Chapter 2

%web\_drop\_table(WORK.raw);

FILENAME REFFILE '/folders/myfolders/chapter2.xlsx';

PROC IMPORT DATAFILE=REFFILE

DBMS=XLSX

OUT=WORK.raw;

GETNAMES=YES;

RUN;

PROC CONTENTS DATA=WORK.raw; RUN;

%web\_open\_table(WORK.raw);

PROC UNIVARIATE DATA=raw;

ID date;

VAR stock;

RUN;

PROC UNIVARIATE DATA=raw;

HISTOGRAM Stock / normal(percents=20 40 60 80 midpercents)

name='MyPlot';

INSET n normal(ksdpval) / pos = ne format = 6.3;

RUN;

%web\_drop\_table(WORK.model);

FILENAME REFFILE '/folders/myfolders/chapter2\_modified.xlsx';

PROC IMPORT DATAFILE=REFFILE

DBMS=XLSX

OUT=WORK.model;

GETNAMES=YES;

RUN;

PROC CONTENTS DATA=WORK.model; RUN;

%web\_open\_table(WORK.model);

PROC UNIVARIATE DATA=model;

HISTOGRAM Stock / normal(percents=20 40 60 80 midpercents)

name='MyPlot';

INSET n normal(ksdpval) / pos = ne format = 6.3;

RUN;

PROC CORR DATA=model outp=corr nosimple;

ID Date;

WITH Stock;

VAR Basket\_index -- M1\_money\_supply\_index;

RUN;

Data Build Validation;

Set Model;

If date le "30Nov2017"d then output build;

Else output validation;

Run;

PROC REG DATA=build plots=diagnostics(unpack);

ID date;

MODEL stock = basket\_index -- m1\_money\_supply\_index;

RUN;

/\* Proc Regression Code for Identifying High Leverage Observations: \*/

PROC REG DATA=build plots(only label)=(RStudentByLeverage CooksD);

ID date;

MODEL stock = basket\_index -- m1\_money\_supply\_index;

RUN;

/\* The Proc Regression Code for Multicollinearity: \*/

PROC REG DATA=build plots(only label)=(RStudentByLeverage CooksD);

ID date;

MODEL stock = basket\_index -- m1\_money\_supply\_index/tol vif;

RUN;

/\* Proc Regression Code for Multicollinearity After Removal of a Variable: \*/

PROC REG DATA=build plots(only label)=(RStudentByLeverage CooksD);

ID date;

MODEL stock = basket\_index eps p\_e\_ratio global\_mkt\_share media\_analytics\_index

m1\_money\_supply\_index top\_10\_gdp/tol vif;

RUN;

/\* Proc Regression Code for Autocorrelation: \*/

PROC REG DATA=build;

ID date;

MODEL basket\_index eps p\_e\_ratio global\_mkt\_share media\_analytics\_index

m1\_money\_supply\_index top\_10\_gdp = /dw;

RUN;

/\* Code to Generate PROC REG Based Forecast \*/

PROC REG DATA=build OUTEST=REGOUT;

ID DATE;

MODEL Stock = basket\_index eps p\_e\_ratio global\_mkt\_share media\_analytics\_index

m1\_money\_supply\_index top\_10\_gdp;

RUN;

PROC SCORE DATA=validation

SCORE=REGOUT OUT=RSCOREP TYPE=PARMS;

var basket\_index eps p\_e\_ratio global\_mkt\_share media\_analytics\_index

m1\_money\_supply\_index top\_10\_gdp;

RUN;

PROC ARIMA Data=build;

IDENTIFY VAR=STOCK;

RUN;

PROC ARIMA Data=build;

IDENTIFY VAR=STOCK(1);

RUN;

/\* PROC ARIMA (1,1,1) Code: \*/

PROC ARIMA Data=build;

IDENTIFY VAR=STOCK(1);

ESTIMATE p=1 q=1;

RUN;

/\* PROC ARIMA (1,1,0) Code: \*/

PROC ARIMA Data=build;

IDENTIFY VAR=STOCK(1);

ESTIMATE p=1;

RUN;

/\* Code for Automated Model Selection: \*/

PROC ARIMA DATA=build;

IDENTIFY VAR=STOCK SCAN;

RUN;

/\* Code for Forecasting: \*/

PROC ARIMA DATA=build;

IDENTIFY VAR=STOCK SCAN;

ESTIMATE p=1 q=0;

FORECAST LEAD=30 OUT=PREDICT;

RUN;