Time Series Analysis

Lecture 5

Vector Autoregressive (VAR) Models

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Spurious Correlation: Another Example

An Example From Three Currency Exchange Rates Series

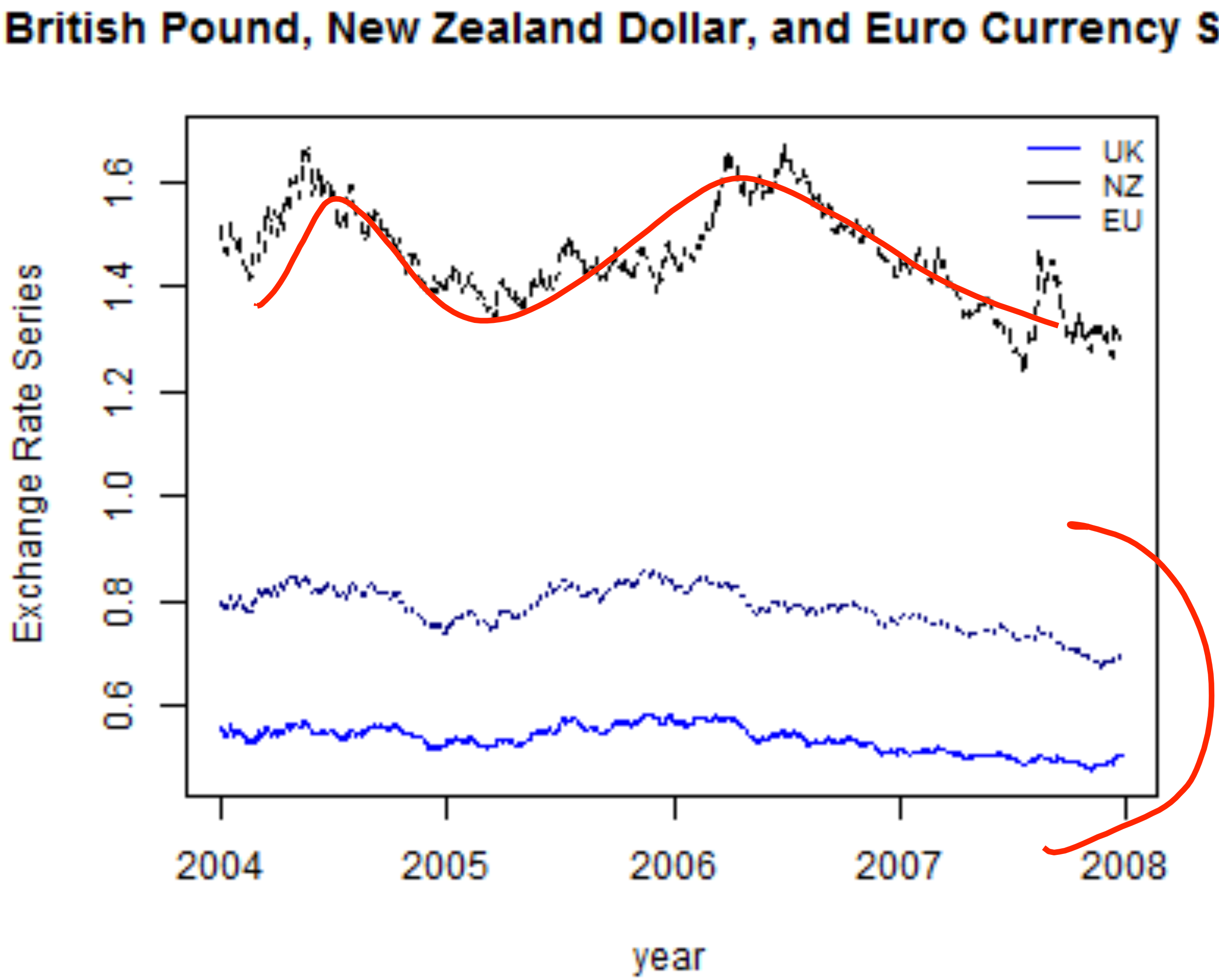
- This is a dataset we have used before, but we used only one of the three series.
- In this example, we will use all three series.

```
# First, we use the cleaned data set provided in CM2009
us_xrates <- read.table("C:/Users/K/z_Teach/MIDS_AdvStat/data/us_xrates.txt",
  str(us_xrates) # check the structure of the data
                 # 1003 observations and 3 varibles
  us_xrates[1:5,]
```

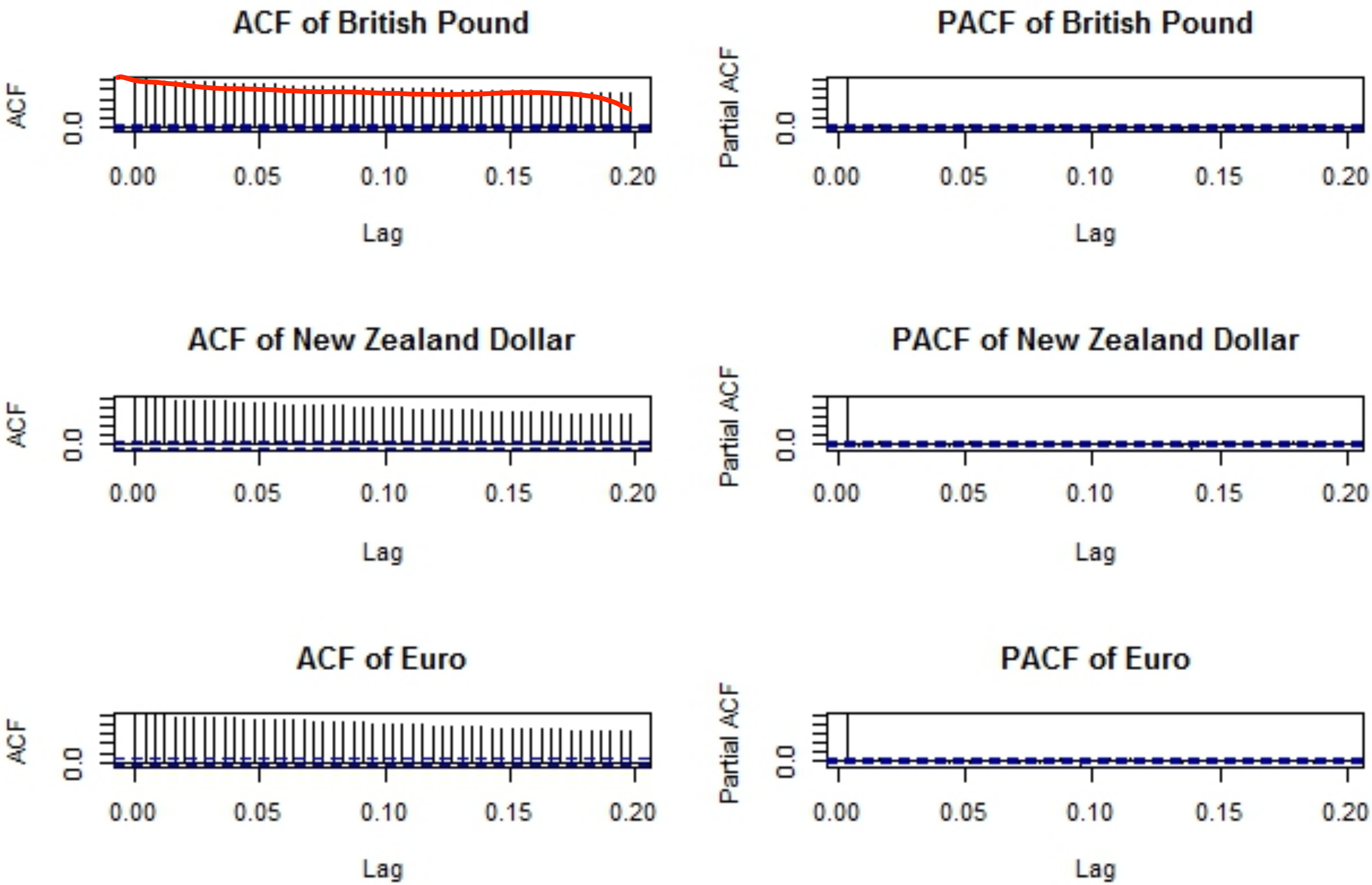
```
# Extract the currency series
UK.ts <- ts(us_xrates[,1], start=2004, freq=252)
NZ.ts <- ts(us_xrates[,2], start=2004, freq=252)
EU.ts <- ts(us_xrates[,3], start=2004, freq=252)

length(UK.ts); length(NZ.ts); length(EU.ts)
t=c(1:length(UK.ts))
```

Currency Exchange Rates Series: T-Plots

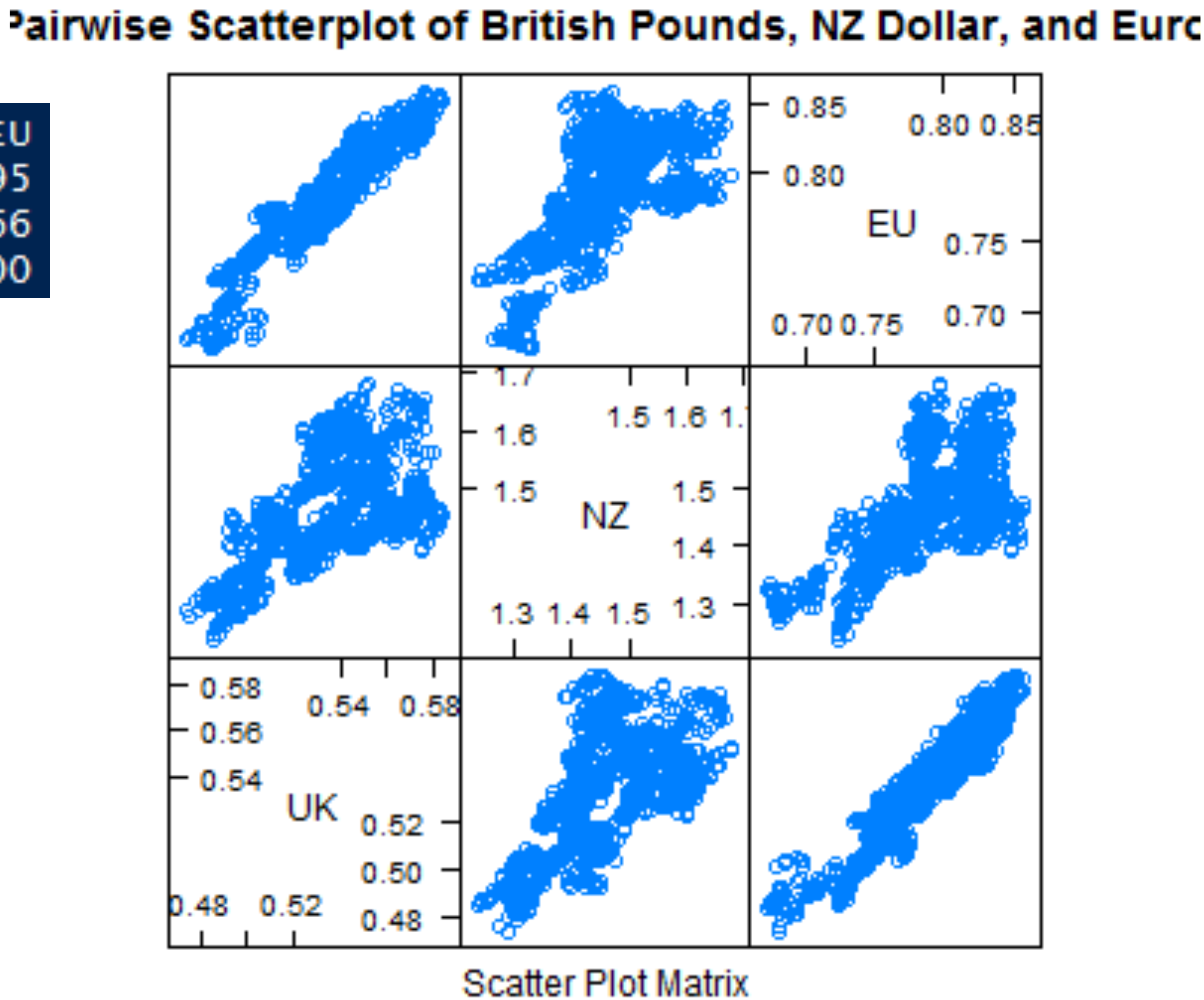


Currency Exchange Rates Series: ACF

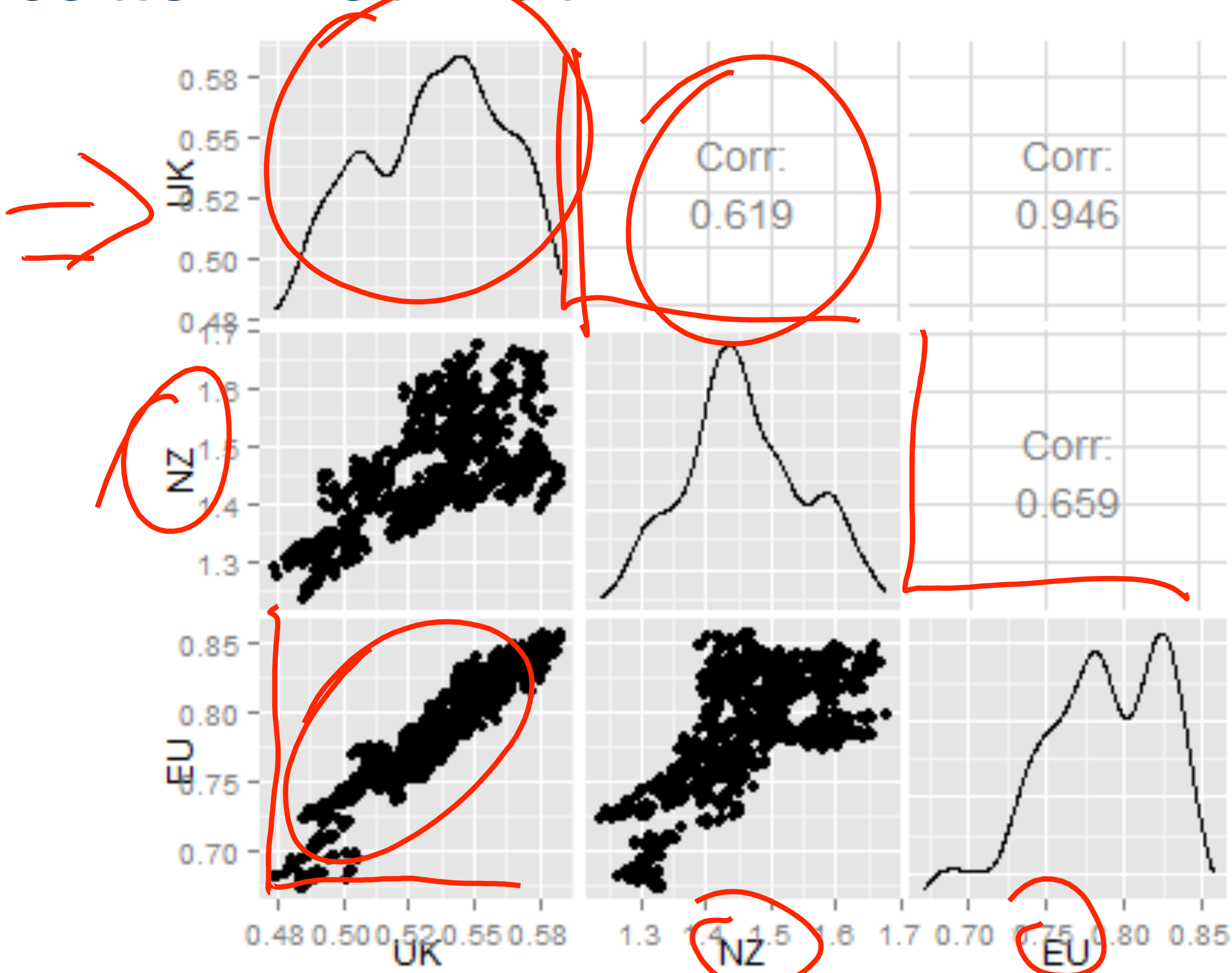


Currency Exchange Rates Series: Scatter Plot Matrix

	UK	NZ	EU
UK	1.00	0.62	0.95
NZ	0.62	1.00	0.66
EU	0.95	0.66	1.00



Currency Exchange Rates Series: Scatter Plot Matrix 2



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