Chapter 5

Data Playstore;

Format Date Date.;

Input Date : Date. @@;

Datalines;

21JAN12 20FEB12 22MAR12 21APR12 21APR12 13MAY12 21JUN12 20JUL12 21AUG12 22SEP12

15OCT12 16NOV12 21DEC12 21DEC12 20JAN13 19FEB13 19MAR13 18MAY13 17JUN13 18JUL13

17OCT13 18NOV13 17DEC13 01JAN14 02FEB14 03MAR14 04APR14 05MAY14 06JUN14 07AUG14

11SEP14 31OCT14 01NOV14 01DEC14 25FEB15 01MAR15 01APR15 01MAY15 01JUN15 01JUL15

01AUG15 01SEP15 01OCT15 01NOV15 01DEC15 05JAN16 01FEB16 01MAR16 01APR16 01MAY16

01JUN16 01JUL16 01AUG16 01SEP16 01OCT16 01NOV16 01DEC16 05JAN17 01FEB17 01FEB17

01APR17 01MAY17 01JUN17 01JUL17 01AUG17 01SEP17 01NOV17 01DEC17 01FEB18 01MAR18

;

ODS GRAPHICS ON;

PROC TIMEID Data=Playstore PRINT=All PLOT=All;

Id Date Interval=MONTH;

Run;

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

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

PROC IMPORT DATAFILE=REFFILE

DBMS=XLSX

OUT=WORK.inflation;

GETNAMES=YES;

RUN;

PROC CONTENTS DATA=WORK.inflation; RUN;

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

Data Model;

Set Inflation;

If Month gt "30Sep2017"d then do;

CPI=.;

end;

Run;

Proc Reg Data=Model Plots=(Criteria SBC CP);

Id Month;

/\*Forward selection\*/

Model CPI = Furniture\_Home\_Improvement Travel\_including\_Leisure Eating\_out Entertainment Grocery Education Communication

Clothing\_and\_shopping Spend\_save\_quaterly\_ratio

/ Selection=Forward Details=All R;

/\*Backward selection\*/

Model CPI = Furniture\_Home\_Improvement Travel\_including\_Leisure Eating\_out Entertainment Grocery Education Communication

Clothing\_and\_shopping Spend\_save\_quaterly\_ratio

/ Selection=Backward Details=All R;

/\*Maxr\*/

Model CPI = Furniture\_Home\_Improvement Travel\_including\_Leisure Eating\_out Entertainment Grocery Education Communication

Clothing\_and\_shopping Spend\_save\_quaterly\_ratio

/ Selection=Maxr Details=All R;

Run;

Proc UCM Data=Model;

Id Month Interval=Month;

Model CPI;

Irregular;

Level;

Slope Var = 0 Noest;

Season Length = 12 Type = Trig;

Estimate Back = 6 plot=(loess panel cusum wn);

Forecast Back = 0 Lead = 6 Print=Forecasts Plot=(forecasts decomp);

Run;

Data Lag;

Set Model;

Difference\_1=Dif1(CPI);

Lagged\_1=Lag1(CPI);

Run;

Proc Reg Data=Lag;

Model Difference\_1=Lagged\_1;

Run;

Proc Arima Data=Model;

Identify Var=CPI;

Run;