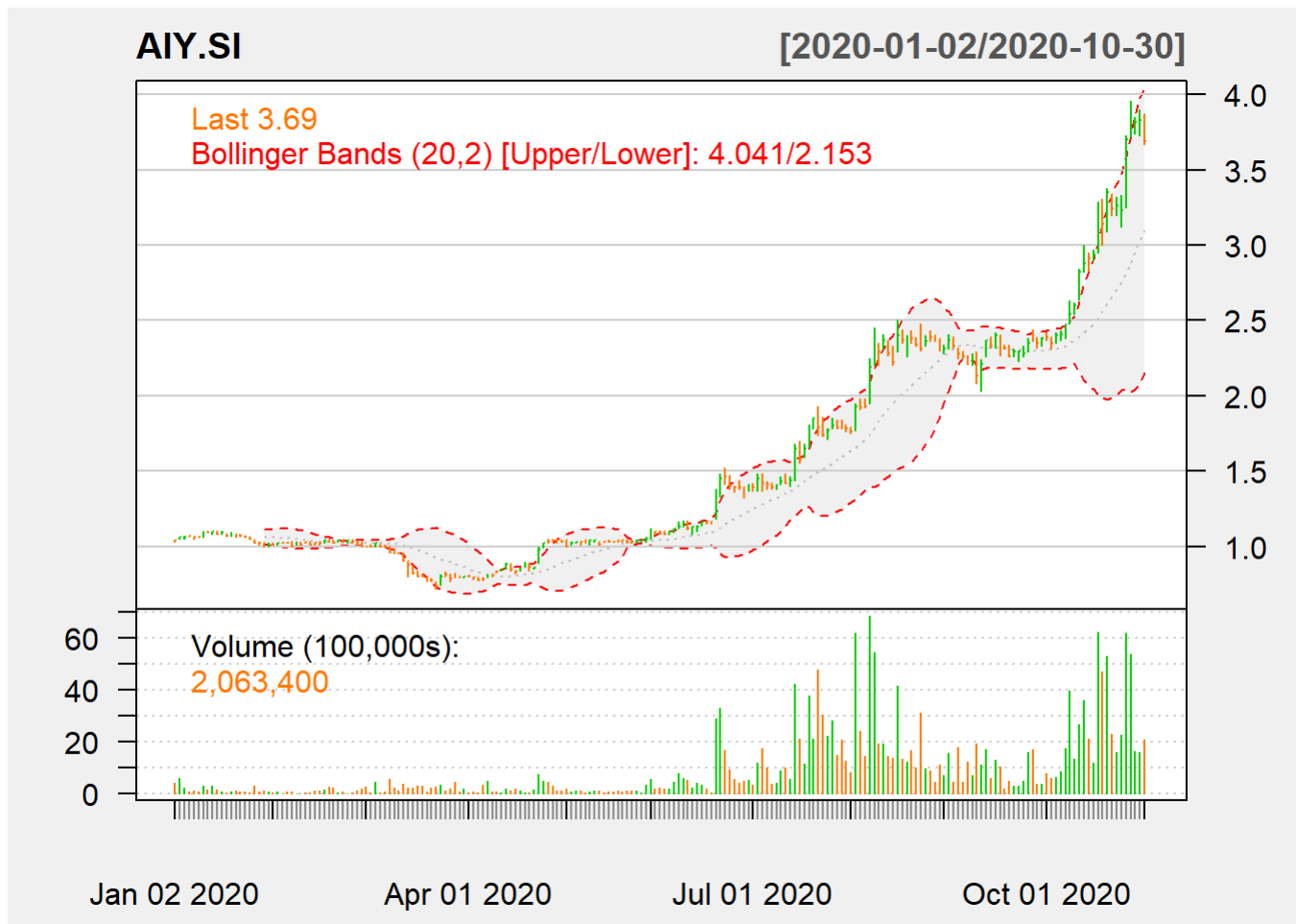
2.3 Bollinger Bands BB (20 days, 2 standard deviations)

- Bollinger Band defined a trendline plotted two standard deviation away from a simple moving average (SMA). Upper band and lower bands are two standard deviation from 20 days SMA.
- From March to mid-June there is a squeeze signalling a period of low volatility and is considered to be a potential sign of future increased volatility and possible trading opportunities.
- Conversely, the wider apart the bands move, the more likely the chance of a decrease in IFAST's volatility and the greater the possibility of exiting a trade. However, these conditions are not trading signals.

```
barChart(AIY.SI, theme=chartTheme("white"))
```



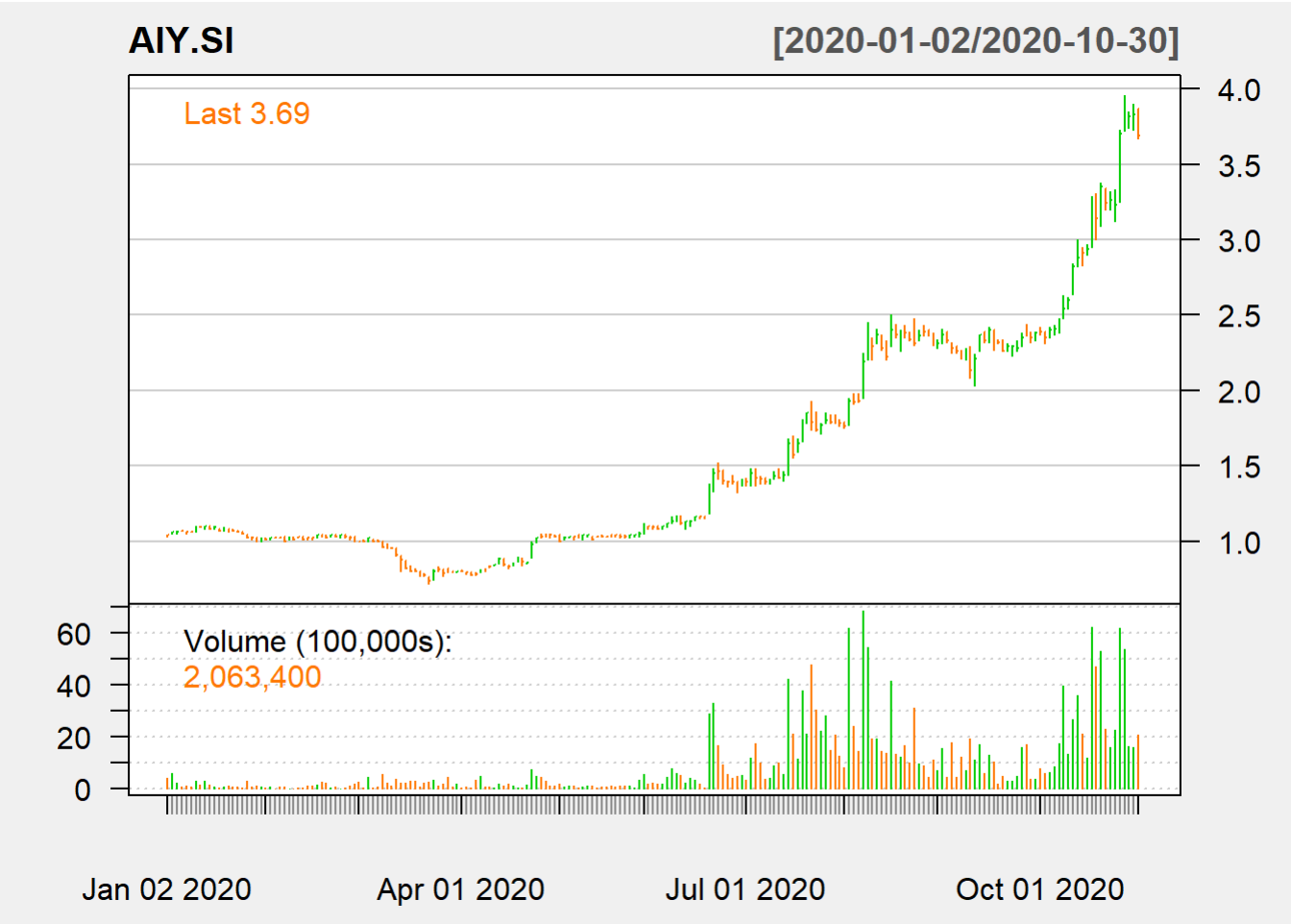
```
addBBands(n=20, sd=2)
```



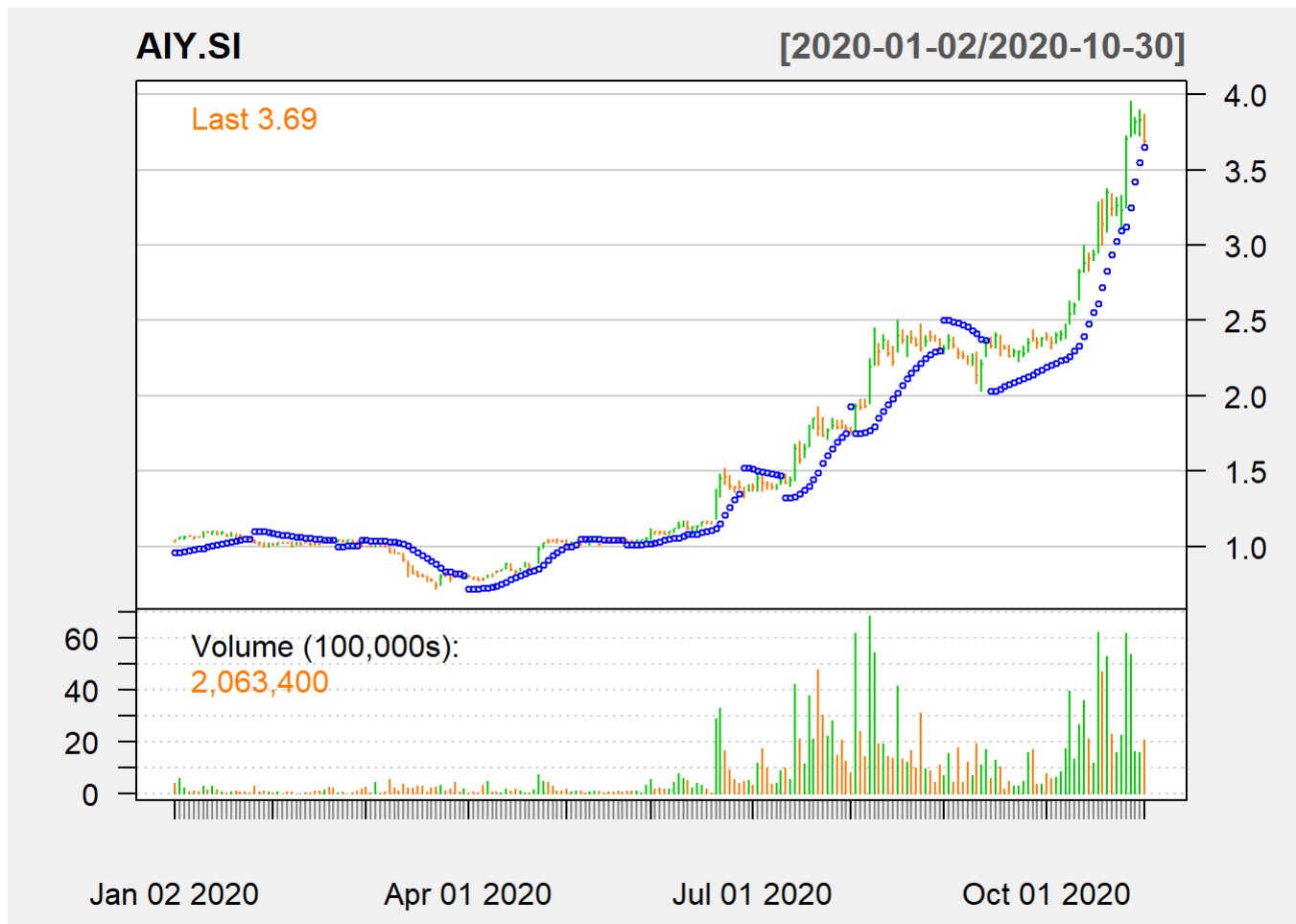
3 Parabolic Stop and Reverse SAR

- Parabolic Stop And Reverse (SAR) indicator is used to determine trend direction and potential reversals in price. The indicator uses a trailing stop and reverse method to identify suitable exit and entry points.

```
barChart(AIY.SI, theme=chartTheme("white"))
```



```
addSAR(accel = c(0.02,0.2))
```



4 Leading Stock technical indicators

4.1 Average Directional Movement Index (ADX) 14 days

- The Average Directional Index (ADX) is used to determine when the price is trending strongly, trading in the direction of a strong trend reduces risk and increases profit potential.
- IFAST shows upward trend as the ADX line is rising indicating trend strength is increasing and price moves in the direction of the trend.
- The DI+ and DI- appears to be very far apart signalling stronger price trend. Since ADX is trending upwards there is a high possibility of an upward movement in the future.

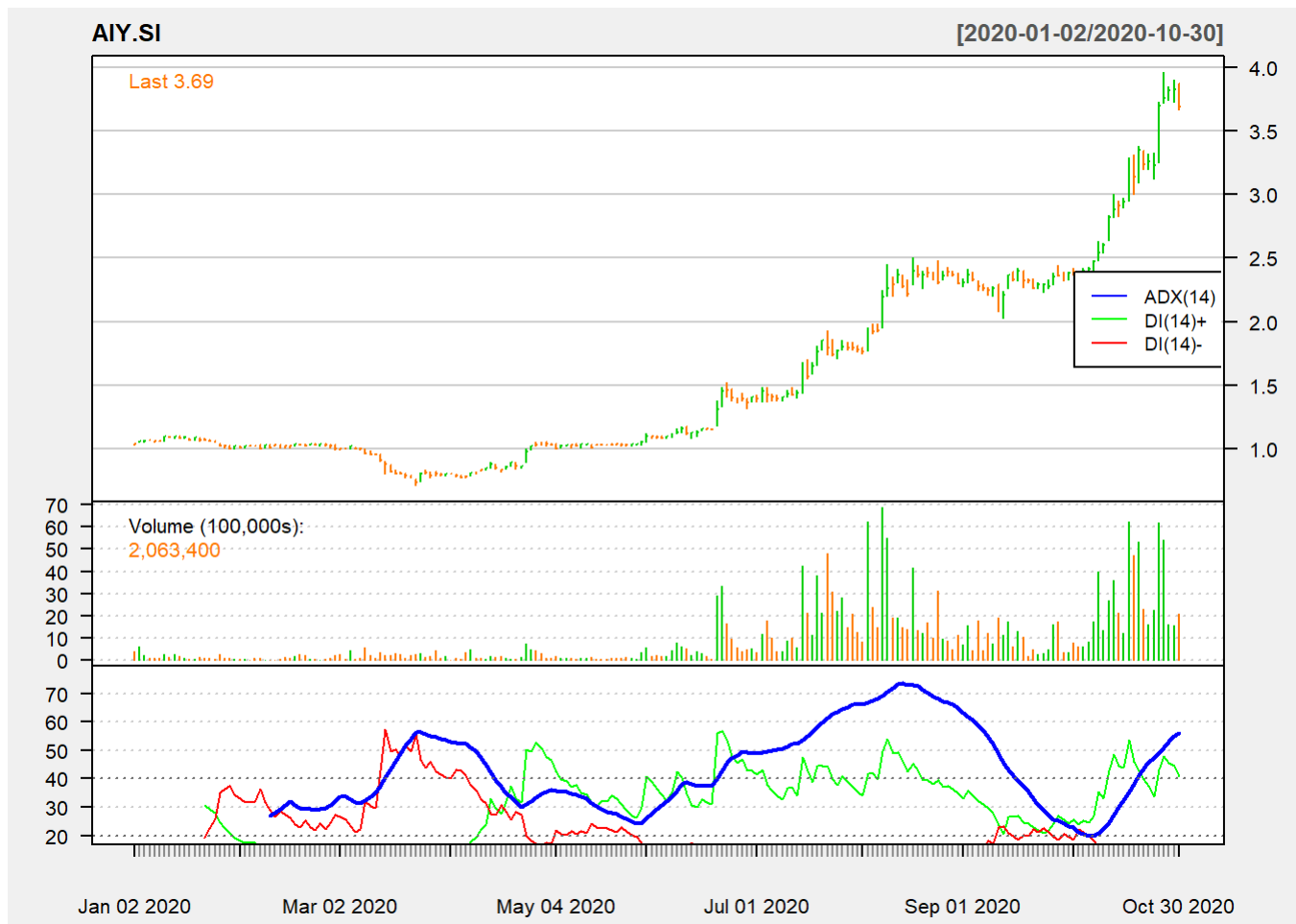
```
barChart(AIY.SI, theme=chartTheme("white"))
```

AIY.SI

[2020-01-02/2020-10-30]



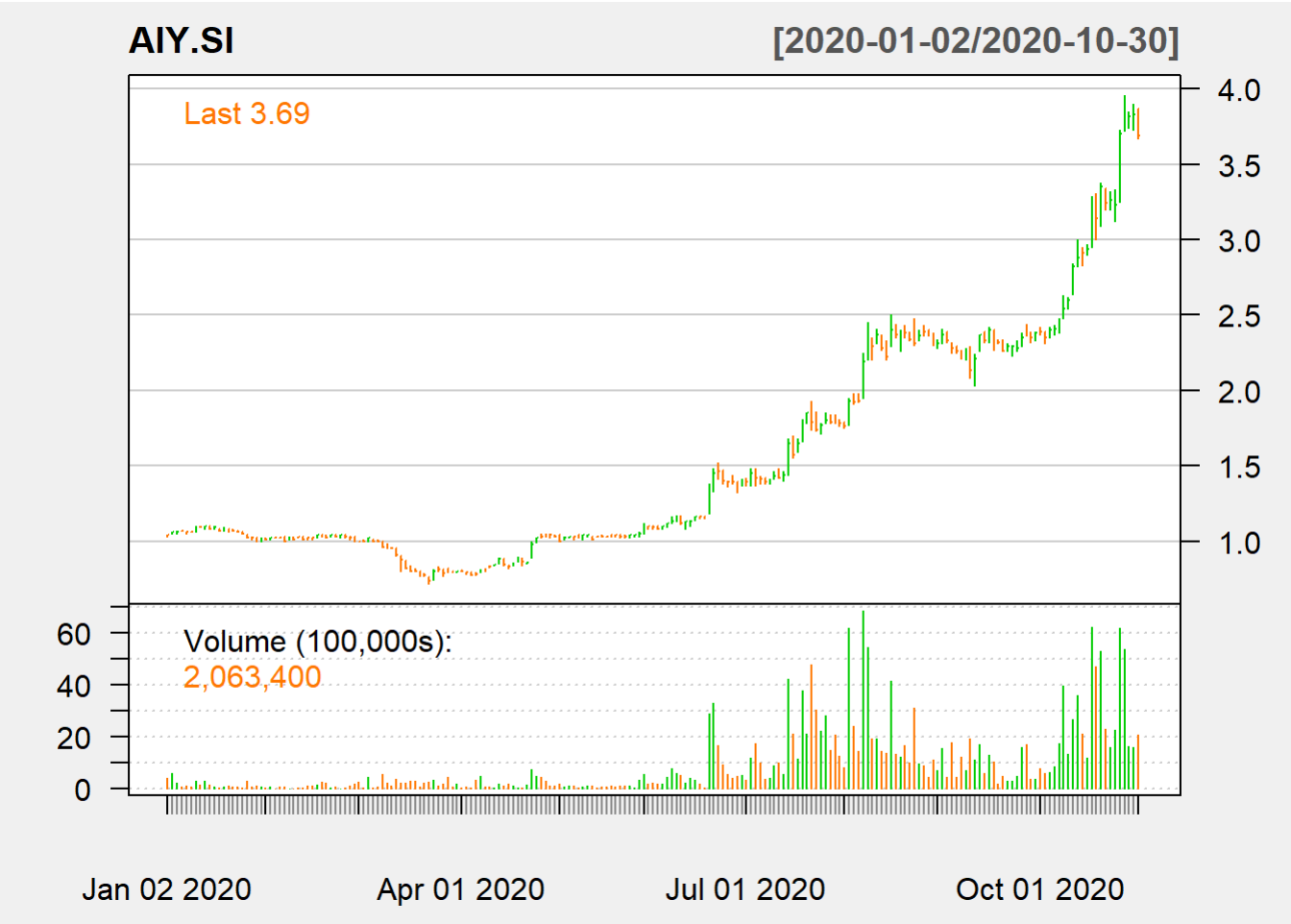
```
addADX(n=14)
legend("right", col=c("blue", "green", "red"), lty=1, legend = c("ADX(14)", "DI(14)+", "DI(14)-"), cex=
0.6)
```

4.2 Commodity Channel Index (20 days, constant parameter 0.015)

- Commodity Channel Index (CCI) measures the difference current price and historical average price.
- IFAST CCI is above 100 indicating the price is well above the historical average.

```
barChart(AIY.SI, theme=chartTheme("white"))
```



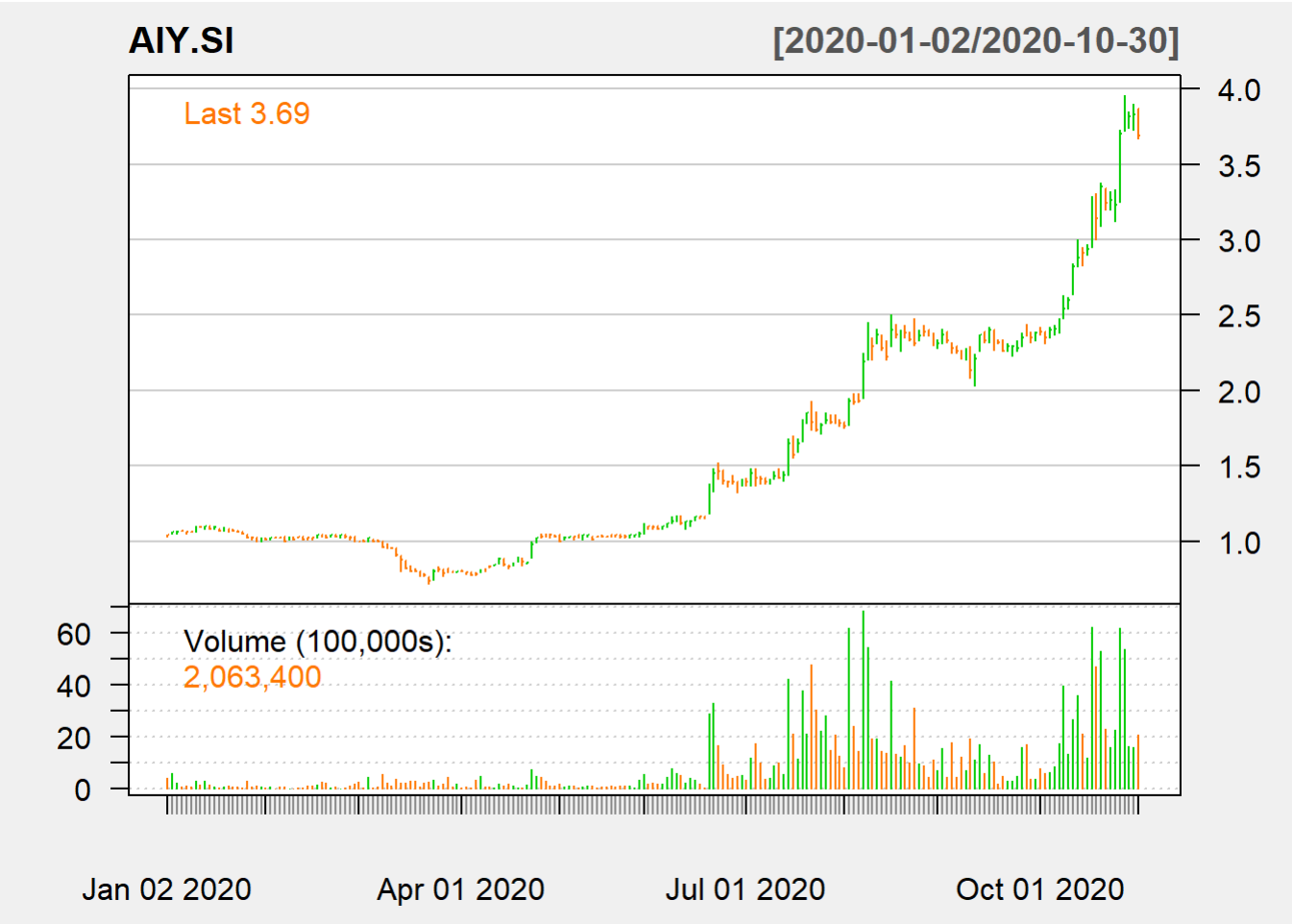
```
addCCI(n=20,c=0.015)
```



4.3 Moving Average Convergence/Divergence (12 days short term smoothing, 26 days long term smoothing, 9 days for signals)

- Moving Average Convergence Divergence (MACD) is calculated by subtracting the 26 period exponential moving average (EMA) from the 12 period EMA.
- MACD triggers technical signals when it cross above (to buy) or below (to sell) its signal line.
- IFAST shows upward trend as MACD crosses above the signal line and is greater than signal, qualifying as a bullish confirmation.
- If the gray line, MACD falls below the red signal line, this indicates a bearish confirmation which indicates it may be time to sell.
- Conversely when the MACD rises above the signal line, the indicator gives a bullish and price of IFAST is likely to experience upward momentum.

```
barChart(AIY.SI, theme=chartTheme("white"))
```



```
addMACD(fast = 12, slow = 26,signal = 9)
```



4.4 Rate of Change ROC (21 days per month)

- Price Rate of Change (ROC) is a momentum based technical indicator that measures percentage change in price between current price and price a certain number of periods ago.
- The ROC indicator is plotted against zero, with the indicator moving upwards into positive territory if price changes are to the upside and vice versa.

```
barChart(AIY.SI, theme=chartTheme("white"))
```

AIY.SI

[2020-01-02/2020-10-30]



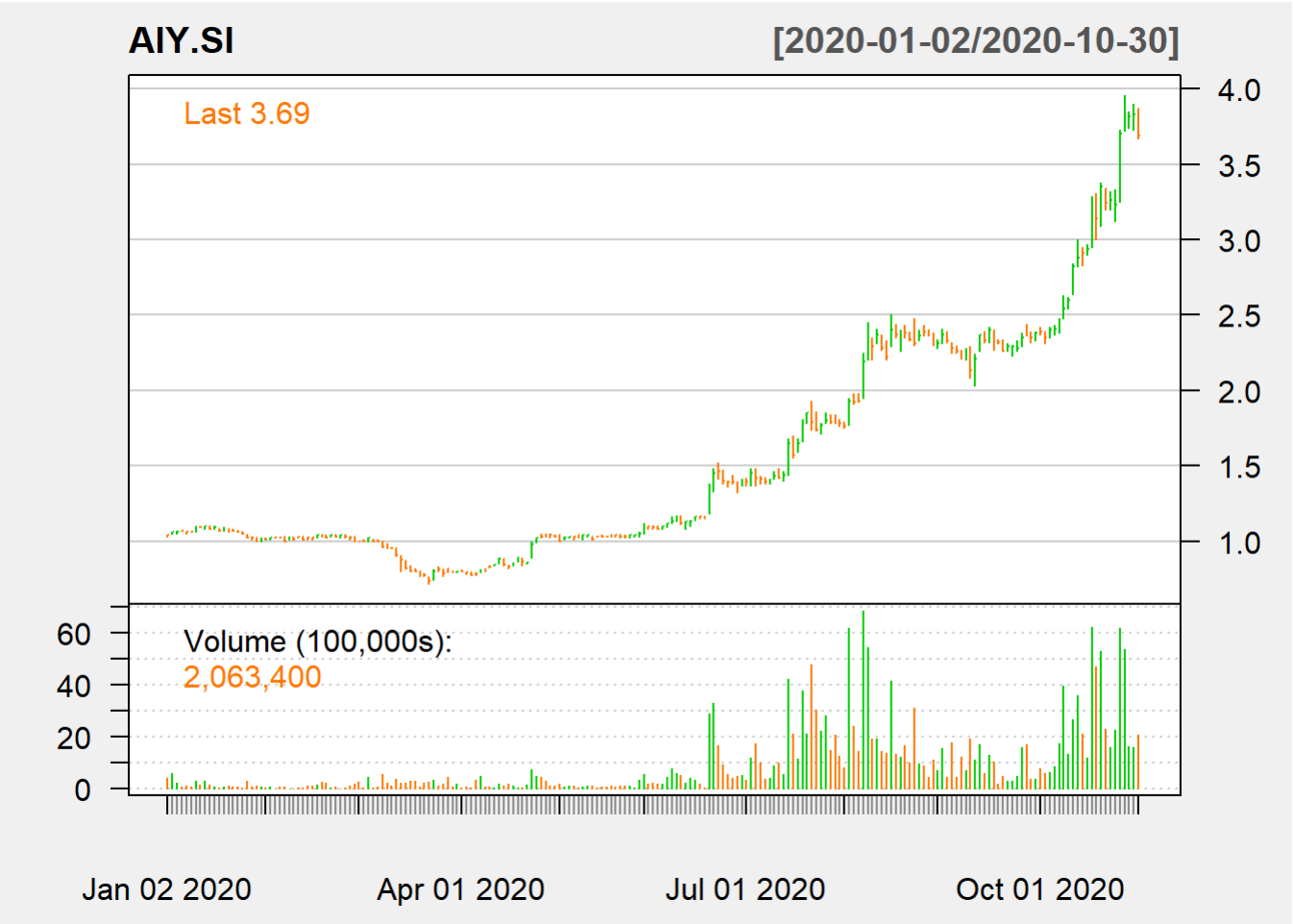
```
addROC(n=21)
legend("right",col="red",lty=1,legend = "ROC(21)",cex=0.6)
```



4.5 Relative Strength Index RSI (14 days)

- The relative strength index (RSI) is a momentum indicator used in technical analysis that measures the magnitude of recent price changes to evaluate overbought or oversold conditions in the price of a stock or other asset.
- IFAST RSI is at 75 indicating it is overbought and the upward trend may not last.

```
barChart(AIY.SI, theme=chartTheme("white"))
```

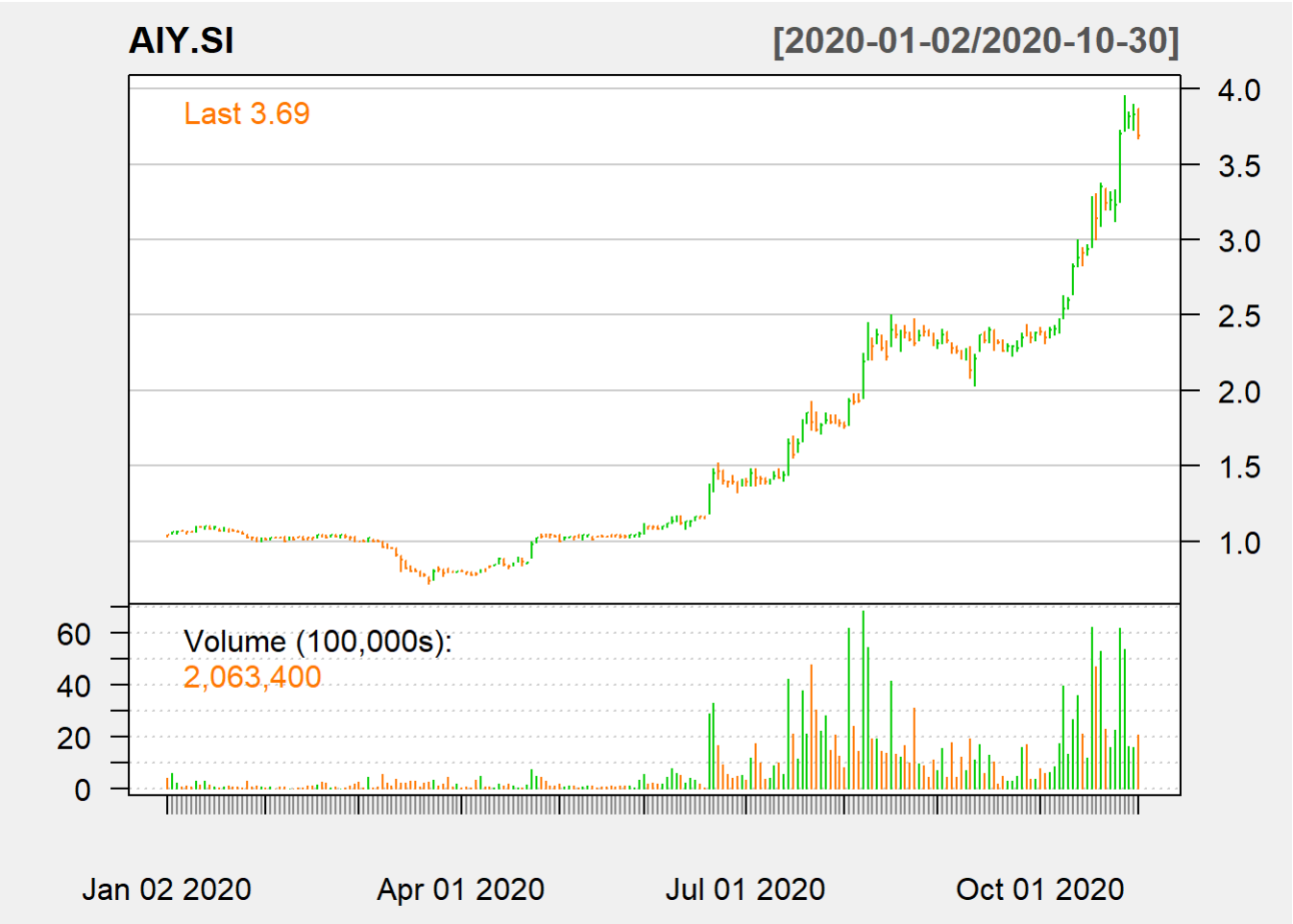


```
addRSI(n=14)
```




Stochastic momentum index SMI (13,2,25,9)

```
barChart(AIY.SI, theme=chartTheme("white"))
```



addSMI(n=13,fast = 2,slow = 25,signal = 9)

