Does the Yield Curve Predict Recessions?

Jonathan Ramani Krishnamachari

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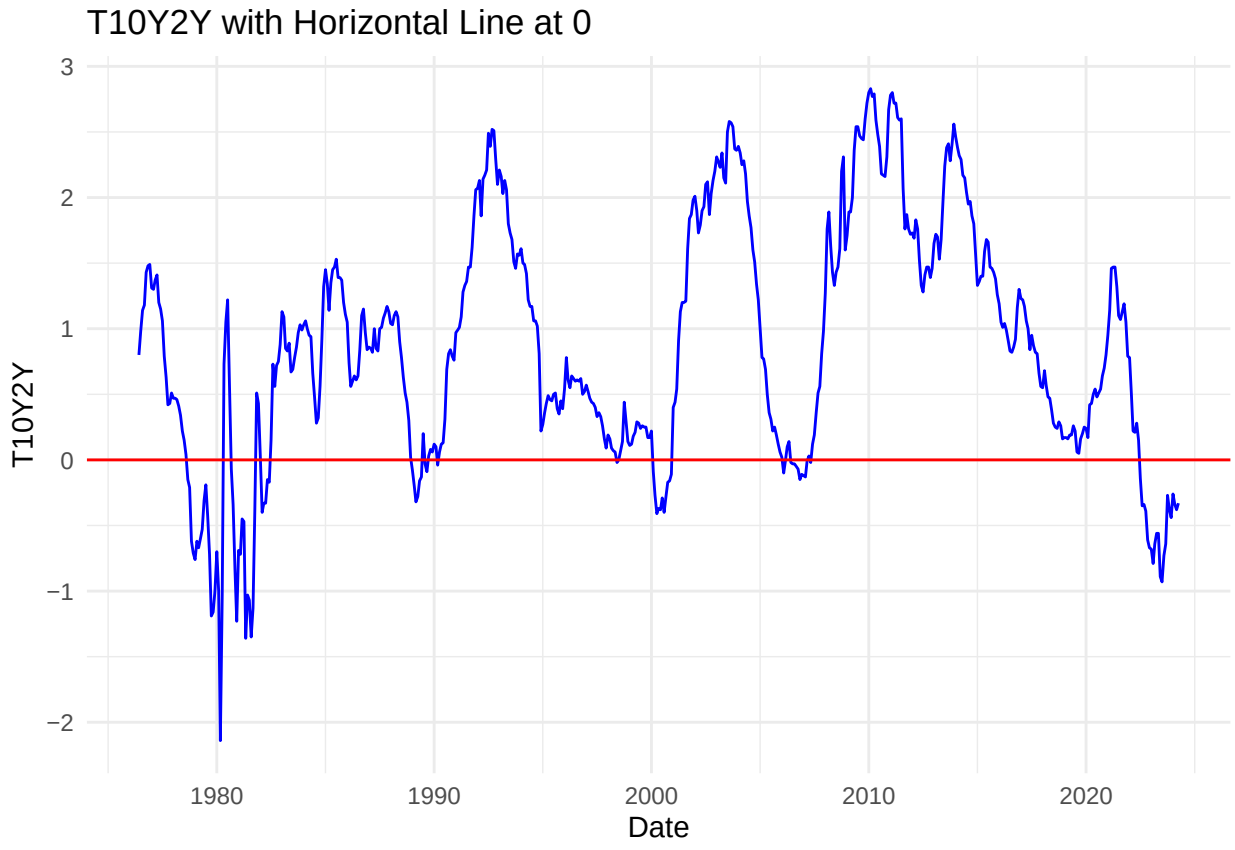
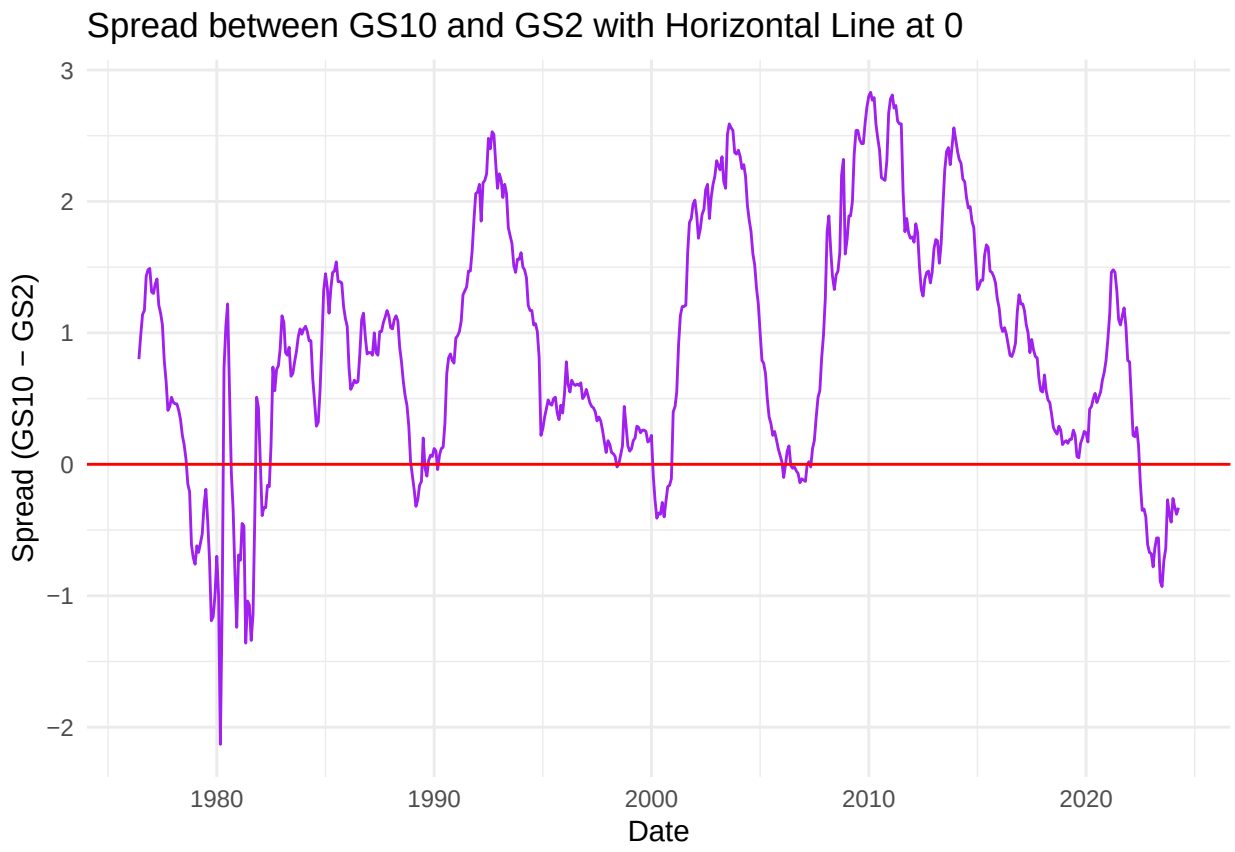
Plotting T10Y2Y

```
economic_data %>%
  ggplot(aes(x = date)) +
  geom_line(aes(y = T10Y2Y), color = "blue", linetype = "solid") +
  geom_hline(yintercept = 0, color = "red", linetype = "solid") +
  labs(title = "T10Y2Y with Horizontal Line at 0",
       y = "T10Y2Y",
       x = "Date") +
  theme_minimal()
```



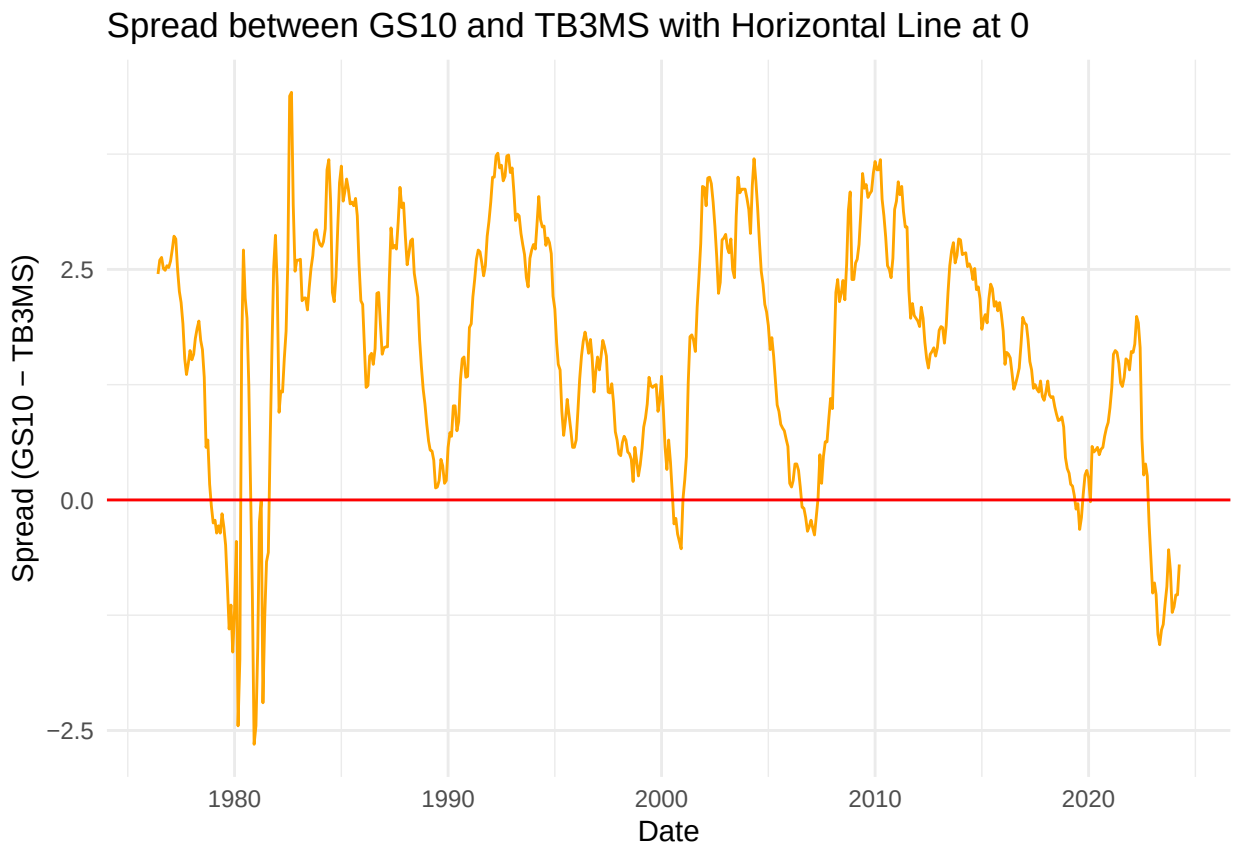
Plotting Spread between GS10 and GS2

```
economic_data %>%
  ggplot(aes(x = date)) +
  geom_line(aes(y = spread_10y_2y), color = "purple", linetype = "solid") +
  geom_hline(yintercept = 0, color = "red", linetype = "solid") +
  labs(title = "Spread between GS10 and GS2 with Horizontal Line at 0",
       y = "Spread (GS10 - GS2)",
       x = "Date") +
  theme_minimal()
```



Plotting Spread between GS10 and TB3MS

```
economic_data %>%
  ggplot(aes(x = date)) +
  geom_line(aes(y = spread_10y_3m), color = "orange", linetype = "solid") +
  geom_hline(yintercept = 0, color = "red", linetype = "solid") +
  labs(title = "Spread between GS10 and TB3MS with Horizontal Line at 0",
       y = "Spread (GS10 - TB3MS)",
       x = "Date") +
  theme_minimal()
```



Lag the spread for spread_10y_2y and spread_10_3m, frequency is 1 month, and add it to the dataset "economic_data"