DATA ABT

libname adijit'/sasdata3/SAS\_MINING/egusers/adijit';

%Let Base=adijit.DATA\_DIU\_ABT\_PB1;

%Let rawdata=adijit.DATA\_DIU\_PB\_MART\_X\_2;

%Let rawdatatest=adijit.PB\_DATA\_SUBS\_KEY;

%Let run\_date ='11NOV2017'D;

%let Last2days = %sysfunc(INTNX(Day, &run\_date, -1), date9.);

%put &Last2days.;

\*;

%let Last3days = %sysfunc(INTNX(Day, &run\_date, -2), date9.);

%put &Last3days.;

\*;

%let Last4days = %sysfunc(INTNX(Day, &run\_date, -3), date9.);

%put &Last4days.;

\*;

%let Last5days = %sysfunc(INTNX(Day, &run\_date, -4), date9.);

%put &Last5days.;

\*;

%let Last6days = %sysfunc(INTNX(Day, &run\_date, -5), date9.);

%put &Last6days.;

\*;

%let Last7days = %sysfunc(INTNX(Day, &run\_date, -6), date9.);

%put &Last7days.;

\*;

%let Last8days = %sysfunc(INTNX(Day, &run\_date, -7), date9.);

%put &Last8days.;

\*;

%let Last9days = %sysfunc(INTNX(Day, &run\_date, -8), date9.);

%put &Last9days.;

\*02MAY2012;

%let Last10days = %sysfunc(INTNX(Day, &run\_date, -9), date9.);

%put &Last10days.;

\*01MAY2012;

%let Last11days = %sysfunc(INTNX(Day, &run\_date, -10), date9.);

%put &Last11days.;

\*30APR2012;

%let Last12days = %sysfunc(INTNX(Day, &run\_date, -11), date9.);

%put &Last12days.;

\*29APR2012;

%let Last13days = %sysfunc(INTNX(Day, &run\_date, -12), date9.);

%put &Last13days.;

\*28APR2012;

%let Last14days = %sysfunc(INTNX(Day, &run\_date, -13), date9.);

%put &Last14days.;

\*27APR2012;

%let Last15days = %sysfunc(INTNX(Day, &run\_date, -14), date9.);

%put &Last15days.;

\*26APR2012;

%let Last16days = %sysfunc(INTNX(Day, &run\_date, -15), date9.);

%put &Last16days.;

\*25APR2012;

%let Last17days = %sysfunc(INTNX(Day, &run\_date, -16), date9.);

%put &Last17days.;

\*24APR2012;

%let Last18days = %sysfunc(INTNX(Day, &run\_date, -17), date9.);

%put &Last18days.;

\*23APR2012;

%let Last19days = %sysfunc(INTNX(Day, &run\_date, -18), date9.);

%put &Last19days.;

\*22APR2012;

%let Last20days = %sysfunc(INTNX(Day, &run\_date, -19), date9.);

%put &Last20days.;

\*21APR2012;

%let Last21days = %sysfunc(INTNX(Day, &run\_date, -20), date9.);

%put &Last21days.;

\*20APR2012;

%let Last22days = %sysfunc(INTNX(Day, &run\_date, -21), date9.);

%put &Last22days.;

\*19APR2012;

%let Last23days = %sysfunc(INTNX(Day, &run\_date, -22), date9.);

%put &Last23days.;

\*18APR2012;

%let Last24days = %sysfunc(INTNX(Day, &run\_date, -23), date9.);

%put &Last24days.;

\*17APR2012;

%let Last25days = %sysfunc(INTNX(Day, &run\_date, -24), date9.);

%put &Last25days.;

\*16APR2012;

%let Last27days = %sysfunc(INTNX(Day, &run\_date, -26), date9.);

%put &Last27days.;

\*14APR2012;

%let Last28days = %sysfunc(INTNX(Day, &run\_date, -27), date9.);

%put &Last28days.;

\*13APR2012;

%let Last29days = %sysfunc(INTNX(Day, &run\_date, -28), date9.);

%put &Last29days.;

\*12APR2012;

%let Last30days = %sysfunc(INTNX(Day, &run\_date, -29), date9.);

%put &Last30days.;

\*11APR2012;

%let Last31days = %sysfunc(INTNX(Day, &run\_date, -30), date9.);

%put &Last31days.;

\*10APR2012;

%let Last32days = %sysfunc(INTNX(Day, &run\_date, -31), date9.);

%put &Last32days.;

\*09APR2012;

%let Last33days = %sysfunc(INTNX(Day, &run\_date, -32), date9.);

%put &Last33days.;

\*08APR2012;

%let Last34days = %sysfunc(INTNX(Day, &run\_date, -33), date9.);

%put &Last34days.;

\*07APR2012;

%let Last36days = %sysfunc(INTNX(Day, &run\_date, -35), date9.);

%put &Last36days.;

\*05APR2012;

%let Last37days = %sysfunc(INTNX(Day, &run\_date, -36), date9.);

%put &Last37days.;

\*04APR2012;

%let Last38days = %sysfunc(INTNX(Day, &run\_date, -37), date9.);

%put &Last38days.;

\*03APR2012;

%let Last42days = %sysfunc(INTNX(Day, &run\_date, -41), date9.);

%put &Last42days.;

\*30MAR2012;

%let Last45days = %sysfunc(INTNX(Day, &run\_date, -44), date9.);

%put &Last45days.;

%let Last50days = %sysfunc(INTNX(Day, &run\_date, -49), date9.);

%put &Last50days.;

%let Last51days = %sysfunc(INTNX(Day, &run\_date, -50), date9.);

%put &Last51days.;

\*27MAR2012;

%let Last52days = %sysfunc(INTNX(Day, &run\_date, -51), date9.);

%put &Last52days.;

\*20MAR2012;

%let Last60days = %sysfunc(INTNX(Day, &run\_date, -59), date9.);

%put &Last60days.;

\*12MAR2012;

%let Last61days = %sysfunc(INTNX(Day, &run\_date, -60), date9.);

%put &Last61days.;

\*11MAR2012;

%let Last62days = %sysfunc(INTNX(Day, &run\_date, -61), date9.);

%put &Last62days.;

\*10MAR2012;

%let Last67days = %sysfunc(INTNX(Day, &run\_date, -66), date9.);

%put &Last67days.;

%let Last16days = %sysfunc(INTNX(Day, &run\_date, -15), date9.);

%put &Last16days.;

%let Last26days = %sysfunc(INTNX(Day, &run\_date, -25), date9.);

%put &Last26days.;

%let Last35days = %sysfunc(INTNX(Day, &run\_date, -34), date9.);

%put &Last35days.;

%let Last39days = %sysfunc(INTNX(Day, &run\_date, -38), date9.);

%put &Last39days.;

%let Last40days = %sysfunc(INTNX(Day, &run\_date, -39), date9.);

%put &Last40days.;

%let Last41days = %sysfunc(INTNX(Day, &run\_date, -40), date9.);

%put &Last41days.;

%let Last43days = %sysfunc(INTNX(Day, &run\_date, -42), date9.);

%put &Last43days.;

%let Last44days = %sysfunc(INTNX(Day, &run\_date, -43), date9.);

%put &Last44days.;

%let Last45days = %sysfunc(INTNX(Day, &run\_date, -44), date9.);

%put &Last45days.;

%let Last46days = %sysfunc(INTNX(Day, &run\_date, -45), date9.);

%put &Last46days.;

%let Last47days = %sysfunc(INTNX(Day, &run\_date, -46), date9.);

%put &Last47days.;

%let Last48days = %sysfunc(INTNX(Day, &run\_date, -47), date9.);

%put &Last48days.;

%let Last49days = %sysfunc(INTNX(Day, &run\_date, -48), date9.);

%put &Last49days.;

%let Last54days = %sysfunc(INTNX(Day, &run\_date, -53), date9.);

%put &Last54days.;

%let Last55days = %sysfunc(INTNX(Day, &run\_date, -54), date9.);

%put &Last55days.;

%let Last57days = %sysfunc(INTNX(Day, &run\_date, -56), date9.);

%put &Last57days.;

%let Last58days = %sysfunc(INTNX(Day, &run\_date, -57), date9.);

%put &Last58days.;

%let Last75days = %sysfunc(INTNX(Day, &run\_date, -74), date9.);

%put &Last75days.;

/\*CREATE Y/N TAGS\*/

**data** &rawdata(compress=binary);

set &rawdata;

if data\_complaint\_flag=**1** then data\_complaint\_tag= 'Y' ;

else data\_complaint\_tag= 'N' ;

if MMS\_flag=**1** then MMS\_tag= 'Y' ;

else MMS\_tag= 'N' ;

if data\_USG\_flag=**1** then data\_tag= 'Y' ;

else data\_tag= 'N' ;

if Data\_Rchg\_Cnt>**0** then Data\_Rch\_TAG= 'Y' ;

else Data\_Rch\_TAG = 'N' ;

**run**;

**data** &rawdata;

set &rawdata;

length data\_pf\_tag $50.;

if PF\_DATA\_PROCESSING\_FEE>**0** then data\_pf\_tag='y';

**run**;

**data** &rawdatatest;

set &rawdata (keep=subs\_key);

**run**;

**proc** **sort** data=&rawdatatest nodupkey; by subs\_key; **run**;

**data** &base;

set &rawdatatest;

**run**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*REPLACES . BY 0 FOR A SINGLE VAR\*/

**%MACRO** create\_file(var,OUTFILE=TEMP);

PROC SQL;

CREATE TABLE &OUTFILE AS

SELECT SUBS\_KEY,

EVENT\_DT,

SUM(&var.,**0**) AS VAR

FROM &rawdata.

ORDER BY SUBS\_KEY;

QUIT;

**%MEND**;

/\*SELECT FLAG VARIABLES ONE VAR AT A TIME\*/

**%MACRO** create\_flag\_file (var,OUTFILE=TEMP);

PROC SQL;

CREATE TABLE &OUTFILE AS

SELECT SUBS\_KEY,

EVENT\_DT,

&var. AS VAR

FROM &rawdata.

ORDER BY SUBS\_KEY;

QUIT;

**%MEND**;

/\*REPLACES . BY 0 FOR A LIST OF VARS\*/

**%MACRO** create\_file\_varlist(OUTFILE=TEMP);

PROC SQL;

CREATE TABLE &OUTFILE AS

SELECT SUBS\_KEY,

EVENT\_DT,

SUM(&varlist.,**0**) AS VAR

FROM &rawdata.

ORDER BY SUBS\_KEY;

QUIT;

**%MEND**;

/\*CREATE DATA RECHARGE RELATED RAW VARS\*/

**%MACRO** create\_Recharge\_file (OUTFILE=TEMP,EVENTDATE=EVENT\_DT);

PROC SQL;

CREATE TABLE &OUTFILE AS

SELECT SUBS\_KEY,&EVENTDATE.,Data\_Rchg\_Cnt,Data\_Rchg\_Sum\_MRP FROM &rawdata.

ORDER BY SUBS\_KEY;

QUIT;

**%MEND**;

**%MACRO** DELETE\_FILE(LIB,FILE);

PROC DATASETS LIB=&LIB;

DELETE &FILE.;

RUN;

**%MEND**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*MAX, SD, AVG\*/

**%MACRO** SUM(date1, date2,abt\_var,INFILE=temp);

PROC SQL;

CREATE TABLE TEM1 AS

SELECT SUBS\_KEY,EVENT\_DT,VAR,

CASE

WHEN EVENT\_DT >= &date1 AND EVENT\_DT <= &date2 THEN Var

ELSE **.** END AS &abt\_Var.

FROM &infile.

ORDER BY SUBS\_KEY;

QUIT;

PROC SQL;

CREATE TABLE &ABT\_VAR AS

SELECT

SUBS\_KEY,

MAX(sum(&ABT\_Var.,**0**)) AS MAX\_&ABT\_Var. FORMAT **8.2**,

STD(&ABT\_Var.) AS SD\_&ABT\_Var. FORMAT **8.2**,

AVG(&ABT\_Var.) AS AVG\_&ABT\_Var. FORMAT **8.2**

FROM TEM1

GROUP BY SUBS\_KEY;

QUIT;

PROC SQL;

CREATE TABLE abt1 AS

SELECT T1.\*,

T2.MAX\_&ABT\_Var.,

T2.SD\_&ABT\_Var.,

T2.AVG\_&ABT\_Var.

FROM &base. T1 LEFT JOIN &ABT\_VAR. T2 ON (T1.SUBS\_KEY=T2.SUBS\_KEY);

QUIT;

data &base.;

set abt1;

run;

proc datasets lib=work nolist;

delete TEM1 TEM2 &ABT\_VAR. abt1;

quit;

**%MEND**;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\*SUM Variables for predifined vintage;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

**%MACRO** SUM\_VINTAGE (abt\_var,INFILE=TEMP);

PROC SQL;

CREATE TABLE TEMP1 AS

SELECT SUBS\_KEY,

VAR,

CASE

WHEN (EVENT\_DT >= **"&Last37days"D** and EVENT\_DT<= **"&Last8days"D**) THEN VAR ELSE **0** END AS VAR\_M2,

CASE

WHEN (EVENT\_DT >= **"&Last67days"D** and EVENT\_DT<= **"&Last38days"D**) THEN VAR ELSE **0** END AS VAR\_M1,

CASE

WHEN (EVENT\_DT >= **"&Last7days"D** and EVENT\_DT<= &run\_date.) THEN VAR ELSE **0** END AS VAR\_L7,

CASE

WHEN (EVENT\_DT >=**"&Last15days"D** and EVENT\_DT<= &run\_date.) THEN VAR ELSE **0** END AS VAR\_L15,

CASE

WHEN (EVENT\_DT >=**"&Last21days"D** and EVENT\_DT<= &run\_date.) THEN VAR ELSE **0** END AS VAR\_L21,

CASE

WHEN (EVENT\_DT >=**"&Last30days"D** and EVENT\_DT<=&run\_date.) THEN VAR ELSE **0** END AS VAR\_L30,

CASE

WHEN (EVENT\_DT >=**"&Last37days"D** and EVENT\_DT<= &run\_date.) THEN VAR ELSE **0** END AS VAR\_L37,

CASE

WHEN (EVENT\_DT >=**"&Last5days"D** and EVENT\_DT<=&run\_date.) THEN VAR ELSE **0** END AS VAR\_L5,

CASE

WHEN (EVENT\_DT >= **"&Last22days"D** and EVENT\_DT<= **"&Last8days"D**) THEN VAR ELSE **0** END AS VAR\_L15M2,

CASE

WHEN (EVENT\_DT >= **"&Last37days"D** and EVENT\_DT<= **"&Last23days"D**) THEN VAR ELSE **0** END AS VAR\_F15M2

FROM &INFILE

ORDER BY SUBS\_KEY;

QUIT;

PROC SQL;

CREATE TABLE TEMP\_&abt\_var AS

SELECT SUBS\_KEY,

SUM(SUM(VAR\_L5,**0**)) AS SUM\_&abt\_var.\_L5,

SUM(SUM(VAR\_L7,**0**)) AS SUM\_&abt\_var.\_L7,

SUM(SUM(VAR\_L15,**0**)) AS SUM\_&abt\_var.\_L15,

SUM(SUM(VAR\_L21,**0**)) AS SUM\_&abt\_var.\_L21,

SUM(SUM(VAR\_L30,**0**)) AS SUM\_&abt\_var.\_L30,

SUM(SUM(VAR\_L37,**0**)) AS SUM\_&abt\_var.\_L37,

SUM(SUM(VAR\_M1,**0**)) AS SUM\_&abt\_var.\_M1,

SUM(SUM(VAR\_M2,**0**)) AS SUM\_&abt\_var.\_M2,

SUM(SUM(VAR\_F15M2,**0**)) AS SUM\_&abt\_var.\_F15M2,

SUM(SUM(VAR\_L15M2,**0**)) AS SUM\_&abt\_var.\_L15M2

FROM TEMP1

GROUP BY SUBS\_KEY

ORDER BY SUBS\_KEY;

QUIT;

PROC SQL;

CREATE TABLE abt1 AS

SELECT T1.\*,

T2.\*

FROM &base. T1 LEFT JOIN temp\_&abt\_var T2 ON (T1.SUBS\_KEY=T2.SUBS\_KEY);

QUIT;

data &base.;

set abt1;

run;

proc datasets lib=work nolist;

delete TEMP1 ;

quit;

**%MEND**;

/\*PERCENTAGE CHANGE VARS\*/

**%MACRO** PCT\_CHG(abt\_var);

PROC SQL;

CREATE TABLE TEMP2 AS

SELECT \*,

/\*PCT\_CHG\_VAR\*/

CASE WHEN(SUM\_&abt\_var.\_M2/**30** NE **0**) THEN (((SUM\_&abt\_var.\_L7/**7**) - (SUM\_&abt\_var.\_M2/**30**)) /(SUM\_&abt\_var.\_M2/**30**))ELSE **999** END AS CHG\_&abt\_var.\_L7\_M2 FORMAT **8.2** ,

CASE WHEN(SUM\_&abt\_var.\_M2/**30** NE **0**) THEN (((SUM\_&abt\_var.\_L5/**5**) - (SUM\_&abt\_var.\_M2/**30**)) /(SUM\_&abt\_var.\_M2/**30**))ELSE **999** END AS CHG\_&abt\_var.\_L5\_M2 FORMAT **8.2** ,

CASE WHEN(SUM\_&abt\_var.\_L15M2/**15** NE **0**) THEN (((SUM\_&abt\_var.\_F15M2/**15**) - (SUM\_&abt\_var.\_L15M2/**15**)) /(SUM\_&abt\_var.\_L15M2/**15**))ELSE **999** END AS CHG\_&abt\_var.\_F15M2\_L15M2 FORMAT **8.2**

FROM TEMP\_&abt\_var

/\*GROUP BY SUBS\_KEY\*/

ORDER BY SUBS\_KEY;

QUIT;

PROC SQL;

CREATE TABLE pct\_&abt\_var AS

SELECT \*

FROM TEMP2 ;

QUIT;

PROC SQL;

CREATE TABLE abt2 AS

SELECT T1.\*,

T2.\*

FROM &base. T1 LEFT JOIN pct\_&abt\_var T2 ON (T1.SUBS\_KEY=T2.SUBS\_KEY);

QUIT;

data &base.;

set abt2;

run;

proc datasets lib=work nolist;

delete TEMP1 TEMP2 ;

quit;

**%MEND**;

/\*SLOPE\*/

**%MACRO** SLOPE(INFILE=TEMP, DATE1=, DATE2=,ABT\_VAR=,OUT=);

PROC SQL;

CREATE TABLE &out AS

SELECT SUBS\_KEY,EVENT\_DT,

VAR AS &ABT\_VAR.

FROM &infile.

WHERE &DATE1 <= EVENT\_DT <= &DATE2 /\*GROUP BY subs\_Key \*/

ORDER BY SUBS\_KEY, EVENT\_DT asc;

quit;

DATA &out;

SET &out;

DAY+**1**;

BY SUBS\_KEY;

IF FIRST.SUBS\_KEY THEN

DAY = **1**;

RUN;

PROC SQL;

CREATE TABLE SLOPE\_&OUT AS

SELECT SUBS\_KEY,&ABT\_VAR.,AVG(&ABT\_VAR.) AS AVG\_&ABT\_VAR.,

DAY, AVG(DAY) AS AVG\_DAY,

( &ABT\_VAR. - CALCULATED AVG\_&ABT\_VAR.) AS DIFF\_&ABT\_VAR.,

(DAY - CALCULATED AVG\_DAY) AS DIFF\_DAY&OUT,

(CALCULATED DIFF\_&ABT\_VAR.\*CALCULATED DIFF\_DAY&OUT) AS PROD\_&ABT\_VAR.,

(CALCULATED DIFF\_DAY&OUT\*CALCULATED DIFF\_DAY&OUT) AS SQ\_DAY&OUT

FROM &out GROUP BY subs\_Key;

CREATE TABLE SLP1\_&OUT AS

SELECT SUBS\_KEY , SUM(PROD\_&ABT\_VAR.) AS num, SUM(SQ\_DAY&OUT) AS denom,

(CALCULATED num / CALCULATED denom) AS SLP\_&OUT. FORMAT **8.2** FROM SLOPE\_&OUT

GROUP BY subs\_Key;

QUIT;

Data SLP1\_&OUT;

Set SLP1\_&OUT;

Keep Subs\_key SLP\_&Out.;

RUN;

PROC SQL;

CREATE TABLE abt1 AS

SELECT T1.\*,

T2.SLP\_&OUT.

FROM &base. T1 LEFT JOIN SLP1\_&OUT T2 ON (T1.SUBS\_KEY=T2.SUBS\_KEY);

QUIT;

data &base.;

set abt1;

run;

proc datasets lib=work nolist;

delete DEC\_SLOPE\_&OUT DEC\_day\_&out SLP:;

quit;

**%MEND**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*BUCKET VISE STANDARD DEVIATION\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*SD\_3DB\_L30\*/

**%MACRO** SD\_3DB\_L30 (abt\_var,INFILE=TEMP);

Data TEM1\_3DB\_L30 (COMPRESS=YES);

SET &INFILE.;

If EVENT\_DT <= &run\_date AND EVENT\_DT >= **"&Last3days"D** THEN

Flag=**1**;

Else if EVENT\_DT <= **"&Last4days"D** AND EVENT\_DT >= **"&Last6days"D** THEN

Flag=**2**;

Else if EVENT\_DT <= **"&Last7days"D** AND EVENT\_DT >= **"&Last9days"D** THEN

Flag=**3**;

Else if EVENT\_DT <= **"&Last10days"D** AND EVENT\_DT >= **"&Last12days"D** THEN

Flag=**4**;

Else if EVENT\_DT <= **"&Last13days"D** AND EVENT\_DT >= **"&Last15days"D** THEN

Flag=**5**;

Else if EVENT\_DT <= **"&Last16days"D** AND EVENT\_DT >= **"&Last18days"D** THEN

Flag=**6**;

Else if EVENT\_DT <= **"&Last19days"D** AND EVENT\_DT >= **"&Last21DAYS"D** THEN

Flag=**7**;

Else if EVENT\_DT <= **"&Last22days"D** AND EVENT\_DT >= **"&Last24days"D** THEN

Flag=**8**;

Else if EVENT\_DT <= **"&Last25days"D** AND EVENT\_DT >= **"&Last27days"D** THEN

Flag=**9**;

Else if EVENT\_DT <= **"&Last28days"D** AND EVENT\_DT >= **"&Last30days"D** THEN

Flag=**10**;

Run;

DATA TEM1\_3DB\_L30;

SET TEM1\_3DB\_L30;

if flag=**0** then

delete;

RUN;

DATA TEM1\_3DB\_L30;

SET TEM1\_3DB\_L30;

if VAR=**.** then

VAR=**0**;

RUN;

PROC MEANS DATA=TEM1\_3DB\_L30 mean nway noprint;

var VAR;

Class SUBS\_KEY flag;

output out=TEM2\_3DB\_L30 mean(VAR)=MEAN\_VAR\_3d;

RUN;

PROC SQL;

CREATE TABLE TEM3\_3DB\_L30 AS

SELECT SUBS\_KEY,

STD(Mean\_VAR\_3d) as SD\_&abt\_var.\_3DB\_L30

FROM TEM2\_3DB\_L30

GROUP BY SUBS\_KEY;

QUIT;

PROC SQL;

CREATE TABLE abt1 AS

SELECT T1.\*,

T2.SD\_&abt\_var.\_3DB\_L30

FROM &Base. T1 LEFT JOIN TEM3\_3DB\_L30 T2 ON (T1.SUBS\_KEY=T2.SUBS\_KEY);

QUIT;

data &base.;

set abt1;

run;

proc datasets lib=work nolist;

delete TEM1\_3DB\_L30 TEM2\_3DB\_L30 TEM3\_3DB\_L30;

quit;

**%MEND**;

/\*SD\_4DB\_L36\*/

**%MACRO** SD\_4DB\_L36 (abt\_var,INFILE=TEMP);

Data TEM1\_4DB\_L36 (COMPRESS=YES);

SET &INFILE.;

If EVENT\_DT <= &run\_date AND EVENT\_DT >= **"&Last4days"D** THEN

Flag=**1**;

Else if EVENT\_DT <= **"&Last5days"D** AND EVENT\_DT >= **"&Last8days"D** THEN

Flag=**2**;

Else if EVENT\_DT <= **"&Last9days"D** AND EVENT\_DT >= **"&Last12days"D** THEN

Flag=**3**;

Else if EVENT\_DT <= **"&Last13days"D** AND EVENT\_DT >= **"&Last16days"D** THEN

Flag=**4**;

Else if EVENT\_DT <= **"&Last17days"D** AND EVENT\_DT >= **"&Last20days"D** THEN

Flag=**5**;

Else if EVENT\_DT <= **"&Last21days"D** AND EVENT\_DT >= **"&Last24days"D** THEN

Flag=**6**;

Else if EVENT\_DT <= **"&Last25days"D** AND EVENT\_DT >= **"&Last28DAYS"D** THEN

Flag=**7**;

Else if EVENT\_DT <= **"&Last29days"D** AND EVENT\_DT >= **"&Last32days"D** THEN

Flag=**8**;

Else if EVENT\_DT <= **"&Last33days"D** AND EVENT\_DT >= **"&Last36days"D** THEN

Flag=**9**;

Run;

DATA TEM1\_4DB\_L36;

SET TEM1\_4DB\_L36;

if flag=**0** then

delete;

RUN;

DATA TEM1\_4DB\_L36;

SET TEM1\_4DB\_L36;

if VAR=**.** then

VAR=**0**;

RUN;

PROC MEANS DATA=TEM1\_4DB\_L36 mean nway noprint;

var VAR;

Class SUBS\_KEY flag;

output out=TEM2\_4DB\_L36 mean(VAR)=MEAN\_VAR\_4d;

RUN;

PROC SQL;

CREATE TABLE TEM3\_4DB\_L36 AS

SELECT SUBS\_KEY,

STD(Mean\_VAR\_4d) as SD\_&abt\_var.\_4DB\_L36

FROM TEM2\_4DB\_L36

GROUP BY SUBS\_KEY;

QUIT;

PROC SQL;

CREATE TABLE abt1 AS

SELECT T1.\*,

T2.SD\_&abt\_var.\_4DB\_L36

FROM &Base. T1 LEFT JOIN TEM3\_4DB\_L36 T2 ON (T1.SUBS\_KEY=T2.SUBS\_KEY);

QUIT;

data &base.;

set abt1;

run;

proc datasets lib=work nolist;

delete TEM1\_4DB\_L36 TEM2\_4DB\_L36 TEM3\_4DB\_L36;

quit;

**%MEND**;

/\*SD\_5DB\_L45\*/

**%MACRO** SD\_5DB\_L45 (abt\_var,INFILE=TEMP);

Data TEM1\_5DB\_L45 (COMPRESS=YES);

SET &INFILE.;

If EVENT\_DT <= &run\_date AND EVENT\_DT >= **"&Last5days"D** THEN

Flag=**1**;

Else if EVENT\_DT <= **"&Last6days"D** AND EVENT\_DT >= **"&Last10days"D** THEN

Flag=**2**;

Else if EVENT\_DT <= **"&Last11days"D** AND EVENT\_DT >= **"&Last15days"D** THEN

Flag=**3**;

Else if EVENT\_DT <= **"&Last16days"D** AND EVENT\_DT >= **"&Last20days"D** THEN

Flag=**4**;

Else if EVENT\_DT <= **"&Last21days"D** AND EVENT\_DT >= **"&Last25days"D** THEN

Flag=**5**;

Else if EVENT\_DT <= **"&Last26days"D** AND EVENT\_DT >= **"&Last30days"D** THEN

Flag=**6**;

Else if EVENT\_DT <= **"&Last31days"D** AND EVENT\_DT >= **"&Last35DAYS"D** THEN

Flag=**7**;

Else if EVENT\_DT <= **"&Last36days"D** AND EVENT\_DT >= **"&Last40days"D** THEN

Flag=**8**;

Else if EVENT\_DT <= **"&Last41days"D** AND EVENT\_DT >= **"&Last45days"D** THEN

Flag=**9**;

Run;

DATA TEM1\_5DB\_L45;

SET TEM1\_5DB\_L45;

if flag=**0** then

delete;

RUN;

DATA TEM1\_5DB\_L45;

SET TEM1\_5DB\_L45;

if VAR=**.** then

VAR=**0**;

RUN;

PROC MEANS DATA=TEM1\_5DB\_L45 mean nway noprint;

var VAR;

Class SUBS\_KEY flag;

output out=TEM2\_5DB\_L45 mean(VAR)=MEAN\_VAR\_5d;

RUN;

PROC SQL;

CREATE TABLE TEM3\_5DB\_L45 AS

SELECT SUBS\_KEY,

STD(Mean\_VAR\_5d) as SD\_&abt\_var.\_5DB\_L45

FROM TEM2\_5DB\_L45

GROUP BY SUBS\_KEY;

QUIT;

PROC SQL;

CREATE TABLE abt1 AS

SELECT T1.\*,

T2.SD\_&abt\_var.\_5DB\_L45

FROM &Base. T1 LEFT JOIN TEM3\_5DB\_L45 T2 ON (T1.SUBS\_KEY=T2.SUBS\_KEY);

QUIT;

data &base.;

set abt1;

run;

proc datasets lib=work nolist;

delete TEM1\_5DB\_L45 TEM2\_5DB\_L45 TEM3\_5DB\_L45;

quit;

**%MEND**;

/\*SD\_7DB\_L28\*/

**%MACRO** SD\_7DB\_L28 (abt\_var,INFILE=TEMP);

Data TEM1\_7DB\_L28 (COMPRESS=YES);

SET &INFILE.;

If EVENT\_DT <= &run\_date AND EVENT\_DT >= **"&Last7days"D** THEN

Flag=**1**;

Else if EVENT\_DT <= **"&Last8days"D** AND EVENT\_DT >= **"&Last14days"D** THEN

Flag=**2**;

Else if EVENT\_DT <= **"&Last15days"D** AND EVENT\_DT >= **"&Last21days"D** THEN

Flag=**3**;

Else if EVENT\_DT <= **"&Last22days"D** AND EVENT\_DT >= **"&Last28days"D** THEN

Flag=**4**;

Run;

DATA TEM1\_7DB\_L28;

SET TEM1\_7DB\_L28;

if flag=**0** then

delete;

RUN;

DATA TEM1\_7DB\_L28;

SET TEM1\_7DB\_L28;

if VAR=**.** then

VAR=**0**;

RUN;

PROC MEANS DATA=TEM1\_7DB\_L28 mean nway noprint;

var VAR;

Class SUBS\_KEY flag;

output out=TEM2\_7DB\_L28 mean(VAR)=MEAN\_VAR\_7d;

RUN;

PROC SQL;

CREATE TABLE TEM3\_7DB\_L28 AS

SELECT SUBS\_KEY,

STD(Mean\_VAR\_7d) as SD\_&abt\_var.\_7DB\_L28

FROM TEM2\_7DB\_L28

GROUP BY SUBS\_KEY;

QUIT;

PROC SQL;

CREATE TABLE abt1 AS

SELECT T1.\*,

T2.SD\_&abt\_var.\_7DB\_L28

FROM &Base. T1 LEFT JOIN TEM3\_7DB\_L28 T2 ON (T1.SUBS\_KEY=T2.SUBS\_KEY);

QUIT;

data &base.;

set abt1;

run;

proc datasets lib=work nolist;

delete TEM1\_7DB\_L28 TEM2\_7DB\_L28 TEM3\_7DB\_L28;

quit;

**%MEND**;

/\*SD\_10DB\_L60\*/

**%MACRO** SD\_10DB\_L60 (abt\_var,INFILE=TEMP);

Data TEM1\_10DB\_L60 (COMPRESS=YES);

SET &INFILE.;

If EVENT\_DT <= &run\_date AND EVENT\_DT >= **"&Last10days"D** THEN

Flag=**1**;

Else if EVENT\_DT <= **"&Last11days"D** AND EVENT\_DT >= **"&Last20days"D** THEN

Flag=**2**;

Else if EVENT\_DT <= **"&Last21days"D** AND EVENT\_DT >= **"&Last30days"D** THEN

Flag=**3**;

Else if EVENT\_DT <= **"&Last31days"D** AND EVENT\_DT >= **"&Last40days"D** THEN

Flag=**4**;

Else if EVENT\_DT <= **"&Last41days"D** AND EVENT\_DT >= **"&Last50days"D** THEN

Flag=**5**;

Else if EVENT\_DT <= **"&Last51days"D** AND EVENT\_DT >= **"&Last60days"D** THEN

Flag=**6**;

Run;

DATA TEM1\_10DB\_L60;

SET TEM1\_10DB\_L60;

if flag=**0** then

delete;

RUN;

DATA TEM1\_10DB\_L60;

SET TEM1\_10DB\_L60;

if VAR=**.** then

VAR=**0**;

RUN;

PROC MEANS DATA=TEM1\_10DB\_L60 mean nway noprint;

var VAR;

Class SUBS\_KEY flag;

output out=TEM2\_10DB\_L60 mean(VAR)=MEAN\_VAR\_10d;

RUN;

PROC SQL;

CREATE TABLE TEM3\_10DB\_L60 AS

SELECT SUBS\_KEY,

STD(Mean\_VAR\_10d) as SD\_&abt\_var.\_10DB\_L60

FROM TEM2\_10DB\_L60

GROUP BY SUBS\_KEY;

QUIT;

PROC SQL;

CREATE TABLE abt1 AS

SELECT T1.\*,

T2.SD\_&abt\_var.\_10DB\_L60

FROM &Base. T1 LEFT JOIN TEM3\_10DB\_L60 T2 ON (T1.SUBS\_KEY=T2.SUBS\_KEY);

QUIT;

data &base.;

set abt1;

run;

proc datasets lib=work nolist;

delete TEM1\_10DB\_L60 TEM2\_10DB\_L60 TEM3\_10DB\_L60;

quit;

**%MEND**;

/\*AVERAGE RECHARGE VALUE , DAILY AVERAGE RECHARGE VALUE\*/

**%MACRO** RCHRG\_VALUE ( OUT= , DATE1=, DATE2=,INFILE=TEMP,EVENTDATE=EVENT\_DT);

PROC SQL NOPRINT;

CREATE TABLE RCHRG AS

SELECT

T1.SUBS\_KEY,

T1.&EVENTDATE.,

t1.Data\_Rchg\_Cnt

t1.Data\_Rchg\_Sum\_MRP

SUM(t1.Data\_Rchg\_Sum\_MRP,**0**) AS

RCHRG\_VALUE\_&OUT,

SUM(T1.Data\_Rchg\_Cnt,**0**) AS CNT\_TOT\_RCHRG\_&OUT

FROM &INFILE T1 WHERE &DATE1 <= &EVENTDATE <= &DATE2;

SELECT COUNT(SUBS\_KEY) INTO: DAY FROM RCHRG GROUP BY SUBS\_KEY;

%LET DAY = &DAY;

%PUT &DAY;

CREATE TABLE RCHRG\_&OUT AS

SELECT SUBS\_KEY,

SUM(RCHRG\_VALUE\_&OUT) AS VALUE\_RCHRG\_&OUT,

SUM(CNT\_TOT\_RCHRG\_&OUT) AS TOT\_CNT\_RCHRG\_&OUT,

(CALCULATED VALUE\_RCHRG\_&OUT/CALCULATED TOT\_CNT\_RCHRG\_&OUT) AS AVG\_RCH\_VAL\_&OUT FORMAT **8.2**,

(CALCULATED VALUE\_RCHRG\_&OUT/&DAY) AS DLY\_AVG\_RCH\_VAL\_&OUT FORMAT **8.2**

FROM RCHRG GROUP BY SUBS\_KEY

ORDER BY SUBS\_KEY;

DATA RCHRG\_&OUT;

SET RCHRG\_&OUT;

IF AVG\_RCH\_VAL\_&OUT = **.** THEN AVG\_RCH\_VAL\_&OUT = **0**;

IF DLY\_AVG\_RCH\_VAL\_&OUT = **.** THEN DLY\_AVG\_RCH\_VAL\_&OUT = **0**;

RUN;

PROC SQL;

CREATE TABLE TEMP12(COMPRESS=YES) AS

SELECT T1.\*, T2.AVG\_RCH\_VAL\_&OUT, T2.DLY\_AVG\_RCH\_VAL\_&OUT

FROM &BASE. T1 LEFT JOIN RCHRG\_&OUT T2 ON (T1.SUBS\_KEY = T2.SUBS\_KEY);

QUIT;

DATA &BASE.;

SET TEMP12;

RUN;

PROC DATASETS LIB=WORK NOLIST;

DELETE RCHRG\_PAST7DAYS RCHRG\_PAST15DAYS RCHRG\_PAST30DAYS RCHRG\_PAST37DAYS;

QUIT;

**%MEND** RCHRG\_VALUE;

/\*COUNT OF HIGH VALUE RECHARGES\*/

**%MACRO** HIGHRECHARGE (OUT=, DATE1=,DATE2=,INFILE=TEMP,AMOUNT=,EVENTDATE=EVENT\_DT);

PROC SQL;

CREATE TABLE HIGH\_RECHARGE AS

SELECT

SUBS\_KEY,

&EVENTDATE.,

Data\_Rchg\_Sum\_MRP,

SUM(Data\_Rchg\_Sum\_MRP,**0**) AS RCHRG\_VALUE\_&OUT.,

(CALCULATED RCHRG\_VALUE\_&OUT > &AMOUNT.) AS RECHARGE\_GT\_&AMOUNT.

FROM &INFILE.

WHERE &EVENTDATE. >= &DATE1. AND &EVENTDATE. <= &DATE2.;

QUIT;

PROC SQL;

CREATE TABLE WORK.HIGH\_RECHARGE1 AS

SELECT

SUBS\_KEY,

SUM(SUM(RECHARGE\_GT\_&AMOUNT.,**0**)) AS CNT\_RCH\_VAL\_GT\_&AMOUNT.\_&OUT.

FROM WORK.HIGH\_RECHARGE

GROUP BY SUBS\_KEY

order by subs\_key;

QUIT;

PROC SQL;

CREATE TABLE TEMP14(COMPRESS=YES) AS

SELECT T1.\*, T2.CNT\_RCH\_VAL\_GT\_&AMOUNT.\_&OUT.

FROM &BASE. T1 LEFT JOIN WORK.HIGH\_RECHARGE1 T2 ON (T1.SUBS\_KEY = T2.SUBS\_KEY);

QUIT;

DATA &BASE.;

SET TEMP14;

RUN;

PROC DATASETS LIB=WORK NOLIST;

DELETE HIGH\_RECHARGE HIGH\_RECHARGE1 ;

QUIT;

**%MEND**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*BUCKET VISE SLOPE\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*SLP\_3DB\_L30\*/

**%MACRO** SLP\_3DB\_L30 (abt\_var,INFILE=TEMP);

Data TEM1\_3DB\_L30 (COMPRESS=YES);

SET &INFILE.;

If EVENT\_DT <= &run\_date AND EVENT\_DT >= **"&Last3days"D** THEN

Flag=**10**;

Else if EVENT\_DT <= **"&Last4days"D** AND EVENT\_DT >= **"&Last6days"D** THEN

Flag=**9**;

Else if EVENT\_DT <= **"&Last7days"D** AND EVENT\_DT >= **"&Last9days"D** THEN

Flag=**8**;

Else if EVENT\_DT <= **"&Last10days"D** AND EVENT\_DT >= **"&Last12days"D** THEN

Flag=**7**;

Else if EVENT\_DT <= **"&Last13days"D** AND EVENT\_DT >= **"&Last15days"D** THEN

Flag=**6**;

Else if EVENT\_DT <= **"&Last16days"D** AND EVENT\_DT >= **"&Last18days"D** THEN

Flag=**5**;

Else if EVENT\_DT <= **"&Last19days"D** AND EVENT\_DT >= **"&Last21DAYS"D** THEN

Flag=**4**;

Else if EVENT\_DT <= **"&Last22days"D** AND EVENT\_DT >= **"&Last24days"D** THEN

Flag=**3**;

Else if EVENT\_DT <= **"&Last25days"D** AND EVENT\_DT >= **"&Last27days"D** THEN

Flag=**2**;

Else if EVENT\_DT <= **"&Last28days"D** AND EVENT\_DT >= **"&Last30days"D** THEN

Flag=**1**;

Run;

DATA TEM1\_3DB\_L30;

SET TEM1\_3DB\_L30;

if flag=**0** then

delete;

RUN;

DATA TEM1\_3DB\_L30;

SET TEM1\_3DB\_L30;

if VAR=**.** then

VAR=**0**;

RUN;

PROC MEANS DATA=TEM1\_3DB\_L30 mean nway noprint;

var VAR;

Class SUBS\_KEY flag;

output out=TEM2\_3DB\_L30 mean(VAR)=MEAN\_VAR\_3d;

RUN;

PROC SQL;

CREATE TABLE TEM3\_3DB\_L30 AS SELECT SUBS\_KEY, FLAG,MEAN\_VAR\_3d FROM

TEM2\_3DB\_L30;

QUIT;

PROC SQL;

CREATE TABLE SLOPE AS

SELECT SUBS\_KEY,MEAN\_VAR\_3d,AVG(MEAN\_VAR\_3d) AS AVG\_MEAN\_VAR\_3d,

FLAG, AVG(FLAG) AS AVG\_FLAG,

( MEAN\_VAR\_3d - CALCULATED AVG\_MEAN\_VAR\_3d) AS DIFF\_MEAN\_VAR\_3d,

(FLAG - CALCULATED AVG\_FLAG) AS DIFF\_FLAG,

(CALCULATED DIFF\_MEAN\_VAR\_3d\*CALCULATED DIFF\_FLAG) AS PROD\_MEAN\_VAR\_3d,

(CALCULATED DIFF\_FLAG\*CALCULATED DIFF\_FLAG) AS SQ\_FLAG

FROM TEM3\_3DB\_L30 GROUP BY subs\_Key;

CREATE TABLE SLP1 AS

SELECT SUBS\_KEY , SUM(PROD\_MEAN\_VAR\_3d) AS num, SUM( SQ\_FLAG) AS denom,

(CALCULATED num / CALCULATED denom) AS SLP\_&abt\_var.\_3DB\_L30 FORMAT **8.2** FROM SLOPE

GROUP BY subs\_Key;

QUIT;

PROC SQL;

CREATE TABLE abt1 AS

SELECT T1.\*,

T2.SLP\_&abt\_var.\_3DB\_L30

FROM &Base. T1 LEFT JOIN SLP1 T2 ON (T1.SUBS\_KEY=T2.SUBS\_KEY);

QUIT;

data &base.;

set abt1;

run;

proc datasets lib=work nolist;

delete TEM1\_3DB\_L30 TEM2\_3DB\_L30 TEM3\_3DB\_L30 SLOPE SLP1 ;

quit;

**%MEND**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*SLP\_3DB\_L60\*/

**%MACRO** SLP\_3DB\_L60 (abt\_var,INFILE=TEMP);

Data TEM1\_3DB\_L60 (COMPRESS=YES);

SET &INFILE.;

If EVENT\_DT <= &run\_date AND EVENT\_DT >= **"&Last3days"D** THEN

Flag=**20**;

Else if EVENT\_DT <= **"&Last4days"D** AND EVENT\_DT >= **"&Last6days"D** THEN

Flag=**19**;

Else if EVENT\_DT <= **"&Last7days"D** AND EVENT\_DT >= **"&Last9days"D** THEN

Flag=**18**;

Else if EVENT\_DT <= **"&Last10days"D** AND EVENT\_DT >= **"&Last12days"D** THEN

Flag=**17**;

Else if EVENT\_DT <= **"&Last13days"D** AND EVENT\_DT >= **"&Last15days"D** THEN

Flag=**16**;

Else if EVENT\_DT <= **"&Last16days"D** AND EVENT\_DT >= **"&Last18days"D** THEN

Flag=**15**;

Else if EVENT\_DT <= **"&Last19days"D** AND EVENT\_DT >= **"&Last21DAYS"D** THEN

Flag=**14**;

Else if EVENT\_DT <= **"&Last22days"D** AND EVENT\_DT >= **"&Last24days"D** THEN

Flag=**13**;

Else if EVENT\_DT <= **"&Last25days"D** AND EVENT\_DT >= **"&Last27days"D** THEN

Flag=**12**;

Else if EVENT\_DT <= **"&Last28days"D** AND EVENT\_DT >= **"&Last30days"D** THEN

Flag=**11**;

ELSE If EVENT\_DT <= **"&Last31days"D** AND EVENT\_DT >= **"&Last33days"D** THEN

Flag=**10**;

Else if EVENT\_DT <= **"&Last34days"D** AND EVENT\_DT >= **"&Last36days"D** THEN

Flag=**9**;

Else if EVENT\_DT <= **"&Last37days"D** AND EVENT\_DT >= **"&Last39days"D** THEN

Flag=**8**;

Else if EVENT\_DT <= **"&Last40days"D** AND EVENT\_DT >= **"&Last42days"D** THEN

Flag=**7**;

Else if EVENT\_DT <= **"&Last43days"D** AND EVENT\_DT >= **"&Last45days"D** THEN

Flag=**6**;

Else if EVENT\_DT <= **"&Last46days"D** AND EVENT\_DT >= **"&Last48days"D** THEN

Flag=**5**;

Else if EVENT\_DT <= **"&Last49days"D** AND EVENT\_DT >= **"&Last51DAYS"D** THEN

Flag=**4**;

Else if EVENT\_DT <= **"&Last52days"D** AND EVENT\_DT >= **"&Last54days"D** THEN

Flag=**3**;

Else if EVENT\_DT <= **"&Last55days"D** AND EVENT\_DT >= **"&Last57days"D** THEN

Flag=**2**;

Else if EVENT\_DT <= **"&Last58days"D** AND EVENT\_DT >= **"&Last60days"D** THEN

Flag=**1**;

Run;

DATA TEM1\_3DB\_L60;

SET TEM1\_3DB\_L60;

if flag=**0** then

delete;

RUN;

DATA TEM1\_3DB\_L60;

SET TEM1\_3DB\_L60;

if VAR=**.** then

VAR=**0**;

RUN;

PROC MEANS DATA=TEM1\_3DB\_L60 mean nway noprint;

var VAR;

Class SUBS\_KEY flag;

output out=TEM2\_3DB\_L60 mean(VAR)=MEAN\_VAR\_3d;

RUN;

PROC SQL;

CREATE TABLE TEM3\_3DB\_L60 AS SELECT SUBS\_KEY, FLAG,MEAN\_VAR\_3d FROM

TEM2\_3DB\_L60;

QUIT;

PROC SQL;

CREATE TABLE SLOPE AS

SELECT SUBS\_KEY,MEAN\_VAR\_3d,AVG(MEAN\_VAR\_3d) AS AVG\_MEAN\_VAR\_3d,

FLAG, AVG(FLAG) AS AVG\_FLAG,

( MEAN\_VAR\_3d - CALCULATED AVG\_MEAN\_VAR\_3d) AS DIFF\_MEAN\_VAR\_3d,

(FLAG - CALCULATED AVG\_FLAG) AS DIFF\_FLAG,

(CALCULATED DIFF\_MEAN\_VAR\_3d\*CALCULATED DIFF\_FLAG) AS PROD\_MEAN\_VAR\_3d,

(CALCULATED DIFF\_FLAG\*CALCULATED DIFF\_FLAG) AS SQ\_FLAG

FROM TEM3\_3DB\_L60 GROUP BY subs\_Key;

CREATE TABLE SLP1 AS

SELECT SUBS\_KEY , SUM(PROD\_MEAN\_VAR\_3d) AS num, SUM( SQ\_FLAG) AS denom,

(CALCULATED num / CALCULATED denom) AS SLP\_&abt\_var.\_3DB\_L60 FORMAT **8.2** FROM SLOPE

GROUP BY subs\_Key;

QUIT;

PROC SQL;

CREATE TABLE abt1 AS

SELECT T1.\*,

T2.SLP\_&abt\_var.\_3DB\_L60

FROM &Base. T1 LEFT JOIN SLP1 T2 ON (T1.SUBS\_KEY=T2.SUBS\_KEY);

QUIT;

data &base.;

set abt1;

run;

proc datasets lib=work nolist;

delete TEM1\_3DB\_L60 TEM2\_3DB\_L60 TEM3\_3DB\_L60 SLOPE SLP1 ;

quit;

**%MEND**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*COUNT VARS\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*Y/N TAG DATASET USED HERE\*/

**%MACRO** CNT(date1, date2,abt\_var,infile=temp);

PROC SQL;

CREATE TABLE TEM1 AS

SELECT SUBS\_KEY,

SUM(VAR = 'Y') AS CNT\_&ABT\_VAR FROM &infile

WHERE &date1 <=EVENT\_DT<= &date2

GROUP BY SUBS\_KEY;

QUIT;

PROC SQL;

CREATE TABLE INS AS

SELECT T1.\*,

T2.CNT\_&ABT\_VAR

FROM &base. T1 LEFT JOIN TEM1 T2 ON (T1.SUBS\_KEY=T2.SUBS\_KEY);

QUIT;

data &base.;

set ins;

run;

proc datasets lib=work nolist;

delete TEM1 &ABT\_VAR;

quit;

**%MEND**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*DATA\_Usg\_Mb\_total\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*USG\_MB\*/

%let varlist= DATA\_USG\_MB\_HOME\_3G,DATA\_USG\_MB\_ROAM\_3G,DATA\_USG\_MB\_HOME\_2G,

DATA\_USG\_MB\_ROAM\_2G,DATA\_USG\_MB\_HOME\_4G,DATA\_USG\_MB\_ROAM\_4G;

%***create\_file\_varlist***(OUTFILE=adijit.DATA\_Usg\_Mb\_total);

%***SUM\_VINTAGE***(USG\_MB,INFILE=adijit.DATA\_Usg\_Mb\_total);

%***PCT\_CHG***(USG\_MB);

%***SUM***(**"&Last7days"d**, &run\_date,USG\_MB\_L7,INFILE=adijit.DATA\_Usg\_Mb\_total);

%***SUM***(**"&Last15days"d**, &run\_date,USG\_MB\_L15,INFILE=adijit.DATA\_Usg\_Mb\_total);

%***SUM***(**"&Last30days"d**, &run\_date,USG\_MB\_L30,INFILE=adijit.DATA\_Usg\_Mb\_total);

%***SUM***(**"&Last37days"d**, **"&Last8days"d**,USG\_MB\_M2,INFILE=adijit.DATA\_Usg\_Mb\_total);

%***SUM***(**"&Last37days"d**, &run\_date,USG\_MB\_L37,INFILE=adijit.DATA\_Usg\_Mb\_total);

%***SLOPE*** ( INFILE=adijit.DATA\_Usg\_Mb\_total, DATE1=**"&Last30days."D** ,DATE2= &run\_date. , ABT\_VAR=USG\_MB , OUT=USG\_MB\_L30);

%***SLOPE*** ( INFILE=adijit.DATA\_Usg\_Mb\_total, DATE1=**"&Last15days."D** ,DATE2= &run\_date. , ABT\_VAR=USG\_MB , OUT=USG\_MB\_L15);

%***SLOPE*** ( INFILE=adijit.DATA\_Usg\_Mb\_total, DATE1=**"&Last37days."D** ,DATE2= &run\_date. , ABT\_VAR=USG\_MB , OUT=USG\_MB\_L37);

%***SLOPE*** ( INFILE=adijit.DATA\_Usg\_Mb\_total, DATE1=**"&Last67days."D** ,DATE2= &run\_date. , ABT\_VAR=USG\_MB , OUT=USG\_MB\_L67);

%***SD\_4DB\_L36***(USG\_MB,INFILE=adijit.DATA\_Usg\_Mb\_total);

%***SD\_3DB\_L30***(USG\_MB,INFILE=adijit.DATA\_Usg\_Mb\_total);

%***SD\_5DB\_L45***(USG\_MB,INFILE=adijit.DATA\_Usg\_Mb\_total);

%***SD\_7DB\_L28***(USG\_MB,INFILE=adijit.DATA\_Usg\_Mb\_total);

%***SD\_10DB\_L60***(USG\_MB,INFILE=adijit.DATA\_Usg\_Mb\_total);

%***SLP\_3DB\_L30***(USG\_MB,INFILE=adijit.DATA\_Usg\_Mb\_total);

%***SLP\_3DB\_L60***(USG\_MB,INFILE=adijit.DATA\_Usg\_Mb\_total);

%***DELETE\_FILE***(adijit,DATA\_Usg\_Mb\_total);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*3G\_USG\_MB\_ALL\*/

%let varlist= DATA\_USG\_MB\_HOME\_3G,DATA\_USG\_MB\_ROAM\_3G;

%***create\_file\_varlist***(OUTFILE=adijit.USG\_MB\_ALL\_3G);

%***SUM\_VINTAGE***(USG\_MB\_ALL\_3G,INFILE=adijit.USG\_MB\_ALL\_3G);

%***PCT\_CHG***(USG\_MB\_ALL\_3G);

%***SUM***(**"&Last7days"d**, &run\_date,USG\_MB\_ALL\_3G\_L7,INFILE=adijit.USG\_MB\_ALL\_3G);

%***SUM***(**"&Last15days"d**, &run\_date,USG\_MB\_ALL\_3G\_L15,INFILE=adijit.USG\_MB\_ALL\_3G);

%***SUM***(**"&Last30days"d**, &run\_date,USG\_MB\_ALL\_3G\_L30,INFILE=adijit.USG\_MB\_ALL\_3G);

%***SUM***(**"&Last37days"d**, **"&Last8days"d**,USG\_MB\_ALL\_3G\_M2,INFILE=adijit.USG\_MB\_ALL\_3G);

%***SUM***(**"&Last37days"d**, &run\_date,USG\_MB\_ALL\_3G\_L37,INFILE=adijit.USG\_MB\_ALL\_3G);

%***SLOPE*** ( INFILE=adijit.USG\_MB\_ALL\_3G, DATE1=**"&Last30days."D** ,DATE2= &run\_date. , ABT\_VAR=USG\_MB\_ALL\_3G , OUT=USG\_MB\_ALL\_3G\_L30);

%***SLOPE*** ( INFILE=adijit.USG\_MB\_ALL\_3G, DATE1=**"&Last15days."D** ,DATE2= &run\_date. , ABT\_VAR=USG\_MB\_ALL\_3G , OUT=USG\_MB\_ALL\_3G\_L15);

%***SLOPE*** ( INFILE=adijit.USG\_MB\_ALL\_3G, DATE1=**"&Last37days."D** ,DATE2= &run\_date. , ABT\_VAR=USG\_MB\_ALL\_3G , OUT=USG\_MB\_ALL\_3G\_L37);

%***SLOPE*** ( INFILE=adijit.USG\_MB\_ALL\_3G, DATE1=**"&Last67days."D** ,DATE2= &run\_date. , ABT\_VAR=USG\_MB\_ALL\_3G , OUT=USG\_MB\_ALL\_3G\_L67);

%***DELETE\_FILE***(adijit,USG\_MB\_ALL\_3G);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*2G\_USG\_MB\_ALL\*/

%let varlist= DATA\_USG\_MB\_HOME\_2G,DATA\_USG\_MB\_ROAM\_2G;

%***create\_file\_varlist***(OUTFILE=adijit.USG\_MB\_ALL\_2G);

%***SUM\_VINTAGE***(USG\_MB\_ALL\_2G,INFILE=adijit.USG\_MB\_ALL\_2G);

%***PCT\_CHG***(USG\_MB\_ALL\_2G);

%***SUM***(**"&Last7days"d**, &run\_date,USG\_MB\_ALL\_2G\_L7,INFILE=adijit.USG\_MB\_ALL\_2G);

%***SUM***(**"&Last15days"d**, &run\_date,USG\_MB\_ALL\_2G\_L15,INFILE=adijit.USG\_MB\_ALL\_2G);

%***SUM***(**"&Last30days"d**, &run\_date,USG\_MB\_ALL\_2G\_L30,INFILE=adijit.USG\_MB\_ALL\_2G);

%***SUM***(**"&Last37days"d**, **"&Last8days"d**,USG\_MB\_ALL\_2G\_M2,INFILE=adijit.USG\_MB\_ALL\_2G);

%***SUM***(**"&Last37days"d**, &run\_date,USG\_MB\_ALL\_2G\_L37,INFILE=adijit.USG\_MB\_ALL\_2G);

%***SLOPE*** ( INFILE=adijit.USG\_MB\_ALL\_2G, DATE1=**"&Last30days."D** ,DATE2= &run\_date. , ABT\_VAR=USG\_MB\_ALL\_2G , OUT=USG\_MB\_ALL\_2G\_L30);

%***SLOPE*** ( INFILE=adijit.USG\_MB\_ALL\_2G, DATE1=**"&Last15days."D** ,DATE2= &run\_date. , ABT\_VAR=USG\_MB\_ALL\_2G , OUT=USG\_MB\_ALL\_2G\_L15);

%***SLOPE*** ( INFILE=adijit.USG\_MB\_ALL\_2G, DATE1=**"&Last37days."D** ,DATE2= &run\_date. , ABT\_VAR=USG\_MB\_ALL\_2G , OUT=USG\_MB\_ALL\_2G\_L37);

%***SLOPE*** ( INFILE=adijit.USG\_MB\_ALL\_2G, DATE1=**"&Last67days."D** ,DATE2= &run\_date. , ABT\_VAR=USG\_MB\_ALL\_2G , OUT=USG\_MB\_ALL\_2G\_L67);

%***DELETE\_FILE***(adijit,USG\_MB\_ALL\_2G);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*4G\_USG\_MB\_ALL\*/

%let varlist= DATA\_USG\_MB\_HOME\_4G,DATA\_USG\_MB\_ROAM\_4G;

%***create\_file\_varlist***(OUTFILE=adijit.USG\_MB\_ALL\_4G);

%***SUM\_VINTAGE***(USG\_MB\_ALL\_4G,INFILE=adijit.USG\_MB\_ALL\_4G);

%***PCT\_CHG***(USG\_MB\_ALL\_4G);

%***SUM***(**"&Last7days"d**, &run\_date,USG\_MB\_ALL\_4G\_L7,INFILE=adijit.USG\_MB\_ALL\_4G);

%***SUM***(**"&Last15days"d**, &run\_date,USG\_MB\_ALL\_4G\_L15,INFILE=adijit.USG\_MB\_ALL\_4G);

%***SUM***(**"&Last30days"d**, &run\_date,USG\_MB\_ALL\_4G\_L30,INFILE=adijit.USG\_MB\_ALL\_4G);

%***SUM***(**"&Last37days"d**, **"&Last8days"d**,USG\_MB\_ALL\_4G\_M2,INFILE=adijit.USG\_MB\_ALL\_4G);

%***SUM***(**"&Last37days"d**, &run\_date,USG\_MB\_ALL\_4G\_L37,INFILE=adijit.USG\_MB\_ALL\_4G);

%***SLOPE*** ( INFILE=adijit.USG\_MB\_ALL\_4G, DATE1=**"&Last30days."D** ,DATE2= &run\_date. , ABT\_VAR=USG\_MB\_ALL\_4G , OUT=USG\_MB\_ALL\_4G\_L30);

%***SLOPE*** ( INFILE=adijit.USG\_MB\_ALL\_4G, DATE1=**"&Last15days."D** ,DATE2= &run\_date. , ABT\_VAR=USG\_MB\_ALL\_4G , OUT=USG\_MB\_ALL\_4G\_L15);

%***SLOPE*** ( INFILE=adijit.USG\_MB\_ALL\_4G, DATE1=**"&Last37days."D** ,DATE2= &run\_date. , ABT\_VAR=USG\_MB\_ALL\_4G , OUT=USG\_MB\_ALL\_4G\_L37);

%***SLOPE*** ( INFILE=adijit.USG\_MB\_ALL\_4G, DATE1=**"&Last67days."D** ,DATE2= &run\_date. , ABT\_VAR=USG\_MB\_ALL\_4G , OUT=USG\_MB\_ALL\_4G\_L67);

%***DELETE\_FILE***(adijit,USG\_MB\_ALL\_4G);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*DATA\_Usg\_REV\_total\*/

/\*DATA\_REV\*/

%let varlist=DATA\_USG\_REV\_HOME\_3G,DATA\_USG\_REV\_ROAM\_3G,DATA\_USG\_REV\_HOME\_2G,

DATA\_USG\_REV\_ROAM\_2G,DATA\_USG\_REV\_HOME\_4G,DATA\_USG\_REV\_ROAM\_4G;

%***create\_file\_varlist***(OUTFILE=adijit.DATA\_USG\_REV);

%***SUM\_VINTAGE***(DATA\_REV,INFILE=adijit.DATA\_USG\_REV);

%***PCT\_CHG***(DATA\_REV);

%***SUM***(**"&Last7days"d**, &run\_date,DATA\_REV\_L7,INFILE=adijit.DATA\_USG\_REV);

%***SUM***(**"&Last15days"d**, &run\_date,DATA\_REV\_L15,INFILE=adijit.DATA\_USG\_REV);

%***SUM***(**"&Last30days"d**, &run\_date,DATA\_REV\_L30,INFILE=adijit.DATA\_USG\_REV);

%***SUM***(**"&Last37days"d**, **"&Last8days"d**,DATA\_REV\_L7,INFILE=adijit.DATA\_USG\_REV);

%***SUM***(**"&Last37days"d**, &run\_date,DATA\_REV\_L37,INFILE=adijit.DATA\_USG\_REV);

%***SLOPE*** ( INFILE=adijit.DATA\_USG\_REV, DATE1=**"&Last30days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_REV , OUT=DATA\_REV\_L30);

%***SLOPE*** ( INFILE=adijit.DATA\_USG\_REV, DATE1=**"&Last15days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_REV , OUT=DATA\_REV\_L15);

%***SLOPE*** ( INFILE=adijit.DATA\_USG\_REV, DATE1=**"&Last37days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_REV , OUT=DATA\_REV\_L37);

%***SLOPE*** ( INFILE=adijit.DATA\_USG\_REV, DATE1=**"&Last67days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_REV , OUT=DATA\_REV\_L67);

%***SD\_4DB\_L36***(DATA\_REV,INFILE=adijit.DATA\_USG\_REV);

%***SD\_3DB\_L30***(DATA\_REV,INFILE=adijit.DATA\_USG\_REV);

%***SD\_5DB\_L45***(DATA\_REV,INFILE=adijit.DATA\_USG\_REV);

%***SD\_7DB\_L28***(DATA\_REV,INFILE=adijit.DATA\_USG\_REV);

%***SLP\_3DB\_L30***(DATA\_REV,INFILE=adijit.DATA\_USG\_REV);

%***SLP\_3DB\_L60***(DATA\_REV,INFILE=adijit.DATA\_USG\_REV);

%***DELETE\_FILE***(adijit,DATA\_USG\_REV);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*3G\_DATA\_REV\_ALL\*/

%let varlist=DATA\_USG\_REV\_HOME\_3G,DATA\_USG\_REV\_ROAM\_3G;

%***create\_file\_varlist***(OUTFILE=adijit.DATA\_REV\_ALL\_3G);

%***SUM\_VINTAGE***(DATA\_REV\_ALL\_3G,INFILE=adijit.DATA\_REV\_ALL\_3G);

%***PCT\_CHG***(DATA\_REV\_ALL\_3G);

%***SUM***(**"&Last7days"d**, &run\_date,DATA\_REV\_ALL\_3G\_L7,INFILE=adijit.DATA\_REV\_ALL\_3G);

%***SUM***(**"&Last15days"d**, &run\_date,DATA\_REV\_ALL\_3G\_L15,INFILE=adijit.DATA\_REV\_ALL\_3G);

%***SUM***(**"&Last30days"d**, &run\_date,DATA\_REV\_ALL\_3G\_L30,INFILE=adijit.DATA\_REV\_ALL\_3G);

%***SUM***(**"&Last37days"d**, **"&Last8days"d**,DATA\_REV\_ALL\_3G\_M2,INFILE=adijit.DATA\_REV\_ALL\_3G);

%***SUM***(**"&Last37days"d**, &run\_date,DATA\_REV\_ALL\_3G\_L37,INFILE=adijit.DATA\_REV\_ALL\_3G);

%***SLOPE*** ( INFILE=adijit.DATA\_REV\_ALL\_3G, DATE1=**"&Last30days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_REV\_ALL\_3G , OUT=DATA\_REV\_ALL\_3G\_L30);

%***SLOPE*** ( INFILE=adijit.DATA\_REV\_ALL\_3G, DATE1=**"&Last15days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_REV\_ALL\_3G , OUT=DATA\_REV\_ALL\_3G\_L15);

%***SLOPE*** ( INFILE=adijit.DATA\_REV\_ALL\_3G, DATE1=**"&Last37days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_REV\_ALL\_3G , OUT=DATA\_REV\_ALL\_3G\_L37);

%***SLOPE*** ( INFILE=adijit.DATA\_REV\_ALL\_3G, DATE1=**"&Last67days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_REV\_ALL\_3G , OUT=DATA\_REV\_ALL\_3G\_L67);

%***DELETE\_FILE***(adijit,DATA\_REV\_ALL\_3G);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*2G\_DATA\_REV\_ALL\*/

%let varlist=DATA\_USG\_REV\_HOME\_2G,DATA\_USG\_REV\_ROAM\_2G;

%***create\_file\_varlist***(OUTFILE=adijit.DATA\_REV\_ALL\_2G);

%***SUM\_VINTAGE***(DATA\_REV\_ALL\_2G,INFILE=adijit.DATA\_REV\_ALL\_2G);

%***PCT\_CHG***(DATA\_REV\_ALL\_2G);

%***SUM***(**"&Last7days"d**, &run\_date,DATA\_REV\_ALL\_2G\_L7,INFILE=adijit.DATA\_REV\_ALL\_2G);

%***SUM***(**"&Last15days"d**, &run\_date,DATA\_REV\_ALL\_2G\_L15,INFILE=adijit.DATA\_REV\_ALL\_2G);

%***SUM***(**"&Last30days"d**, &run\_date,DATA\_REV\_ALL\_2G\_L30,INFILE=adijit.DATA\_REV\_ALL\_2G);

%***SUM***(**"&Last37days"d**, **"&Last8days"d**,DATA\_REV\_ALL\_2G\_M2,INFILE=adijit.DATA\_REV\_ALL\_2G);

%***SUM***(**"&Last37days"d**, &run\_date,DATA\_REV\_ALL\_2G\_L37,INFILE=adijit.DATA\_REV\_ALL\_2G);

%***SLOPE*** ( INFILE=adijit.DATA\_REV\_ALL\_2G, DATE1=**"&Last30days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_REV\_ALL\_2G , OUT=DATA\_REV\_ALL\_2G\_L30);

%***SLOPE*** ( INFILE=adijit.DATA\_REV\_ALL\_2G, DATE1=**"&Last15days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_REV\_ALL\_2G , OUT=DATA\_REV\_ALL\_2G\_L15);

%***SLOPE*** ( INFILE=adijit.DATA\_REV\_ALL\_2G, DATE1=**"&Last37days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_REV\_ALL\_2G , OUT=DATA\_REV\_ALL\_2G\_L37);

%***SLOPE*** ( INFILE=adijit.DATA\_REV\_ALL\_2G, DATE1=**"&Last67days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_REV\_ALL\_2G , OUT=DATA\_REV\_ALL\_2G\_L67);

%***DELETE\_FILE***(adijit,DATA\_REV\_ALL\_2G);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*4G\_DATA\_REV\_ALL\*/

%let varlist=DATA\_USG\_REV\_HOME\_4G,DATA\_USG\_REV\_ROAM\_4G;

%***create\_file\_varlist***(OUTFILE=adijit.DATA\_REV\_ALL\_4G);

%***SUM\_VINTAGE***(DATA\_REV\_ALL\_4G,INFILE=adijit.DATA\_REV\_ALL\_4G);

%***PCT\_CHG***(DATA\_REV\_ALL\_4G);

%***SUM***(**"&Last7days"d**, &run\_date,DATA\_REV\_ALL\_4G\_L7,INFILE=adijit.DATA\_REV\_ALL\_4G);

%***SUM***(**"&Last15days"d**, &run\_date,DATA\_REV\_ALL\_4G\_L15,INFILE=adijit.DATA\_REV\_ALL\_4G);

%***SUM***(**"&Last30days"d**, &run\_date,DATA\_REV\_ALL\_4G\_L30,INFILE=adijit.DATA\_REV\_ALL\_4G);

%***SUM***(**"&Last37days"d**, **"&Last8days"d**,DATA\_REV\_ALL\_4G\_M2,INFILE=adijit.DATA\_REV\_ALL\_4G);

%***SUM***(**"&Last37days"d**, &run\_date,DATA\_REV\_ALL\_4G\_L37,INFILE=adijit.DATA\_REV\_ALL\_4G);

%***SLOPE*** ( INFILE=adijit.DATA\_REV\_ALL\_4G, DATE1=**"&Last30days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_REV\_ALL\_4G , OUT=DATA\_REV\_ALL\_4G\_L30);

%***SLOPE*** ( INFILE=adijit.DATA\_REV\_ALL\_4G, DATE1=**"&Last15days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_REV\_ALL\_4G , OUT=DATA\_REV\_ALL\_4G\_L15);

%***SLOPE*** ( INFILE=adijit.DATA\_REV\_ALL\_4G, DATE1=**"&Last37days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_REV\_ALL\_4G , OUT=DATA\_REV\_ALL\_4G\_L37);

%***SLOPE*** ( INFILE=adijit.DATA\_REV\_ALL\_4G, DATE1=**"&Last67days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_REV\_ALL\_4G , OUT=DATA\_REV\_ALL\_4G\_L67);

%***DELETE\_FILE***(adijit,DATA\_REV\_ALL\_4G);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*DURATION\*/

%let varlist=DATA\_USG\_DURATION\_HOME\_2G,DATA\_USG\_DURATION\_ROAM\_2G,DATA\_USG\_DURATION\_HOME\_3G,

DATA\_USG\_DURATION\_ROAM\_3G,DATA\_USG\_DURATION\_HOME\_4G,DATA\_USG\_DURATION\_ROAM\_4G;

%***create\_file\_varlist***(OUTFILE=adijit.DATA\_TOT\_DUR);

%***SUM\_VINTAGE***(DATA\_TOT\_DUR,INFILE=adijit.DATA\_TOT\_DUR);

%***PCT\_CHG***(DATA\_TOT\_DUR);

%***SUM***(**"&Last7days"d**, &run\_date,DATA\_TOT\_DUR\_L7,INFILE=adijit.DATA\_TOT\_DUR);

%***SUM***(**"&Last15days"d**, &run\_date,DATA\_TOT\_DUR\_L15,INFILE=adijit.DATA\_TOT\_DUR);

%***SUM***(**"&Last30days"d**, &run\_date,DATA\_TOT\_DUR\_L30,INFILE=adijit.DATA\_TOT\_DUR);

%***SUM***(**"&Last37days"d**, **"&Last8days"d**,DATA\_TOT\_DUR\_M2,INFILE=adijit.DATA\_TOT\_DUR);

%***SUM***(**"&Last37days"d**, &run\_date,DATA\_TOT\_DUR\_L37,INFILE=adijit.DATA\_TOT\_DUR);

%***SLOPE*** ( INFILE=adijit.DATA\_TOT\_DUR, DATE1=**"&Last30days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_TOT\_DUR , OUT=DATA\_TOT\_DUR\_L30);

%***SLOPE*** ( INFILE=adijit.DATA\_TOT\_DUR, DATE1=**"&Last15days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_TOT\_DUR , OUT=DATA\_TOT\_DUR\_L15);

%***SLOPE*** ( INFILE=adijit.DATA\_TOT\_DUR, DATE1=**"&Last37days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_TOT\_DUR , OUT=DATA\_TOT\_DUR\_L37);

%***SLOPE*** ( INFILE=adijit.DATA\_TOT\_DUR, DATE1=**"&Last67days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_TOT\_DUR , OUT=DATA\_TOT\_DUR\_L67);

%***DELETE\_FILE***(adijit,DATA\_TOT\_DUR);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*DATA\_USG\_2G\_DUR\*/

%let varlist=DATA\_USG\_DURATION\_HOME\_2G,DATA\_USG\_DURATION\_ROAM\_2G;

%***create\_file\_varlist***(OUTFILE=adijit.DATA\_2G\_DUR\_ALL);

%***SUM\_VINTAGE***(DATA\_DUR\_ALL\_2G,INFILE=adijit.DATA\_2G\_DUR\_ALL);

%***PCT\_CHG***(DATA\_DUR\_ALL\_2G);

%***SUM***(**"&Last7days"d**, &run\_date,DATA\_DUR\_ALL\_2G\_L7,INFILE=adijit.DATA\_2G\_DUR\_ALL);

%***SUM***(**"&Last15days"d**, &run\_date,DATA\_DUR\_ALL\_2G\_L15,INFILE=adijit.DATA\_2G\_DUR\_ALL);

%***SUM***(**"&Last30days"d**, &run\_date,DATA\_DUR\_ALL\_2G\_L30,INFILE=adijit.DATA\_2G\_DUR\_ALL);

%***SUM***(**"&Last37days"d**, **"&Last8days"d**,DATA\_DUR\_ALL\_2G\_M2,INFILE=adijit.DATA\_2G\_DUR\_ALL);

%***SUM***(**"&Last37days"d**, &run\_date,DATA\_DUR\_ALL\_2G\_L37,INFILE=adijit.DATA\_2G\_DUR\_ALL);

%***SLOPE*** ( INFILE=adijit.DATA\_2G\_DUR\_ALL, DATE1=**"&Last30days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_DUR\_ALL\_2G , OUT=DATA\_DUR\_ALL\_2G\_L30);

%***SLOPE*** ( INFILE=adijit.DATA\_2G\_DUR\_ALL, DATE1=**"&Last15days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_DUR\_ALL\_2G , OUT=DATA\_DUR\_ALL\_2G\_L15);

%***SLOPE*** ( INFILE=adijit.DATA\_2G\_DUR\_ALL, DATE1=**"&Last37days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_DUR\_ALL\_2G , OUT=DATA\_DUR\_ALL\_2G\_L37);

%***SLOPE*** ( INFILE=adijit.DATA\_2G\_DUR\_ALL, DATE1=**"&Last67days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_DUR\_ALL\_2G , OUT=DATA\_DUR\_ALL\_2G\_L67);

%***DELETE\_FILE***(adijit,DATA\_2G\_DUR\_ALL);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*DATA\_USG\_3G\_DUR\*/

%let varlist=DATA\_USG\_DURATION\_HOME\_3G,DATA\_USG\_DURATION\_ROAM\_3G;

%***create\_file\_varlist***(OUTFILE=adijit.DATA\_3G\_DUR\_ALL);

%***SUM\_VINTAGE***(DATA\_DUR\_ALL\_3G,INFILE=adijit.DATA\_3G\_DUR\_ALL);

%***PCT\_CHG***(DATA\_DUR\_ALL\_3G);

%***SUM***(**"&Last7days"d**, &run\_date,DATA\_DUR\_ALL\_3G\_L7,INFILE=adijit.DATA\_3G\_DUR\_ALL);

%***SUM***(**"&Last15days"d**, &run\_date,DATA\_DUR\_ALL\_3G\_L15,INFILE=adijit.DATA\_3G\_DUR\_ALL);

%***SUM***(**"&Last30days"d**, &run\_date,DATA\_DUR\_ALL\_3G\_L30,INFILE=adijit.DATA\_3G\_DUR\_ALL);

%***SUM***(**"&Last37days"d**, **"&Last8days"d**,DATA\_DUR\_ALL\_3G\_M2,INFILE=adijit.DATA\_3G\_DUR\_ALL);

%***SUM***(**"&Last37days"d**, &run\_date,DATA\_DUR\_ALL\_3G\_L37,INFILE=adijit.DATA\_3G\_DUR\_ALL);

%***SLOPE*** ( INFILE=adijit.DATA\_3G\_DUR\_ALL, DATE1=**"&Last30days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_DUR\_ALL\_3G , OUT=DATA\_DUR\_ALL\_3G\_L30);

%***SLOPE*** ( INFILE=adijit.DATA\_3G\_DUR\_ALL, DATE1=**"&Last15days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_DUR\_ALL\_3G , OUT=DATA\_DUR\_ALL\_3G\_L15);

%***SLOPE*** ( INFILE=adijit.DATA\_3G\_DUR\_ALL, DATE1=**"&Last37days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_DUR\_ALL\_3G , OUT=DATA\_DUR\_ALL\_3G\_L37);

%***SLOPE*** ( INFILE=adijit.DATA\_3G\_DUR\_ALL, DATE1=**"&Last67days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_DUR\_ALL\_3G , OUT=DATA\_DUR\_ALL\_3G\_L67);

%***DELETE\_FILE***(adijit,DATA\_3G\_DUR\_ALL);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*DATA\_USG\_4G\_DUR\*/

%let varlist=DATA\_USG\_DURATION\_HOME\_4G,DATA\_USG\_DURATION\_ROAM\_4G;

%***create\_file\_varlist***(OUTFILE=adijit.DATA\_4G\_DUR\_ALL);

%***SUM\_VINTAGE***(DATA\_DUR\_ALL\_4G,INFILE=adijit.DATA\_4G\_DUR\_ALL);

%***PCT\_CHG***(DATA\_DUR\_ALL\_4G);

%***SUM***(**"&Last7days"d**, &run\_date,DATA\_DUR\_ALL\_4G\_L7,INFILE=adijit.DATA\_4G\_DUR\_ALL);

%***SUM***(**"&Last15days"d**, &run\_date,DATA\_DUR\_ALL\_4G\_L15,INFILE=adijit.DATA\_4G\_DUR\_ALL);

%***SUM***(**"&Last30days"d**, &run\_date,DATA\_DUR\_ALL\_4G\_L30,INFILE=adijit.DATA\_4G\_DUR\_ALL);

%***SUM***(**"&Last37days"d**, **"&Last8days"d**,DATA\_DUR\_ALL\_4G\_M2,INFILE=adijit.DATA\_4G\_DUR\_ALL);

%***SUM***(**"&Last37days"d**, &run\_date,DATA\_DUR\_ALL\_4G\_L37,INFILE=adijit.DATA\_4G\_DUR\_ALL);

%***SLOPE*** ( INFILE=adijit.DATA\_4G\_DUR\_ALL, DATE1=**"&Last30days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_DUR\_ALL\_4G , OUT=DATA\_DUR\_ALL\_4G\_L30);

%***SLOPE*** ( INFILE=adijit.DATA\_4G\_DUR\_ALL, DATE1=**"&Last15days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_DUR\_ALL\_4G , OUT=DATA\_DUR\_ALL\_4G\_L15);

%***SLOPE*** ( INFILE=adijit.DATA\_4G\_DUR\_ALL, DATE1=**"&Last37days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_DUR\_ALL\_4G , OUT=DATA\_DUR\_ALL\_4G\_L37);

%***SLOPE*** ( INFILE=adijit.DATA\_4G\_DUR\_ALL, DATE1=**"&Last67days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_DUR\_ALL\_4G , OUT=DATA\_DUR\_ALL\_4G\_L67);

%***DELETE\_FILE***(adijit,DATA\_4G\_DUR\_ALL);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*SESSIONS\*/

%let varlist=DATA\_USG\_SESSION\_HOME\_2G\_CNT,DATA\_USG\_SESSION\_ROAM\_2G\_CNT,DATA\_USG\_SESSION\_HOME\_3G\_CNT,DATA\_USG\_SESSION\_ROAM\_3G\_CNT,

DATA\_USG\_SESSION\_ROAM\_4G\_CNT,DATA\_USG\_SESSION\_HOME\_4G\_CNT;

%***create\_file\_varlist***(OUTFILE=adijit.DATA\_CNT\_SSN);

%***SUM\_VINTAGE***(DATA\_CNT\_SSN,INFILE=adijit.DATA\_CNT\_SSN);

%***PCT\_CHG***(DATA\_CNT\_SSN);

%***SUM***(**"&Last7days"d**, &run\_date,DATA\_CNT\_SSN\_L7,INFILE=adijit.DATA\_CNT\_SSN);

%***SUM***(**"&Last15days"d**, &run\_date,DATA\_CNT\_SSN\_L15,INFILE=adijit.DATA\_CNT\_SSN);

%***SUM***(**"&Last30days"d**, &run\_date,DATA\_CNT\_SSN\_L30,INFILE=adijit.DATA\_CNT\_SSN);

%***SUM***(**"&Last37days"d**, **"&Last8days"d**,DATA\_CNT\_SSN\_M2,INFILE=adijit.DATA\_CNT\_SSN);

%***SUM***(**"&Last37days"d**, &run\_date,DATA\_CNT\_SSN\_L37,INFILE=adijit.DATA\_CNT\_SSN);

%***SLOPE*** ( INFILE=adijit.DATA\_CNT\_SSN, DATE1=**"&Last30days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_CNT\_SSN , OUT=DATA\_CNT\_SSN\_L30);

%***SLOPE*** ( INFILE=adijit.DATA\_CNT\_SSN, DATE1=**"&Last15days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_CNT\_SSN , OUT=DATA\_CNT\_SSN\_L15);

%***SLOPE*** ( INFILE=adijit.DATA\_CNT\_SSN, DATE1=**"&Last37days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_CNT\_SSN , OUT=DATA\_CNT\_SSN\_L37);

%***SLOPE*** ( INFILE=adijit.DATA\_CNT\_SSN, DATE1=**"&Last67days."D** ,DATE2= &run\_date. , ABT\_VAR=DATA\_CNT\_SSN , OUT=DATA\_CNT\_SSN\_L67);

%***DELETE\_FILE***(adijit,DATA\_CNT\_SSN);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*proportion\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*proportion data usg\*/

**%MACRO** ***create\_file***;

PROC SQL;

CREATE TABLE TEMP AS SELECT

SUBS\_KEY,

EVENT\_DT,

SUM(DATA\_USG\_MB\_HOME\_3G,DATA\_USG\_MB\_ROAM\_3G,DATA\_USG\_MB\_HOME\_2G,DATA\_USG\_MB\_roam\_2G,

DATA\_USG\_MB\_HOME\_4G,DATA\_USG\_MB\_roam\_4G,**0**) AS TOT\_DATA\_USG\_MB,

SUM(DATA\_USG\_MB\_HOME\_3G,DATA\_USG\_MB\_ROAM\_3G,**0**)AS TOT\_DATA\_USG\_MB\_3G,

SUM(DATA\_USG\_MB\_HOME\_2G,DATA\_USG\_MB\_ROAM\_2G,**0**)AS TOT\_DATA\_USG\_MB\_2G,

SUM(DATA\_USG\_MB\_HOME\_4G,DATA\_USG\_MB\_ROAM\_4G,**0**)AS TOT\_DATA\_USG\_MB\_4G,

SUM(DATA\_USG\_MB\_HOME\_3G,**0**)AS TOT\_DATA\_USG\_MB\_HOME\_3G,

SUM(DATA\_USG\_MB\_HOME\_2G,**0**)AS TOT\_DATA\_USG\_MB\_HOME\_2G,

SUM(DATA\_USG\_MB\_HOME\_4G,**0**)AS TOT\_DATA\_USG\_MB\_HOME\_4G

FROM &rawdata.

Order by SUBS\_KEY, EVENT\_DT;

QUIT;

**%MEND**;

**%MACRO** PROP\_USG\_MB(date1, date2, out);

PROC SQL;

CREATE TABLE TEM1 as select

SUBS\_KEY,

SUM(TOT\_DATA\_USG\_MB) AS TOT\_DATA\_USG,

SUM(TOT\_DATA\_USG\_MB\_3G) AS TOT\_DATA\_USG\_3G,

SUM(TOT\_DATA\_USG\_MB\_2G) AS TOT\_DATA\_USG\_2G,

SUM(TOT\_DATA\_USG\_MB\_4G) AS TOT\_DATA\_USG\_4G,

SUM(TOT\_DATA\_USG\_MB\_HOME\_3G) AS TOT\_DATA\_USG\_HOME\_3G,

SUM(TOT\_DATA\_USG\_MB\_HOME\_2G) AS TOT\_DATA\_USG\_HOME\_2G,

SUM(TOT\_DATA\_USG\_MB\_HOME\_4G) AS TOT\_DATA\_USG\_HOME\_4G

FROM TEMP

WHERE (&date1. <= EVENT\_DT <= &date2. )

GROUP BY SUBS\_KEY;

QUIT;

DATA TEM2;

SET TEM1;

IF TOT\_DATA\_USG\_2G=**0** THEN PROP\_HOME\_USG\_TOT\_USG\_2G\_&out.=**0**;

ELSE PROP\_HOME\_USG\_TOT\_USG\_2G\_&out.=TOT\_DATA\_USG\_HOME\_2G/TOT\_DATA\_USG\_2G;

IF TOT\_DATA\_USG\_3G=**0** THEN PROP\_HOME\_USG\_TOT\_USG\_3G\_&out.=**0**;

ELSE PROP\_HOME\_USG\_TOT\_USG\_3G\_&out.=TOT\_DATA\_USG\_HOME\_3G/TOT\_DATA\_USG\_3G;

IF TOT\_DATA\_USG\_4G=**0** THEN PROP\_HOME\_USG\_TOT\_USG\_4G\_&out.=**0**;

ELSE PROP\_HOME\_USG\_TOT\_USG\_4G\_&out.=TOT\_DATA\_USG\_HOME\_4G/TOT\_DATA\_USG\_4G;

IF TOT\_DATA\_USG=**0** THEN PROP\_2G\_USG\_TOT\_USG\_&out.=**0**;

ELSE PROP\_2G\_USG\_TOT\_USG\_&out.=TOT\_DATA\_USG\_2G/TOT\_DATA\_USG;

IF TOT\_DATA\_USG=**0** THEN PROP\_3G\_USG\_TOT\_USG\_&out.=**0**;

ELSE PROP\_3G\_USG\_TOT\_USG\_&out.=TOT\_DATA\_USG\_3G/TOT\_DATA\_USG;

IF TOT\_DATA\_USG=**0** THEN PROP\_4G\_USG\_TOT\_USG\_&out.=**0**;

ELSE PROP\_4G\_USG\_TOT\_USG\_&out.=TOT\_DATA\_USG\_4G/TOT\_DATA\_USG;

RUN;

PROC SQL;

CREATE TABLE abt1 AS

SELECT T1.\*,

T2.PROP\_HOME\_USG\_TOT\_USG\_2G\_&out.,

T2.PROP\_HOME\_USG\_TOT\_USG\_3G\_&out.,

T2.PROP\_HOME\_USG\_TOT\_USG\_4G\_&out.,

T2.PROP\_2G\_USG\_TOT\_USG\_&out.,

T2.PROP\_3G\_USG\_TOT\_USG\_&out.,

T2.PROP\_4G\_USG\_TOT\_USG\_&out.

FROM &base. T1 LEFT JOIN TEM2 T2 ON (T1.SUBS\_KEY=T2.SUBS\_KEY);

QUIT;

Data &base.;

set abt1;

run;

proc datasets lib=work nolist;

delete TEM1 ABT1;

quit;

**%MEND**;

%***create\_file***;

%***PROP\_USG\_MB***(**"&Last30days."d**, &run\_date., L30);

%***PROP\_USG\_MB***(**"&Last37days."d**, &run\_date., L37);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*proportion usg rev\*/

**%MACRO** ***create\_file***;

PROC SQL;

CREATE TABLE REV AS SELECT

SUBS\_KEY,

EVENT\_DT,

SUM(DATA\_USG\_REV\_HOME\_3G,DATA\_USG\_REV\_ROAM\_3G,DATA\_USG\_REV\_HOME\_2G,DATA\_USG\_REV\_roam\_2G,

DATA\_USG\_REV\_HOME\_4G,DATA\_USG\_REV\_roam\_4G,**0**) AS TOT\_DATA\_USG\_REV,

SUM(DATA\_USG\_REV\_HOME\_3G,DATA\_USG\_REV\_ROAM\_3G,**0**)AS TOT\_DATA\_USG\_REV\_3G,

SUM(DATA\_USG\_REV\_HOME\_2G,DATA\_USG\_REV\_ROAM\_2G,**0**)AS TOT\_DATA\_USG\_REV\_2G,

SUM(DATA\_USG\_REV\_HOME\_4G,DATA\_USG\_REV\_ROAM\_4G,**0**)AS TOT\_DATA\_USG\_REV\_4G,

SUM(DATA\_USG\_REV\_HOME\_3G,**0**)AS TOT\_DATA\_USG\_REV\_HOME\_3G,

SUM(DATA\_USG\_REV\_HOME\_2G,**0**)AS TOT\_DATA\_USG\_REV\_HOME\_2G,

SUM(DATA\_USG\_REV\_HOME\_4G,**0**)AS TOT\_DATA\_USG\_REV\_HOME\_4G

FROM &rawdata.

Order by SUBS\_KEY, EVENT\_DT;

QUIT;

**%MEND**;

**%MACRO** PROP\_USG\_REV(date1, date2, out);

PROC SQL;

CREATE TABLE REV1 as select

SUBS\_KEY,

SUM(TOT\_DATA\_USG\_REV) AS TOT\_DATA\_REV,

SUM(TOT\_DATA\_USG\_REV\_3G) AS TOT\_DATA\_REV\_3G,

SUM(TOT\_DATA\_USG\_REV\_2G) AS TOT\_DATA\_REV\_2G,

SUM(TOT\_DATA\_USG\_REV\_4G) AS TOT\_DATA\_REV\_4G,

SUM(TOT\_DATA\_USG\_REV\_HOME\_3G) AS TOT\_DATA\_REV\_HOME\_3G,

SUM(TOT\_DATA\_USG\_REV\_HOME\_2G) AS TOT\_DATA\_REV\_HOME\_2G,

SUM(TOT\_DATA\_USG\_REV\_HOME\_4G) AS TOT\_DATA\_REV\_HOME\_4G

FROM REV

WHERE (&date1. <= EVENT\_DT <= &date2. )

GROUP BY SUBS\_KEY;

QUIT;

DATA REV2;

SET REV1;

IF TOT\_DATA\_REV\_2G=**0** THEN PROP\_HOME\_REV\_TOT\_REV\_2G\_&out.=**0**;

ELSE PROP\_HOME\_REV\_TOT\_REV\_2G\_&out.=TOT\_DATA\_REV\_HOME\_2G/TOT\_DATA\_REV\_2G;

IF TOT\_DATA\_REV\_3G=**0** THEN PROP\_HOME\_REV\_TOT\_REV\_3G\_&out.=**0**;

ELSE PROP\_HOME\_REV\_TOT\_REV\_3G\_&out.=TOT\_DATA\_REV\_HOME\_3G/TOT\_DATA\_REV\_3G;

IF TOT\_DATA\_REV\_4G=**0** THEN PROP\_HOME\_REV\_TOT\_REV\_4G\_&out.=**0**;

ELSE PROP\_HOME\_REV\_TOT\_REV\_4G\_&out.=TOT\_DATA\_REV\_HOME\_4G/TOT\_DATA\_REV\_4G;

IF TOT\_DATA\_REV=**0** THEN PROP\_2G\_REV\_TOT\_REV\_&out.=**0**;

ELSE PROP\_2G\_REV\_TOT\_REV\_&out.=TOT\_DATA\_REV\_2G/TOT\_DATA\_REV;

IF TOT\_DATA\_REV=**0** THEN PROP\_3G\_REV\_TOT\_REV\_&out.=**0**;

ELSE PROP\_3G\_REV\_TOT\_REV\_&out.=TOT\_DATA\_REV\_3G/TOT\_DATA\_REV;

IF TOT\_DATA\_REV=**0** THEN PROP\_4G\_REV\_TOT\_REV\_&out.=**0**;

ELSE PROP\_4G\_REV\_TOT\_REV\_&out.=TOT\_DATA\_REV\_4G/TOT\_DATA\_REV;

RUN;

PROC SQL;

CREATE TABLE abt2 AS

SELECT T1.\*,

T2.PROP\_HOME\_REV\_TOT\_REV\_2G\_&out.,

T2.PROP\_HOME\_REV\_TOT\_REV\_3G\_&out.,

T2.PROP\_HOME\_REV\_TOT\_REV\_4G\_&out.,

T2.PROP\_2G\_REV\_TOT\_REV\_&out.,

T2.PROP\_3G\_REV\_TOT\_REV\_&out.,

T2.PROP\_4G\_REV\_TOT\_REV\_&out.

FROM &base. T1 LEFT JOIN REV2 T2 ON (T1.SUBS\_KEY=T2.SUBS\_KEY);

QUIT;

Data &base.;

set abt2;

run;

proc datasets lib=work nolist;

delete REV1 ABT2;

quit;

**%MEND**;

%***create\_file***;

%***PROP\_USG\_REV***(**"&Last30days."d**, &run\_date., L30);

%***PROP\_USG\_REV***(**"&Last37days."d**, &run\_date., L37);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*AVG DAY/NIGHT DATA USG ,PROPORTION\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

**%MACRO** MOU(OUT=,DATE1=,DATE2=);

PROC SQL;

CREATE TABLE USAGE\_DAY\_NIGHT\_&OUT AS

SELECT SUBS\_KEY,

SUM(SUM(DATA\_USG\_MB\_SLB\_6,DATA\_USG\_MB\_SLB\_1,**0**)) AS NIGHT\_USAGE\_&out,

SUM(SUM(DATA\_USG\_MB\_SLB\_2,DATA\_USG\_MB\_SLB\_3,DATA\_USG\_MB\_SLB\_4,DATA\_USG\_MB\_SLB\_5,**0**)) AS DAY\_USAGE\_&out,

SUM(CALCULATED NIGHT\_USAGE\_&out, CALCULATED DAY\_USAGE\_&out) AS TOT\_USAGE\_&out,

(CALCULATED NIGHT\_USAGE\_&out/ &out ) AS AVG\_NIG\_USG\_&out FORMAT **8.2**,

(CALCULATED DAY\_USAGE\_&out/ &out ) AS AVG\_DAY\_USG\_&out FORMAT **8.2**

FROM &rawdata.

WHERE &DATE1 <= EVENT\_DT <= &DATE2 GROUP BY SUBS\_KEY ORDER BY SUBS\_KEY;

QUIT;

DATA USAGE1\_&out;

SET USAGE\_DAY\_NIGHT\_&OUT;

IF TOT\_USAGE\_&out=**0** THEN PROP\_NIG\_USG\_TOT\_USG\_MB\_&out.=**0**;

ELSE PROP\_NIG\_USG\_TOT\_USG\_MB\_&out=NIGHT\_USAGE\_&out/TOT\_USAGE\_&out;

run;

DATA usage2\_&out (compress=yes);

SET USAGE1\_&out;

AVG\_NIG\_USG\_L&out = sum(AVG\_NIG\_USG\_&out,**0**);

AVG\_DAY\_USG\_L&out = sum(AVG\_DAY\_USG\_&out,**0**);

Run;

**%MEND**;

%***MOU***(OUT=**30**,DATE1=**"&LAST30DAYS"D**,DATE2= &RUN\_DATE);

%***MOU***(OUT=**37**,DATE1=**"&LAST37DAYS"D**,DATE2= &RUN\_DATE);

**%MACRO** NIGHT\_MOU(OUT=);

PROC SQL;

create table temp1(compress=yes) as

select t1.\*, t2.AVG\_NIG\_USG\_L&out, t2.AVG\_DAY\_USG\_L&out, t2.PROP\_NIG\_USG\_TOT\_USG\_MB\_&out

FROM &base. t1 LEFT JOIN usage2\_&out t2 ON (t1.SUBS\_KEY = t2.SUBS\_KEY);

quit;

data &base.;

set temp1;

run;

**%MEND**;

%***NIGHT\_MOU***(OUT=**30**);

%***NIGHT\_MOU***(OUT=**37**);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*RATIO OF DATA REVENUE TO TOTAL DATA USG IN MB\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

**%MACRO** RR(OUT=,DATE1=,DATE2=);

PROC SQL;

CREATE TABLE RAT\_DATA\_REV\_MB\_&OUT AS

SELECT SUBS\_KEY,

SUM(SUM(DATA\_USG\_MB\_HOME\_3G,DATA\_USG\_MB\_ROAM\_3G,DATA\_USG\_MB\_HOME\_2G,DATA\_USG\_MB\_roam\_2G,DATA\_USG\_MB\_HOME\_4G,DATA\_USG\_MB\_roam\_4G,**0**)) AS TOT\_DATA\_USG\_MB,

SUM(SUM(DATA\_USG\_REV\_HOME\_3G,DATA\_USG\_REV\_ROAM\_3G,DATA\_USG\_REV\_HOME\_2G,DATA\_USG\_REV\_roam\_2G,DATA\_USG\_REV\_HOME\_4G,DATA\_USG\_REV\_roam\_4G,**0**)) AS TOT\_DATA\_USG\_REV

FROM &rawdata.

WHERE &DATE1 <= EVENT\_DT <= &DATE2

GROUP BY SUBS\_KEY ORDER BY SUBS\_KEY;

QUIT;

data RAT\_DATA\_REV\_MB\_1\_&OUT;

set RAT\_DATA\_REV\_MB\_&OUT;

IF TOT\_DATA\_USG\_MB=**0** THEN RAT\_DATA\_REV\_TOT\_MB\_&out.=**999**;

ELSE RAT\_DATA\_REV\_TOT\_MB\_&out.= TOT\_DATA\_USG\_REV/TOT\_DATA\_USG\_MB;

run;

PROC SQL;

create table temp1(compress=yes) as

select t1.\*, t2.RAT\_DATA\_REV\_TOT\_MB\_&out.

FROM &base. t1 LEFT JOIN RAT\_DATA\_REV\_MB\_1\_&OUT t2 ON (t1.SUBS\_KEY = t2.SUBS\_KEY);

quit;

data &base.;

set temp1;

run;

**%MEND**;

%***RR***(OUT=L7,DATE1=**"&LAST7DAYS"D**,DATE2= &RUN\_DATE);

%***RR***(OUT=L15,DATE1=**"&LAST15DAYS"D**,DATE2= &RUN\_DATE);

%***RR***(OUT=L30,DATE1=**"&LAST30DAYS"D**,DATE2= &RUN\_DATE);

%***RR***(OUT=L37,DATE1=**"&LAST37DAYS"D**,DATE2= &RUN\_DATE);

%***RR***(OUT=L67,DATE1=**"&LAST67DAYS"D**,DATE2= &RUN\_DATE);

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

**%MACRO** create\_Recharge\_file (OUTFILE=TEMP,EVENTDATE=EVENT\_DT);

PROC SQL;

CREATE TABLE &OUTFILE AS

SELECT SUBS\_KEY,&EVENTDATE.,Data\_Rchg\_Cnt,Data\_Rchg\_Sum\_MRP FROM &rawdata.

ORDER BY SUBS\_KEY;

QUIT;

**%MEND**;

**%MACRO** RCHRG\_VALUE ( OUT= , DATE1=, DATE2=,INFILE=TEMP,EVENTDATE=EVENT\_DT);

PROC SQL NOPRINT;

CREATE TABLE RCHRG AS

SELECT

T1.SUBS\_KEY,

T1.&EVENTDATE.,

t1.Data\_Rchg\_Cnt,

t1.Data\_Rchg\_Sum\_MRP,

SUM(t1.Data\_Rchg\_Sum\_MRP,**0**) AS

RCHRG\_VALUE\_&OUT,

SUM(T1.Data\_Rchg\_Cnt,**0**) AS CNT\_TOT\_RCHRG\_&OUT

FROM &INFILE T1 WHERE &DATE1 <= &EVENTDATE <= &DATE2;

SELECT COUNT(SUBS\_KEY) INTO: DAY FROM RCHRG GROUP BY SUBS\_KEY;

%LET DAY = &DAY;

%PUT &DAY;

CREATE TABLE RCHRG\_&OUT AS

SELECT SUBS\_KEY,

SUM(RCHRG\_VALUE\_&OUT) AS VALUE\_RCHRG\_&OUT,

SUM(CNT\_TOT\_RCHRG\_&OUT) AS TOT\_CNT\_RCHRG\_&OUT,

(CALCULATED VALUE\_RCHRG\_&OUT/CALCULATED TOT\_CNT\_RCHRG\_&OUT) AS AVG\_RCH\_VAL\_&OUT FORMAT **8.2**,

(CALCULATED VALUE\_RCHRG\_&OUT/&DAY) AS DLY\_AVG\_RCH\_VAL\_&OUT FORMAT **8.2**

FROM RCHRG GROUP BY SUBS\_KEY

ORDER BY SUBS\_KEY;

DATA RCHRG\_&OUT;

SET RCHRG\_&OUT;

IF AVG\_RCH\_VAL\_&OUT = **.** THEN AVG\_RCH\_VAL\_&OUT = **0**;

IF DLY\_AVG\_RCH\_VAL\_&OUT = **.** THEN DLY\_AVG\_RCH\_VAL\_&OUT = **0**;

RUN;

PROC SQL;

CREATE TABLE TEMP12(COMPRESS=YES) AS

SELECT T1.\*, T2.AVG\_RCH\_VAL\_&OUT, T2.DLY\_AVG\_RCH\_VAL\_&OUT

FROM &BASE. T1 LEFT JOIN RCHRG\_&OUT T2 ON (T1.SUBS\_KEY = T2.SUBS\_KEY);

QUIT;

DATA &BASE.;

SET TEMP12;

RUN;

PROC DATASETS LIB=WORK NOLIST;

DELETE RCHRG\_PAST7DAYS RCHRG\_PAST15DAYS RCHRG\_PAST30DAYS RCHRG\_PAST37DAYS;

QUIT;

**%MEND** RCHRG\_VALUE;

**%MACRO** HIGHRECHARGE (OUT=, DATE1=,DATE2=,INFILE=TEMP,AMOUNT=,EVENTDATE=EVENT\_DT);

PROC SQL;

CREATE TABLE HIGH\_RECHARGE AS

SELECT

SUBS\_KEY,

&EVENTDATE.,

Data\_Rchg\_Sum\_MRP,

SUM(Data\_Rchg\_Sum\_MRP,**0**) AS RCHRG\_VALUE\_&OUT.,

(CALCULATED RCHRG\_VALUE\_&OUT > &AMOUNT.) AS RECHARGE\_GT\_&AMOUNT.

FROM &INFILE.

WHERE &EVENTDATE. >= &DATE1. AND &EVENTDATE. <= &DATE2.;

QUIT;

PROC SQL;

CREATE TABLE WORK.HIGH\_RECHARGE1 AS

SELECT

SUBS\_KEY,

SUM(SUM(RECHARGE\_GT\_&AMOUNT.,**0**)) AS CNT\_RCH\_VAL\_GT\_&AMOUNT.\_&OUT.

FROM WORK.HIGH\_RECHARGE

GROUP BY SUBS\_KEY

order by subs\_key;

QUIT;

PROC SQL;

CREATE TABLE TEMP14(COMPRESS=YES) AS

SELECT T1.\*, T2.CNT\_RCH\_VAL\_GT\_&AMOUNT.\_&OUT.

FROM &BASE. T1 LEFT JOIN WORK.HIGH\_RECHARGE1 T2 ON (T1.SUBS\_KEY = T2.SUBS\_KEY);

QUIT;

DATA &BASE.;

SET TEMP14;

RUN;

PROC DATASETS LIB=WORK NOLIST;

DELETE HIGH\_RECHARGE HIGH\_RECHARGE1 ;

QUIT;

**%MEND**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*recharges\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

%***CREATE\_RECHARGE\_FILE***(OUTFILE=adijit.RECHARGE,EVENTDATE=EVENT\_DT) ;

%***RCHRG\_VALUE*** (OUT=L7 , DATE1=**"&LAST7DAYS."D** , DATE2= &RUN\_DATE.,INFILE=adijit.RECHARGE,EVENTDATE=EVENT\_DT);

%***RCHRG\_VALUE*** (OUT=L15 , DATE1=**"&LAST15DAYS."D** , DATE2= &RUN\_DATE.,INFILE=adijit.RECHARGE,EVENTDATE=EVENT\_DT);

%***RCHRG\_VALUE*** (OUT=L30 , DATE1=**"&LAST30DAYS."D** , DATE2= &RUN\_DATE.,INFILE=adijit.RECHARGE,EVENTDATE=EVENT\_DT);

%***RCHRG\_VALUE*** (OUT=L37 , DATE1=**"&LAST37DAYS."D** , DATE2= &RUN\_DATE.,INFILE=adijit.RECHARGE,EVENTDATE=EVENT\_DT);

%***RCHRG\_VALUE*** (OUT=L67 , DATE1=**"&LAST67DAYS."D** , DATE2= &RUN\_DATE.,INFILE=adijit.RECHARGE,EVENTDATE=EVENT\_DT);

%***HIGHRECHARGE***(OUT=L7 , DATE1=**"&LAST7DAYS."D** , DATE2= &RUN\_DATE.,INFILE=adijit.RECHARGE, AMOUNT=**50**,EVENTDATE=EVENT\_DT);

%***HIGHRECHARGE***(OUT=L15 , DATE1=**"&LAST15DAYS."D** , DATE2= &RUN\_DATE.,INFILE=adijit.RECHARGE,AMOUNT=**50**,EVENTDATE=EVENT\_DT);

%***HIGHRECHARGE***(OUT=L30 , DATE1=**"&LAST30DAYS."D** , DATE2= &RUN\_DATE.,INFILE=adijit.RECHARGE,AMOUNT=**50**,EVENTDATE=EVENT\_DT);

%***HIGHRECHARGE***(OUT=L37 , DATE1=**"&LAST37DAYS."D** , DATE2= &RUN\_DATE.,INFILE=adijit.RECHARGE,AMOUNT=**50**,EVENTDATE=EVENT\_DT);

%***HIGHRECHARGE***(OUT=L7 , DATE1=**"&LAST7DAYS."D** , DATE2= &RUN\_DATE.,INFILE=adijit.RECHARGE, AMOUNT=**100**,EVENTDATE=EVENT\_DT);

%***HIGHRECHARGE***(OUT=L15 , DATE1=**"&LAST15DAYS."D** , DATE2= &RUN\_DATE.,INFILE=adijit.RECHARGE,AMOUNT=**100**,EVENTDATE=EVENT\_DT);

%***HIGHRECHARGE***(OUT=L30 , DATE1=**"&LAST30DAYS."D** , DATE2= &RUN\_DATE.,INFILE=adijit.RECHARGE,AMOUNT=**100**,EVENTDATE=EVENT\_DT);

%***HIGHRECHARGE***(OUT=L37 , DATE1=**"&LAST37DAYS."D** , DATE2= &RUN\_DATE.,INFILE=adijit.RECHARGE,AMOUNT=**100**,EVENTDATE=EVENT\_DT);

%***DELETE\_FILE***(adijit,RECHARGE);

/\*\\*??????????????????????????????????????\*\\*/

/\*\\*??????? Days since last recharge ?????\*\\*/

/\*\\*??????????????????????????????????????\*\\*/

**PROC** **SQL**;

CREATE TABLE WORK.RCHRG\_day\_DATA AS

SELECT

T1.SUBS\_KEY,

T1. EVENT\_DT,

SUM(T1.Data\_Rchg\_Cnt,**0**) AS CNT\_TOT\_DATA\_RCHRG

FROM &rawdata T1 WHERE ((**"&Last67days"D** <= EVENT\_DT <= &run\_date ) and (calculated CNT\_TOT\_DATA\_RCHRG ne **0** or **.**))

order by SUBS\_KEY, EVENT\_DT;

**quit**;

**DATA** work.day\_last\_DATA\_rchg;

SET WORK.RCHRG\_day\_DATA ;

BY SUBS\_KEY ;

IF last.SUBS\_KEY;

**run**;

**data** work.day\_last\_DATA\_rchg;

set work.day\_last\_DATA\_rchg;

DS\_DATA\_RCH\_L67 = intck ('day', EVENT\_DT,&run\_date );

**run**;

**PROC** **SQL**;

CREATE TABLE ABT\_DS\_DATA\_RCH (compress=binary) AS

SELECT t1.\*,

t2.DS\_DATA\_RCH\_L67

FROM &base. t1 LEFT JOIN work.day\_last\_DATA\_rchg t2 ON (t1.SUBS\_KEY = t2.SUBS\_KEY)

order by t1.subs\_key;

**QUIT**;

**data** &base. (compress=binary);

set ABT\_DS\_DATA\_RCH;

if DS\_DATA\_RCH\_L67 = **.** then DS\_DATA\_RCH\_L67 = **99**;

**run**;

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*count\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

%***create\_flag\_file***(data\_complaint\_tag,OUTFILE=adijit.data\_complaint);

%***CNT***(**"&last7days"D**, &run\_date,DATA\_COMPLNT\_INS\_L7,INFILE=adijit.data\_complaint);

%***CNT***(**"&last15days"D**, &run\_date,DATA\_COMPLNT\_INS\_L15,INFILE=adijit.data\_complaint);

%***CNT***(**"&last30days"D**, &run\_date,DATA\_COMPLNT\_INS\_L30,INFILE=adijit.data\_complaint);

%***CNT***(**"&Last37days"d**, &run\_date,DATA\_COMPLNT\_INS\_L37,INFILE=adijit.data\_complaint);

%***CNT***(**"&last67days"D**, &run\_date,DATA\_COMPLNT\_INS\_L67,INFILE=adijit.data\_complaint);

%***DELETE\_FILE***(adijit,data\_complaint);

%***create\_flag\_file***(DATA\_Tag,OUTFILE=adijit.DATA\_flag);

%***CNT***(**"&last7days"D**, &run\_date,DATA\_INS\_L7,INFILE=adijit.DATA\_flag);

%***CNT***(**"&last15days"D**, &run\_date,DATA\_INS\_L15,INFILE=adijit.DATA\_flag);

%***CNT***(**"&last30days"D**, &run\_date,DATA\_INS\_L30,INFILE=adijit.DATA\_flag);

%***CNT***(**"&Last37days"d**, &run\_date,DATA\_INS\_L37,INFILE=adijit.DATA\_flag);

%***CNT***(**"&last67days"D**, &run\_date,DATA\_INS\_L67,INFILE=adijit.DATA\_flag);

%***DELETE\_FILE***(adijit,DATA\_flag);

/\*proportion of max sum of volume at cellsite to the total data usg mb\*/

**%MACRO** max\_data\_lac\_cellsite (OUT= , DATE1= , DATE2=);

PROC SQL;

CREATE TABLE MAX\_DATA\_LAC\_CELLSITE&OUT.

AS SELECT SUBS\_KEY,MAX\_DATA\_LAC\_CELLSITE,

SUM(SUM(VOLUME\_AT\_MAX\_CELLSITE,**0**)) AS SUM\_VOL\_&out

FROM &RAWDATA.

WHERE &DATE1.<=EVENT\_DT<=&DATE2.

GROUP BY SUBS\_KEY,MAX\_DATA\_LAC\_CELLSITE;

RUN;

PROC SQL;

CREATE TABLE MAX\_DATA\_LAC\_CELLSITE1&OUT. AS SELECT SUBS\_KEY,

MAX(SUM\_VOL\_&out) AS MAX\_SUM\_VOL\_&out

FROM MAX\_DATA\_LAC\_CELLSITE&OUT.

GROUP BY SUBS\_KEY;

QUIT;

proc sql;

create table TOT\_MB\_&OUT. as select subs\_key,

SUM(SUM(DATA\_USG\_MB\_HOME\_3G,DATA\_USG\_MB\_ROAM\_3G,DATA\_USG\_MB\_HOME\_2G,DATA\_USG\_MB\_roam\_2G,DATA\_USG\_MB\_HOME\_4G,DATA\_USG\_MB\_roam\_4G,**0**)) AS TOT\_DATA\_USG\_MB\_&OUT.

FROM &RAWDATA.

WHERE &DATE1.<=EVENT\_DT<=&DATE2.

GROUP BY SUBS\_KEY;

RUN;

proc sql;

create table tot\_mb\_max\_data\_join\_&OUT. as select t1.subs\_key, t1.TOT\_DATA\_USG\_MB\_&OUT.,t2.MAX\_SUM\_VOL\_&out

from TOT\_MB\_&OUT. as t1 inner join MAX\_DATA\_LAC\_CELLSITE1&OUT. as t2 on (t1.subs\_key=t2.subs\_key);

quit;

DATA TEM1;

SET tot\_mb\_max\_data\_join\_&OUT.;

IF TOT\_DATA\_USG\_MB\_&out=**0** THEN PROP\_MB\_MAX\_LAC\_CELL\_TOT\_MB\_&out.=**0**;

ELSE PROP\_MB\_MAX\_LAC\_CELL\_TOT\_MB\_&out.= MAX\_SUM\_VOL\_&out/TOT\_DATA\_USG\_MB\_&out;

RUN;

proc sql;

create table temp1(compress=yes) as

select T1.\*, T2.PROP\_MB\_MAX\_LAC\_CELL\_TOT\_MB\_&out.

FROM &base. t1 LEFT JOIN WORK.TEM1 t2 ON (t1.SUBS\_KEY = t2.SUBS\_KEY);

quit;

data &base.;

set temp1;

run;

**%MEND**

%***max\_data\_lac\_cellsite***(OUT=L7 , DATE1=**"&Last7days."d** , DATE2=&run\_date.);

%***max\_data\_lac\_cellsite***(OUT=L15 , DATE1=**"&Last15days."d** , DATE2=&run\_date.);

%***max\_data\_lac\_cellsite***(OUT=L30 , DATE1=**"&Last30days"D** , DATE2 = &run\_date.);

%***max\_data\_lac\_cellsite***(OUT=L37 , DATE1=**"&Last37days."d** , DATE2=&run\_date.);

%***max\_data\_lac\_cellsite***(OUT=L67 , DATE1=**"&Last67days."d** , DATE2=&run\_date.);

/\*\\*??????????????????????????????????????\*\\*/

/\*\\*??????? Count of no data Days ?????\*\\*/

/\*\\*??????????????????????????????????????\*\\*/

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

**%macro** nouse(out=,date1=,date2=);

proc sql;

create table up\_SAMPF\_&out as

select subs\_key,EVENT\_DT, DATA\_TAG,

case when DATA\_TAG = 'Y' then **0** else **1** end as DATA\_TAG1

from &rawdata where &date1 <= EVENT\_DT <= &date2

order by SUBS\_KEY ,EVENT\_DT;

quit;

proc sql;

create table NOUSE\_&out as

select subs\_key, sum(SUM(DATA\_TAG1,**0**)) AS TOT\_CNT\_DAY\_NO\_DATA\_&out

from up\_SAMPF\_&out

GROUP BY SUBS\_KEY ;

quit;

DATA LAGTAG\_&out;

SET up\_SAMPF\_&out;

BY SUBS\_KEY;

IF FIRST.SUBS\_KEY THEN FIRSTSUBS = **1**;

IF LAST.SUBS\_KEY THEN LASTSUBS = **1**;

IF FIRST.SUBS\_KEY OR DATA\_TAG1 NE LAG1(DATA\_TAG1) OR DATA\_TAG1 = **0** THEN COUNT1 = **0**;

ELSE COUNT1 + **1**;

RUN;

DATA LAGTAG2\_&out;

MERGE LAGTAG\_&out(FIRSTOBS = **2** RENAME=(COUNT1 = NEXT\_COUNT1)) LAGTAG\_&out;

RUN;

DATA LAGTAG3\_&out;

SET LAGTAG2\_&out;

IF NEXT\_COUNT1 = **0** AND COUNT1 > **0** THEN DUR = COUNT1 + **1**;

ELSE DUR = **0**;

DROP FIRSTSUBS LASTSUBS NEXT\_COUNT1;

RUN;

DATA LAGTAG4\_&out;

SET LAGTAG3\_&out;

WHERE DUR <> **0**;

STARTDATE = INTNX('DAY',EVENT\_DT, -DUR+**1**);

LASTDATE = EVENT\_DT;

FORMAT STARTDATE LASTDATE DATE9.;

RUN;

PROC SQL;

CREATE TABLE NUMNOUSAGE\_&out AS

SELECT

SUBS\_KEY,

COUNT(DUR) AS CNT\_DAY\_NO\_DATA\_&out FORMAT **10.0**,

AVG(DUR) AS AVG\_CNT\_DAY\_NO\_DATA\_&out FORMAT **10.2**,

MAX(DUR) AS MAX\_CNT\_DAY\_NO\_DATA\_&out FORMAT **10.0**

FROM LAGTAG4\_&out

GROUP BY SUBS\_KEY;

QUIT;

DATA A;

MERGE &base.(IN=A) NOUSE\_&out(IN=B) NUMNOUSAGE\_&out(IN=C);

BY SUBS\_KEY;

IF A;

RUN;

DATA ABT\_&out;

SET A /\*ABT23\_&out\*/;

IF CNT\_DAY\_NO\_DATA\_&out = **.** THEN CNT\_DAY\_NO\_DATA\_&out = **0**;

IF AVG\_CNT\_DAY\_NO\_DATA\_&out = **.** THEN AVG\_CNT\_DAY\_NO\_DATA\_&out= **0**;

IF MAX\_CNT\_DAY\_NO\_DATA\_&out = **.** THEN MAX\_CNT\_DAY\_NO\_DATA\_&out= **0**;

IF TOT\_CNT\_DAY\_NO\_DATA\_&out = **0** THEN RAT\_MAX\_CNT\_DAY\_NO\_DATA\_&out = **0**;

ELSE RAT\_MAX\_CNT\_DAY\_NO\_DATA\_&out= MAX\_CNT\_DAY\_NO\_DATA\_&out/TOT\_CNT\_DAY\_NO\_DATA\_&out;

RUN;

**%mend**;

%***nouse***(out=L30,date1=**"&last30days."d**,date2=&run\_date);

**data** &base.;

set ABT\_L30;

**run**;

%***nouse***(out=L67,date1=**"&last67days."d**,date2=&run\_date);

**data** &base.;

set ABT\_L67;

**run**;

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*weekend & weekday\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*total data usage\*/

**%MACRO** WKDY\_WKND\_TOT\_USG(DATE1,DATE2,OUT);

PROC SQL;

CREATE TABLE Wk\_day\_wk\_end AS SELECT

SUBS\_KEY,

EVENT\_DT,

SUM(DATA\_USG\_MB\_HOME\_3G,DATA\_USG\_MB\_ROAM\_3G,DATA\_USG\_MB\_HOME\_2G,DATA\_USG\_MB\_roam\_2G,DATA\_USG\_MB\_HOME\_4G,DATA\_USG\_MB\_roam\_4G,**0**) AS TOT\_DATA\_USG\_MB

FROM &rawdata.

where &date1.<=EVENT\_DT<=&date2.

Order by SUBS\_KEY, EVENT\_DT;

QUIT;

DATA SUBS\_KEY\_EV\_DT;

SET Wk\_day\_wk\_end;

WEEKDAY\_SAMPLE = WEEKDAY(EVENT\_DT);

WEEK\_ROLL =CEIL(DAY(EVENT\_DT)/**7**);

IF WEEKDAY\_SAMPLE IN(**1**,**7**) THEN

FLAG = "WKEND\_AVG\_USG\_MB\_&out.";

ELSE IF WEEKDAY\_SAMPLE IN(**2**,**3**,**5**,**4**,**6**) THEN

FLAG = "WKDAY\_AVG\_USG\_MB\_&out.";

RUN;

PROC SQL;

CREATE TABLE TR\_RATED3 AS

SELECT SUBS\_KEY,FLAG,

AVG(SUM(TOT\_DATA\_USG\_MB,**0**)) AS AVG\_DATA\_USG\_MB FORMAT **8.2**

FROM SUBS\_KEY\_EV\_DT

GROUP BY SUBS\_KEY, FLAG

ORDER BY SUBS\_KEY;

QUIT;

PROC TRANSPOSE DATA=TR\_RATED3 OUT=WKDWKE;

BY SUBS\_KEY;

VAR AVG\_DATA\_USG\_MB ;

ID FLAG;

RUN;

PROC SQL;

CREATE TABLE ABT\_wk (compress =yes) AS

SELECT T1.\*,

t2.WKEND\_AVG\_USG\_MB\_&out.,

t2.WKDAY\_AVG\_USG\_MB\_&out.

FROM &base. T1 LEFT JOIN WKDWKE T2 ON (T1.SUBS\_KEY = T2.SUBS\_KEY);

QUIT;

DATA &base.;

Set ABT\_wk;

IF WKDAY\_AVG\_USG\_MB\_&out. = **0** and WKEND\_AVG\_USG\_MB\_&out. = **0** THEN PROP\_WKDAY\_USG\_TOT\_USG\_MB\_&out.=**0**;

ELSE PROP\_WKDAY\_USG\_TOT\_USG\_MB\_&out.= WKDAY\_AVG\_USG\_MB\_&out./(WKEND\_AVG\_USG\_MB\_&out. + WKDAY\_AVG\_USG\_MB\_&out.);

IF WKDAY\_AVG\_USG\_MB\_&out.= **0** and WKEND\_AVG\_USG\_MB\_&out. = **0** THEN PROP\_WKEND\_USG\_TOT\_USG\_MB\_&out.=**0**;

ELSE PROP\_WKEND\_USG\_TOT\_USG\_MB\_&out.= WKEND\_AVG\_USG\_MB\_&out./(WKEND\_AVG\_USG\_MB\_&out. + WKDAY\_AVG\_USG\_MB\_&out.);

if WKEND\_AVG\_USG\_MB\_&out.= **0** then RAT\_WKD\_WKE\_USG\_MB\_&out =**999**;

else RAT\_WKD\_WKE\_USG\_MB\_&out = WKDAY\_AVG\_USG\_MB\_&out./WKEND\_AVG\_USG\_MB\_&out.;

FORMAT RAT\_WKD\_WKE\_USG\_MB\_&out;

RUN;

**%mend**;

%***WKDY\_WKND\_TOT\_USG***(**"&Last28days."d**, &run\_date., L28);

%***WKDY\_WKND\_TOT\_USG***(**"&Last35days."d**, &run\_date., L35);

%***WKDY\_WKND\_TOT\_USG***(**"&Last37days."d**, &run\_date., L37);

%***WKDY\_WKND\_TOT\_USG***(**"&Last67days."d**, &run\_date., L67);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*total data usage 3G\*/

**%MACRO** WKDY\_WKND\_TOT\_USG\_3G(DATE1,DATE2,OUT);

PROC SQL;

CREATE TABLE Wk\_day\_wk\_end AS SELECT

SUBS\_KEY,

EVENT\_DT,

SUM(DATA\_USG\_MB\_HOME\_3G,DATA\_USG\_MB\_ROAM\_3G,**0**) AS TOT\_DATA\_USG\_MB\_3G

FROM &rawdata.

where &date1.<=EVENT\_DT<=&date2.

Order by SUBS\_KEY, EVENT\_DT;

QUIT;

DATA SUBS\_KEY\_EV\_DT;

SET Wk\_day\_wk\_end;

WEEKDAY\_SAMPLE = WEEKDAY(EVENT\_DT);

WEEK\_ROLL =CEIL(DAY(EVENT\_DT)/**7**);

IF WEEKDAY\_SAMPLE IN(**1**,**7**) THEN

FLAG = "WKEND\_AVG\_3G\_USG\_MB\_&out.";

ELSE IF WEEKDAY\_SAMPLE IN(**2**,**3**,**5**,**4**,**6**) THEN

FLAG = "WKDAY\_AVG\_3G\_USG\_MB\_&out.";

RUN;

PROC SQL;

CREATE TABLE TR\_RATED3 AS

SELECT SUBS\_KEY,FLAG,

AVG(SUM(TOT\_DATA\_USG\_MB\_3G,**0**)) AS AVG\_DATA\_USG\_MB\_3G FORMAT **8.2**

FROM SUBS\_KEY\_EV\_DT

GROUP BY SUBS\_KEY, FLAG

ORDER BY SUBS\_KEY;

QUIT;

PROC TRANSPOSE DATA=TR\_RATED3 OUT=WKDWKE;

BY SUBS\_KEY;

VAR AVG\_DATA\_USG\_MB\_3G;

ID FLAG;

RUN;

PROC SQL;

CREATE TABLE ABT\_wk (compress =yes) AS

SELECT T1.\*,

t2.WKEND\_AVG\_3G\_USG\_MB\_&out.,

t2.WKDAY\_AVG\_3G\_USG\_MB\_&out.

FROM &base. T1 LEFT JOIN WKDWKE T2 ON (T1.SUBS\_KEY = T2.SUBS\_KEY);

QUIT;

DATA &base.;

Set ABT\_wk;

IF WKDAY\_AVG\_3G\_USG\_MB\_&out.= **0** and WKEND\_AVG\_3G\_USG\_MB\_&out.= **0** THEN PROP\_WKDAY\_USG\_TOT\_USG\_3G\_&out.=**0**;

ELSE PROP\_WKDAY\_USG\_TOT\_USG\_3G\_&out.= WKDAY\_AVG\_3G\_USG\_MB\_&out./(WKEND\_AVG\_3G\_USG\_MB\_&out. + WKDAY\_AVG\_3G\_USG\_MB\_&out.);

IF WKDAY\_AVG\_3G\_USG\_MB\_&out.= **0** and WKEND\_AVG\_3G\_USG\_MB\_&out.= **0** THEN PROP\_WKEND\_USG\_TOT\_USG\_3G\_&out.=**0**;

ELSE PROP\_WKEND\_USG\_TOT\_USG\_3G\_&out.= WKEND\_AVG\_3G\_USG\_MB\_&out./(WKEND\_AVG\_3G\_USG\_MB\_&out. + WKDAY\_AVG\_3G\_USG\_MB\_&out.);

if WKEND\_AVG\_3G\_USG\_MB\_&out.= **0** then RAT\_WKD\_WKE\_3G\_USG\_MB\_&out =**999**;

else RAT\_WKD\_WKE\_3G\_USG\_MB\_&out = WKDAY\_AVG\_3G\_USG\_MB\_&out./WKEND\_AVG\_3G\_USG\_MB\_&out.;

FORMAT RAT\_WKD\_WKE\_3G\_USG\_MB\_&out;

RUN;

**%mend**;

%***WKDY\_WKND\_TOT\_USG\_3G***(**"&Last28days."d**, &run\_date., L28);

%***WKDY\_WKND\_TOT\_USG\_3G***(**"&Last35days."d**, &run\_date., L35);

%***WKDY\_WKND\_TOT\_USG\_3G***(**"&Last37days."d**, &run\_date., L37);

%***WKDY\_WKND\_TOT\_USG\_3G***(**"&Last67days."d**, &run\_date., L67);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*total data usage 2G\*/

**%MACRO** WKDY\_WKND\_TOT\_USG\_2G(DATE1,DATE2,OUT);

PROC SQL;

CREATE TABLE Wk\_day\_wk\_end AS SELECT

SUBS\_KEY,

EVENT\_DT,

SUM(DATA\_USG\_MB\_HOME\_2G,DATA\_USG\_MB\_ROAM\_2G,**0**) AS TOT\_DATA\_USG\_MB\_2G

FROM &rawdata.

where &date1.<=EVENT\_DT<=&date2.

Order by SUBS\_KEY, EVENT\_DT;

QUIT;

DATA SUBS\_KEY\_EV\_DT;

SET Wk\_day\_wk\_end;

WEEKDAY\_SAMPLE = WEEKDAY(EVENT\_DT);

WEEK\_ROLL =CEIL(DAY(EVENT\_DT)/**7**);

IF WEEKDAY\_SAMPLE IN(**1**,**7**) THEN

FLAG = "WKEND\_AVG\_2G\_USG\_MB\_&out.";

ELSE IF WEEKDAY\_SAMPLE IN(**2**,**3**,**5**,**4**,**6**) THEN

FLAG = "WKDAY\_AVG\_2G\_USG\_MB\_&out.";

RUN;

PROC SQL;

CREATE TABLE TR\_RATED3 AS

SELECT SUBS\_KEY,FLAG,

AVG(SUM(TOT\_DATA\_USG\_MB\_2G,**0**)) AS AVG\_DATA\_USG\_MB\_2G FORMAT **8.2**

FROM SUBS\_KEY\_EV\_DT

GROUP BY SUBS\_KEY, FLAG

ORDER BY SUBS\_KEY;

QUIT;

PROC TRANSPOSE DATA=TR\_RATED3 OUT=WKDWKE;

BY SUBS\_KEY;

VAR AVG\_DATA\_USG\_MB\_2G;

ID FLAG;

RUN;

PROC SQL;

CREATE TABLE ABT\_wk (compress =yes) AS

SELECT T1.\*,

t2.WKEND\_AVG\_2G\_USG\_MB\_&out.,

t2.WKDAY\_AVG\_2G\_USG\_MB\_&out.

FROM &base. T1 LEFT JOIN WKDWKE T2 ON (T1.SUBS\_KEY = T2.SUBS\_KEY);

QUIT;

DATA &base.;

Set ABT\_wk;

IF WKDAY\_AVG\_2G\_USG\_MB\_&out.= **0** and WKEND\_AVG\_2G\_USG\_MB\_&out.= **0** THEN PROP\_WKDAY\_USG\_TOT\_USG\_2G\_&out.=**0**;

ELSE PROP\_WKDAY\_USG\_TOT\_USG\_2G\_&out.= WKDAY\_AVG\_2G\_USG\_MB\_&out./(WKEND\_AVG\_2G\_USG\_MB\_&out. + WKDAY\_AVG\_2G\_USG\_MB\_&out.);

IF WKDAY\_AVG\_2G\_USG\_MB\_&out.= **0** and WKEND\_AVG\_2G\_USG\_MB\_&out.= **0** THEN PROP\_WKEND\_USG\_TOT\_USG\_2G\_&out.=**0**;

ELSE PROP\_WKEND\_USG\_TOT\_USG\_2G\_&out.= WKEND\_AVG\_2G\_USG\_MB\_&out./(WKEND\_AVG\_2G\_USG\_MB\_&out. + WKDAY\_AVG\_2G\_USG\_MB\_&out.);

if WKEND\_AVG\_2G\_USG\_MB\_&out.= **0** then RAT\_WKD\_WKE\_2G\_USG\_MB\_&out =**999**;

else RAT\_WKD\_WKE\_2G\_USG\_MB\_&out = WKDAY\_AVG\_2G\_USG\_MB\_&out./WKEND\_AVG\_2G\_USG\_MB\_&out.;

FORMAT RAT\_WKD\_WKE\_2G\_USG\_MB\_&out;

RUN;

**%mend**;

%***WKDY\_WKND\_TOT\_USG\_2G***(**"&Last28days."d**, &run\_date., L28);

%***WKDY\_WKND\_TOT\_USG\_2G***(**"&Last35days."d**, &run\_date., L35);

%***WKDY\_WKND\_TOT\_USG\_2G***(**"&Last37days."d**, &run\_date., L37);

%***WKDY\_WKND\_TOT\_USG\_2G***(**"&Last67days."d**, &run\_date., L67);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*total data usage 4G\*/

**%MACRO** WKDY\_WKND\_TOT\_USG\_4G(DATE1,DATE2,OUT);

PROC SQL;

CREATE TABLE Wk\_day\_wk\_end AS SELECT

SUBS\_KEY,

EVENT\_DT,

SUM(DATA\_USG\_MB\_HOME\_4G,DATA\_USG\_MB\_ROAM\_4G,**0**) AS TOT\_DATA\_USG\_MB\_4G

FROM &rawdata.

where &date1.<=EVENT\_DT<=&date2.

Order by SUBS\_KEY, EVENT\_DT;

QUIT;

DATA SUBS\_KEY\_EV\_DT;

SET Wk\_day\_wk\_end;

WEEKDAY\_SAMPLE = WEEKDAY(EVENT\_DT);

WEEK\_ROLL =CEIL(DAY(EVENT\_DT)/**7**);

IF WEEKDAY\_SAMPLE IN(**1**,**7**) THEN

FLAG = "WKEND\_AVG\_4G\_USG\_MB\_&out.";

ELSE IF WEEKDAY\_SAMPLE IN(**2**,**3**,**5**,**4**,**6**) THEN

FLAG = "WKDAY\_AVG\_4G\_USG\_MB\_&out.";

RUN;

PROC SQL;

CREATE TABLE TR\_RATED3 AS

SELECT SUBS\_KEY,FLAG,

AVG(SUM(TOT\_DATA\_USG\_MB\_4G,**0**)) AS AVG\_DATA\_USG\_MB\_4G FORMAT **8.2**

FROM SUBS\_KEY\_EV\_DT

GROUP BY SUBS\_KEY, FLAG

ORDER BY SUBS\_KEY;

QUIT;

PROC TRANSPOSE DATA=TR\_RATED3 OUT=WKDWKE;

BY SUBS\_KEY;

VAR AVG\_DATA\_USG\_MB\_4G;

ID FLAG;

RUN;

PROC SQL;

CREATE TABLE ABT\_wk (compress =yes) AS

SELECT T1.\*,

t2.WKEND\_AVG\_4G\_USG\_MB\_&out.,

t2.WKDAY\_AVG\_4G\_USG\_MB\_&out.

FROM &base. T1 LEFT JOIN WKDWKE T2 ON (T1.SUBS\_KEY = T2.SUBS\_KEY);

QUIT;

DATA &base.;

Set ABT\_wk;

IF WKDAY\_AVG\_4G\_USG\_MB\_&out.= **0** and WKEND\_AVG\_4G\_USG\_MB\_&out.= **0** THEN PROP\_WKDAY\_USG\_TOT\_USG\_4G\_&out.=**0**;

ELSE PROP\_WKDAY\_USG\_TOT\_USG\_4G\_&out.= WKDAY\_AVG\_4G\_USG\_MB\_&out./(WKEND\_AVG\_4G\_USG\_MB\_&out. + WKDAY\_AVG\_4G\_USG\_MB\_&out.);

IF WKDAY\_AVG\_4G\_USG\_MB\_&out.= **0** and WKEND\_AVG\_4G\_USG\_MB\_&out.= **0** THEN PROP\_WKEND\_USG\_TOT\_USG\_4G\_&out.=**0**;

ELSE PROP\_WKEND\_USG\_TOT\_USG\_4G\_&out.= WKEND\_AVG\_4G\_USG\_MB\_&out./(WKEND\_AVG\_4G\_USG\_MB\_&out. + WKDAY\_AVG\_4G\_USG\_MB\_&out.);

if WKEND\_AVG\_4G\_USG\_MB\_&out.= **0** then RAT\_WKD\_WKE\_4G\_USG\_MB\_&out =**999**;

else RAT\_WKD\_WKE\_4G\_USG\_MB\_&out = WKDAY\_AVG\_4G\_USG\_MB\_&out./WKEND\_AVG\_4G\_USG\_MB\_&out.;

FORMAT RAT\_WKD\_WKE\_4G\_USG\_MB\_&out;

RUN;

**%mend**;

%***WKDY\_WKND\_TOT\_USG\_2G***(**"&Last28days."d**, &run\_date., L28);

%***WKDY\_WKND\_TOT\_USG\_2G***(**"&Last35days."d**, &run\_date., L35);

%***WKDY\_WKND\_TOT\_USG\_2G***(**"&Last37days."d**, &run\_date., L37);

%***WKDY\_WKND\_TOT\_USG\_2G***(**"&Last67days."d**, &run\_date., L67);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*total data REV\*/

**%MACRO** WKDY\_WKND\_TOT\_REV(DATE1,DATE2,OUT);

PROC SQL;

CREATE TABLE Wk\_day\_wk\_end AS SELECT

SUBS\_KEY,

EVENT\_DT,

SUM(DATA\_USG\_REV\_HOME\_3G,DATA\_USG\_REV\_ROAM\_3G,DATA\_USG\_REV\_HOME\_2G,DATA\_USG\_REV\_ROAM\_2G,DATA\_USG\_REV\_HOME\_4G,DATA\_USG\_REV\_ROAM\_4G,**0**) AS TOT\_DATA\_USG\_REV

FROM &rawdata.

where &date1.<=EVENT\_DT<=&date2.

Order by SUBS\_KEY, EVENT\_DT;

QUIT;

DATA SUBS\_KEY\_EV\_DT;

SET Wk\_day\_wk\_end;

WEEKDAY\_SAMPLE = WEEKDAY(EVENT\_DT);

WEEK\_ROLL =CEIL(DAY(EVENT\_DT)/**7**);

IF WEEKDAY\_SAMPLE IN(**1**,**7**) THEN

FLAG = "WKEND\_AVG\_DATA\_REV\_&out.";

ELSE IF WEEKDAY\_SAMPLE IN(**2**,**3**,**5**,**4**,**6**) THEN

FLAG = "WKDAY\_AVG\_DATA\_REV\_&out.";

RUN;

PROC SQL;

CREATE TABLE TR\_RATED3 AS

SELECT SUBS\_KEY,FLAG,

AVG(SUM(TOT\_DATA\_USG\_REV,**0**)) AS AVG\_DATA\_USG\_REV FORMAT **8.2**

FROM SUBS\_KEY\_EV\_DT

GROUP BY SUBS\_KEY, FLAG

ORDER BY SUBS\_KEY;

QUIT;

PROC TRANSPOSE DATA=TR\_RATED3 OUT=WKDWKE;

BY SUBS\_KEY;

VAR AVG\_DATA\_USG\_REV ;

ID FLAG;

RUN;

PROC SQL;

CREATE TABLE ABT\_wk (compress =yes) AS

SELECT T1.\*,

t2.WKEND\_AVG\_DATA\_REV\_&out.,

t2.WKDAY\_AVG\_DATA\_REV\_&out.

FROM &base. T1 LEFT JOIN WKDWKE T2 ON (T1.SUBS\_KEY = T2.SUBS\_KEY);

QUIT;

DATA &base.;

Set ABT\_wk;

IF WKDAY\_AVG\_DATA\_REV\_&out. = **0** and WKEND\_AVG\_DATA\_REV\_&out.= **0** THEN PROP\_WKDAY\_REV\_TOT\_DATA\_REV\_&out.=**0**;

ELSE PROP\_WKDAY\_REV\_TOT\_DATA\_REV\_&out.= WKDAY\_AVG\_DATA\_REV\_&out./(WKEND\_AVG\_DATA\_REV\_&out. + WKDAY\_AVG\_DATA\_REV\_&out.);

IF WKDAY\_AVG\_DATA\_REV\_&out. = **0** and WKEND\_AVG\_DATA\_REV\_&out.= **0** THEN PROP\_WKEND\_REV\_TOT\_DATA\_REV\_&out.=**0**;

ELSE PROP\_WKEND\_REV\_TOT\_DATA\_REV\_&out.= WKEND\_AVG\_DATA\_REV\_&out./(WKEND\_AVG\_DATA\_REV\_&out. + WKDAY\_AVG\_DATA\_REV\_&out.);

if WKEND\_AVG\_DATA\_REV\_&out.= **0** then

RAT\_WKD\_WKE\_DATA\_REV\_&out =**999**;

else RAT\_WKD\_WKE\_DATA\_REV\_&out = WKDAY\_AVG\_DATA\_REV\_&out./WKEND\_AVG\_DATA\_REV\_&out.;

FORMAT RAT\_WKD\_WKE\_DATA\_REV\_&out;

RUN;

**%mend**;

%***WKDY\_WKND\_TOT\_REV***(**"&Last28days."d**, &run\_date., L28);

%***WKDY\_WKND\_TOT\_REV***(**"&Last35days."d**, &run\_date., L35);

%***WKDY\_WKND\_TOT\_REV***(**"&Last37days."d**, &run\_date., L37);

%***WKDY\_WKND\_TOT\_REV***(**"&Last67days."d**, &run\_date., L67);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*total data REV 3G\*/

**%MACRO** WKDY\_WKND\_TOT\_REV\_3G(DATE1,DATE2,OUT);

PROC SQL;

CREATE TABLE Wk\_day\_wk\_end AS SELECT

SUBS\_KEY,

EVENT\_DT,

SUM(DATA\_USG\_REV\_HOME\_3G,DATA\_USG\_REV\_ROAM\_3G,**0**) AS TOT\_DATA\_USG\_REV\_3G

FROM &rawdata.

where &date1.<=EVENT\_DT<=&date2.

Order by SUBS\_KEY, EVENT\_DT;

QUIT;

DATA SUBS\_KEY\_EV\_DT;

SET Wk\_day\_wk\_end;

WEEKDAY\_SAMPLE = WEEKDAY(EVENT\_DT);

WEEK\_ROLL =CEIL(DAY(EVENT\_DT)/**7**);

IF WEEKDAY\_SAMPLE IN(**1**,**7**) THEN

FLAG = "WKEND\_AVG\_3G\_REV\_&out.";

ELSE IF WEEKDAY\_SAMPLE IN(**2**,**3**,**5**,**4**,**6**) THEN

FLAG = "WKDAY\_AVG\_3G\_REV\_&out.";

RUN;

PROC SQL;

CREATE TABLE TR\_RATED3 AS

SELECT SUBS\_KEY,FLAG,

AVG(SUM(TOT\_DATA\_USG\_REV\_3G,**0**)) AS AVG\_DATA\_USG\_REV\_3G FORMAT **8.2**

FROM SUBS\_KEY\_EV\_DT

GROUP BY SUBS\_KEY, FLAG

ORDER BY SUBS\_KEY;

QUIT;

PROC TRANSPOSE DATA=TR\_RATED3 OUT=WKDWKE;

BY SUBS\_KEY;

VAR AVG\_DATA\_USG\_REV\_3G;

ID FLAG;

RUN;

PROC SQL;

CREATE TABLE ABT\_wk (compress =yes) AS

SELECT T1.\*,

t2.WKEND\_AVG\_3G\_REV\_&out.,

t2.WKDAY\_AVG\_3G\_REV\_&out.

FROM &base. T1 LEFT JOIN WKDWKE T2 ON (T1.SUBS\_KEY = T2.SUBS\_KEY);

QUIT;

DATA &base.;

Set ABT\_wk;

IF WKDAY\_AVG\_3G\_REV\_&out.= **0** and WKEND\_AVG\_3G\_REV\_&out.= **0** THEN PROP\_WKDAY\_REV\_TOT\_REV\_3G\_&out.=**0**;

ELSE PROP\_WKDAY\_REV\_TOT\_REV\_3G\_&out.= WKDAY\_AVG\_3G\_REV\_&out./(WKEND\_AVG\_3G\_REV\_&out. + WKDAY\_AVG\_3G\_REV\_&out.);

IF WKDAY\_AVG\_3G\_REV\_&out.= **0** and WKEND\_AVG\_3G\_REV\_&out.= **0** THEN PROP\_WKEND\_REV\_TOT\_REV\_3G\_&out.=**0**;

ELSE PROP\_WKEND\_REV\_TOT\_REV\_3G\_&out.= WKEND\_AVG\_3G\_REV\_&out./(WKEND\_AVG\_3G\_REV\_&out. + WKDAY\_AVG\_3G\_REV\_&out.);

if WKEND\_AVG\_3G\_REV\_&out.= **0** then

RAT\_WKD\_WKE\_3G\_REV\_&out =**999**;

else RAT\_WKD\_WKE\_3G\_REV\_&out = WKDAY\_AVG\_3G\_REV\_&out./WKEND\_AVG\_3G\_REV\_&out.;

FORMAT RAT\_WKD\_WKE\_3G\_REV\_&out;

RUN;

**%mend**;

%***WKDY\_WKND\_TOT\_REV\_3G***(**"&Last28days."d**, &run\_date., L28);

%***WKDY\_WKND\_TOT\_REV\_3G***(**"&Last35days."d**, &run\_date., L35);

%***WKDY\_WKND\_TOT\_REV\_3G***(**"&Last37days."d**, &run\_date., L37);

%***WKDY\_WKND\_TOT\_REV\_3G***(**"&Last67days."d**, &run\_date., L67);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*total data rev 2G\*/

**%MACRO** WKDY\_WKND\_TOT\_REV\_2G(DATE1,DATE2,OUT);

PROC SQL;

CREATE TABLE Wk\_day\_wk\_end AS SELECT

SUBS\_KEY,

EVENT\_DT,

SUM(DATA\_USG\_REV\_HOME\_2G,DATA\_USG\_REV\_ROAM\_2G,**0**) AS TOT\_DATA\_USG\_REV\_2G

FROM &rawdata.

where &date1.<=EVENT\_DT<=&date2.

Order by SUBS\_KEY, EVENT\_DT;

QUIT;

DATA SUBS\_KEY\_EV\_DT;

SET Wk\_day\_wk\_end;

WEEKDAY\_SAMPLE = WEEKDAY(EVENT\_DT);

WEEK\_ROLL =CEIL(DAY(EVENT\_DT)/**7**);

IF WEEKDAY\_SAMPLE IN(**1**,**7**) THEN

FLAG = "WKEND\_AVG\_2G\_REV\_&out.";

ELSE IF WEEKDAY\_SAMPLE IN(**2**,**3**,**5**,**4**,**6**) THEN

FLAG = "WKDAY\_AVG\_2G\_REV\_&out.";

RUN;

PROC SQL;

CREATE TABLE TR\_RATED3 AS

SELECT SUBS\_KEY,FLAG,

AVG(SUM(TOT\_DATA\_USG\_REV\_2G,**0**)) AS AVG\_DATA\_USG\_REV\_2G FORMAT **8.2**

FROM SUBS\_KEY\_EV\_DT

GROUP BY SUBS\_KEY, FLAG

ORDER BY SUBS\_KEY;

QUIT;

PROC TRANSPOSE DATA=TR\_RATED3 OUT=WKDWKE;

BY SUBS\_KEY;

VAR AVG\_DATA\_USG\_REV\_2G;

ID FLAG;

RUN;

PROC SQL;

CREATE TABLE ABT\_wk (compress =yes) AS

SELECT T1.\*,

t2.WKEND\_AVG\_2G\_REV\_&out.,

t2.WKDAY\_AVG\_2G\_REV\_&out.

FROM &base. T1 LEFT JOIN WKDWKE T2 ON (T1.SUBS\_KEY = T2.SUBS\_KEY);

QUIT;

DATA &base.;

Set ABT\_wk;

IF WKDAY\_AVG\_2G\_REV\_&out.= **0** and WKEND\_AVG\_2G\_REV\_&out.= **0** THEN PROP\_WKDAY\_REV\_TOT\_REV\_2G\_&out.=**0**;

ELSE PROP\_WKDAY\_REV\_TOT\_REV\_2G\_&out.= WKDAY\_AVG\_2G\_REV\_&out./(WKEND\_AVG\_2G\_REV\_&out. + WKDAY\_AVG\_2G\_REV\_&out.);

IF WKDAY\_AVG\_2G\_REV\_&out.= **0** and WKEND\_AVG\_2G\_REV\_&out.= **0** THEN PROP\_WKEND\_REV\_TOT\_REV\_2G\_&out.=**0**;

ELSE PROP\_WKEND\_REV\_TOT\_REV\_2G\_&out.= WKEND\_AVG\_2G\_REV\_&out./(WKEND\_AVG\_2G\_REV\_&out. + WKDAY\_AVG\_2G\_REV\_&out.);

if WKEND\_AVG\_2G\_REV\_&out.= **0** then RAT\_WKD\_WKE\_2G\_REV\_&out =**999**;

else RAT\_WKD\_WKE\_2G\_REV\_&out = WKDAY\_AVG\_2G\_REV\_&out./WKEND\_AVG\_2G\_REV\_&out.;

FORMAT RAT\_WKD\_WKE\_2G\_REV\_&out;

RUN;

**%mend**;

%***WKDY\_WKND\_TOT\_REV\_2G***(**"&Last28days."d**, &run\_date., L28);

%***WKDY\_WKND\_TOT\_REV\_2G***(**"&Last35days."d**, &run\_date., L35);

%***WKDY\_WKND\_TOT\_REV\_2G***(**"&Last37days."d**, &run\_date., L37);

%***WKDY\_WKND\_TOT\_REV\_2G***(**"&Last67days."d**, &run\_date., L67);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*total data rev 2G\*/

**%MACRO** WKDY\_WKND\_TOT\_REV\_4G(DATE1,DATE2,OUT);

PROC SQL;

CREATE TABLE Wk\_day\_wk\_end AS SELECT

SUBS\_KEY,

EVENT\_DT,

SUM(DATA\_USG\_REV\_HOME\_4G,DATA\_USG\_REV\_ROAM\_4G,**0**) AS TOT\_DATA\_USG\_REV\_4G

FROM &rawdata.

where &date1.<=EVENT\_DT<=&date2.

Order by SUBS\_KEY, EVENT\_DT;

QUIT;

DATA SUBS\_KEY\_EV\_DT;

SET Wk\_day\_wk\_end;

WEEKDAY\_SAMPLE = WEEKDAY(EVENT\_DT);

WEEK\_ROLL =CEIL(DAY(EVENT\_DT)/**7**);

IF WEEKDAY\_SAMPLE IN(**1**,**7**) THEN

FLAG = "WKEND\_AVG\_4G\_REV\_&out.";

ELSE IF WEEKDAY\_SAMPLE IN(**2**,**3**,**5**,**4**,**6**) THEN

FLAG = "WKDAY\_AVG\_4G\_REV\_&out.";

RUN;

PROC SQL;

CREATE TABLE TR\_RATED3 AS

SELECT SUBS\_KEY,FLAG,

AVG(SUM(TOT\_DATA\_USG\_REV\_4G,**0**)) AS AVG\_DATA\_USG\_REV\_4G FORMAT **8.2**

FROM SUBS\_KEY\_EV\_DT

GROUP BY SUBS\_KEY, FLAG

ORDER BY SUBS\_KEY;

QUIT;

PROC TRANSPOSE DATA=TR\_RATED3 OUT=WKDWKE;

BY SUBS\_KEY;

VAR AVG\_DATA\_USG\_REV\_4G;

ID FLAG;

RUN;

PROC SQL;

CREATE TABLE ABT\_wk (compress =yes) AS

SELECT T1.\*,

t2.WKEND\_AVG\_4G\_REV\_&out.,

t2.WKDAY\_AVG\_4G\_REV\_&out.

FROM &base. T1 LEFT JOIN WKDWKE T2 ON (T1.SUBS\_KEY = T2.SUBS\_KEY);

QUIT;

DATA &base.;

Set ABT\_wk;

IF WKDAY\_AVG\_4G\_REV\_&out.= **0** and WKEND\_AVG\_4G\_REV\_&out.= **0** THEN PROP\_WKDAY\_REV\_TOT\_REV\_4G\_&out.=**0**;

ELSE PROP\_WKDAY\_REV\_TOT\_REV\_4G\_&out.= WKDAY\_AVG\_4G\_REV\_&out./(WKEND\_AVG\_4G\_REV\_&out. + WKDAY\_AVG\_4G\_REV\_&out.);

IF WKDAY\_AVG\_4G\_REV\_&out.= **0** and WKEND\_AVG\_4G\_REV\_&out.= **0** THEN PROP\_WKEND\_REV\_TOT\_REV\_4G\_&out.=**0**;

ELSE PROP\_WKEND\_REV\_TOT\_REV\_4G\_&out.= WKEND\_AVG\_4G\_REV\_&out./(WKEND\_AVG\_4G\_REV\_&out. + WKDAY\_AVG\_4G\_REV\_&out.);

if WKEND\_AVG\_4G\_REV\_&out.= **0** then RAT\_WKD\_WKE\_4G\_REV\_&out =**999**;

else RAT\_WKD\_WKE\_4G\_REV\_&out = WKDAY\_AVG\_4G\_REV\_&out./WKEND\_AVG\_4G\_REV\_&out.;

FORMAT RAT\_WKD\_WKE\_4G\_REV\_&out;

RUN;

**%mend**;

%***WKDY\_WKND\_TOT\_REV\_4G***(**"&Last28days."d**, &run\_date., L28);

%***WKDY\_WKND\_TOT\_REV\_4G***(**"&Last35days."d**, &run\_date., L35);

%***WKDY\_WKND\_TOT\_REV\_4G***(**"&Last37days."d**, &run\_date., L37);

%***WKDY\_WKND\_TOT\_REV\_4G***(**"&Last67days."d**, &run\_date., L67);

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*DS\_RENEWAL\*/

**DATA** aaa;

SET &rawdata;

WHERE **"&Last67days."d** <=event\_dt<=&run\_date;

**RUN**;

**DATA** A;

SET aaa;

WHERE DATA\_RECHARGE1\_MRP ne **.**;

**RUN**;

**proc** **sort** data=a ;

by subs\_key event\_dt;

**run**;

**data** a1;

set a;

by subs\_key;

if last.subs\_key then tag=**1** ;

**run**;

**data** a2;

set a1;

where tag=**1**;

**run**;

**PROC** **SQL**;

CREATE TABLE A3 AS

SELECT DISTINCT t1.SUBS\_KEY,

t1.DATA\_RECHARGE1\_PACK\_VALIDITY,

t1.DATA\_RECHARGE2\_PACK\_VALIDITY,

t1.DATA\_RECHARGE2\_MRP,

t1.DATA\_RECHARGE1\_MRP,

t1.DATA\_RECHARGE2\_MRP\_CNT,

t1.DATA\_RECHARGE1\_MRP\_CNT,

t1.EVENT\_DATE,

t1.tag

FROM WORK.A2 t1;

**QUIT**;

**data** A3;

set A3 ;

if DATA\_RECHARGE2\_MRP ne **.** then validity\_1=DATA\_RECHARGE2\_PACK\_VALIDITY;

else validity\_1=DATA\_RECHARGE1\_PACK\_VALIDITY;

**run**;

**data** A3;

set A3;

format renewal\_dt date9.;

renewal\_dt=event\_date+validity\_1;

**run**;

**data** A3;

set A3;

DS\_RENEWAL\_DATA\_RCH = intck ('day', renewal\_dt, &run\_date.);

**run**;

**PROC** **SQL**;

CREATE TABLE A4 AS

SELECT t1.\*,

t2.DS\_RENEWAL\_DATA\_RCH

FROM &base. as t1 LEFT JOIN A3 as t2 ON (t1.SUBS\_KEY = t2.SUBS\_KEY);

**QUIT**;

**data** &base. (compress=binary);

set A4;

**run**;

**data** &base. ;

set &base. ;

if DS\_RENEWAL\_DATA\_RCH=**.** then DS\_RENEWAL\_DATA\_RCH=**99**;

**run**;

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

/\*\\*??????????????????????????????????????\*\\*/

/\*\\*??????? Count of no data recharges ?????\*\\*/

/\*\\*??????????????????????????????????????\*\\*/

**proc** **sql**;

create table ds\_file as

select subs\_key,EVENT\_DT, Data\_Rch\_TAG ,

case when Data\_Rch\_TAG = 'Y' then **0** else **1** end as Data\_Rch\_TAG1

from &rawdata where **"&last67days."d** <= EVENT\_DT <= &run\_date

order by SUBS\_KEY ,EVENT\_DT;

**quit**;

**data** ds\_file\_1 /\*(drop= Data\_Rch\_Tag1)\*/;

set ds\_file;

if Data\_Rch\_Tag1 = **0**;

**run**;

**data** ds\_file\_2;

set ds\_file\_1;

by subs\_key;

format Event\_Dt1 Date9.;

Event\_Dt1 = lag(Event\_Dt);

if first.subs\_key then Event\_Dt1 = **.**;

**run**;

**data** ds\_file\_2 /\*(drop= Event\_Dt1 Event\_Dt) \*/;

set ds\_file\_2;

days\_between = intck('days',Event\_Dt1,Event\_Dt)-**1**;

**run**;

**data** ds\_file\_3 /\*(drop= days\_between Event\_Dt1)\*/;

set ds\_file\_2;

by subs\_key;

retain cnt;

if first.subs\_key then cnt = **0**;

else if days\_between = **0** then cnt = cnt;

else cnt = cnt+**1**;

if last.subs\_key ;

**run**;

**proc** **sql**;

create table ds\_file\_4

as select subs\_key,

sum(days\_between) as sum\_days\_between

,max(days\_between) as MAX\_CNT\_DAY\_NO\_DATA\_RCH\_L67

from ds\_file\_2

group by subs\_key

;

**quit**;

**data** ds\_file\_5;

merge ds\_file\_3 ds\_file\_4;

by subs\_key;

**run**;

**data** ds\_file\_5;

set ds\_file\_5;

AVG\_CNT\_DAY\_NO\_DATA\_RCH\_L67 = sum\_days\_between/(cnt);

**run**;

**PROC** **SQL**;

CREATE TABLE ds\_file\_base AS

SELECT DISTINCT SUBS\_KEY

FROM &rawdata;

**QUIT**;

**proc** **sql**;

create table ds\_file\_6 as select t1.\*, t2.MAX\_CNT\_DAY\_NO\_DATA\_RCH\_L67,t2.AVG\_CNT\_DAY\_NO\_DATA\_RCH\_L67

from ds\_file\_base as t1 left join ds\_file\_5 as t2 on (t1.subs\_key=t2.subs\_key);

**quit**;

**proc** **sql**;

create table ds\_file\_7 as select \* , avg(sum(MAX\_CNT\_DAY\_NO\_DATA\_RCH\_L67,**0**)) as avg\_max\_cnt,

avg(sum(AVG\_CNT\_DAY\_NO\_DATA\_RCH\_L67,**0**)) as avg\_avg\_cnt

from ds\_file\_6;

**quit**;

**data** ds\_file\_8;

set ds\_file\_7;

if AVG\_CNT\_DAY\_NO\_DATA\_RCH\_L67=**.** then AVG\_CNT\_DAY\_NO\_DATA\_RCH\_L67=avg\_avg\_cnt;

if MAX\_CNT\_DAY\_NO\_DATA\_RCH\_L67=**.** or MAX\_CNT\_DAY\_NO\_DATA\_RCH\_L67=**0** then MAX\_CNT\_DAY\_NO\_DATA\_RCH\_L67=avg\_max\_cnt;

**run**;

**PROC** **SQL**;

CREATE TABLE WORK.RCHRG\_day\_DATA AS

SELECT

T1.SUBS\_KEY,

T1. EVENT\_DT,

SUM(T1.Data\_Rchg\_Cnt,**0**) AS CNT\_TOT\_DATA\_RCHRG

FROM &rawdata T1 WHERE ((**"&last67days."d** <= EVENT\_DT <= &run\_date) and (calculated CNT\_TOT\_DATA\_RCHRG ne **0** or **.**))

order by SUBS\_KEY, EVENT\_DT;

**quit**;

**DATA** work.day\_last\_DATA\_rchg;

SET WORK.RCHRG\_day\_DATA ;

BY SUBS\_KEY ;

IF last.SUBS\_KEY;

**run**;

**data** work.day\_last\_DATA\_rchg;

set work.day\_last\_DATA\_rchg;

DS\_DATA\_RCH\_L67 = intck ('day', EVENT\_DT, &run\_date );

**run**;

**PROC** **SQL**;

CREATE TABLE DS\_AND\_NO\_DATA\_RCH AS SELECT T1.SUBS\_KEY,T1.AVG\_CNT\_DAY\_NO\_DATA\_RCH\_L67,

T1.MAX\_CNT\_DAY\_NO\_DATA\_RCH\_L67,T2.DS\_DATA\_RCH\_L67 FROM ds\_file\_8 as T1 LEFT JOIN

work.day\_last\_DATA\_rchg as T2 ON (T1.SUBS\_KEY=T2.SUBS\_KEY) ;

**QUIT**;

**data** DS\_AND\_NO\_DATA\_RCH (compress=binary);

set DS\_AND\_NO\_DATA\_RCH ;

if DS\_DATA\_RCH\_L67 = **.** then DS\_DATA\_RCH\_L67 = **99**;

**run**;

**DATA** DS\_AND\_NO\_DATA\_RCH1;

SET DS\_AND\_NO\_DATA\_RCH;

RAT\_DS\_RCH\_MAX\_NO\_DATA\_RCH\_L67=DS\_DATA\_RCH\_L67/MAX\_CNT\_DAY\_NO\_DATA\_RCH\_L67;

RAT\_DS\_RCH\_AVG\_NO\_DATA\_RCH\_L67=DS\_DATA\_RCH\_L67/AVG\_CNT\_DAY\_NO\_DATA\_RCH\_L67;

**RUN**;

**PROC** **SQL**;

CREATE TABLE DS\_AND\_NO\_DATA\_RCH2 AS

SELECT T1.\*,

T2.RAT\_DS\_RCH\_MAX\_NO\_DATA\_RCH\_L67,t2.RAT\_DS\_RCH\_AVG\_NO\_DATA\_RCH\_L67,t2.MAX\_CNT\_DAY\_NO\_DATA\_RCH\_L67,

t2.AVG\_CNT\_DAY\_NO\_DATA\_RCH\_L67

FROM &base. T1 LEFT JOIN DS\_AND\_NO\_DATA\_RCH1 T2 ON (T1.SUBS\_KEY=T2.SUBS\_KEY);

**QUIT**;

**data** &base.;

set DS\_AND\_NO\_DATA\_RCH2;

**run**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Total No recharge days\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

**proc** **sql**;

create table up\_SAMPF\_L67 as

select subs\_key,EVENT\_DT, DATA\_TAG,

case when Data\_Rch\_TAG = 'Y' then **0** else **1** end as Data\_Rch\_TAG1

from &rawdata

where **"&Last67days"d** <= EVENT\_DT <= &run\_date

order by SUBS\_KEY ,EVENT\_DT;

**quit**;

**proc** **sql**;

create table NOUSE\_L67 as

select subs\_key, sum(SUM(Data\_Rch\_TAG1,**0**)) AS TOT\_CNT\_DAY\_NO\_DATA\_RCH\_L67

from up\_SAMPF\_L67

GROUP BY SUBS\_KEY ;

**quit**;

**PROC** **SQL**;

CREATE TABLE NOUSE1\_L67 (compress=yes) AS

SELECT T1.\*,

T2.TOT\_CNT\_DAY\_NO\_DATA\_RCH\_L67

FROM &base. AS T1

LEFT JOIN NOUSE\_L67 AS T2 ON (T1.SUBS\_KEY = T2.SUBS\_KEY);

**QUIT**;

**data** &base. (compress=binary);

set NOUSE1\_L67;

**run**;

**data** &base.

(rename= AVG\_RCH\_VAL\_L7=AVG\_RCH\_VAL\_L7\_DATA

rename=DLY\_AVG\_RCH\_VAL\_L7=DLY\_AVG\_RCH\_VAL\_L7\_DATA

rename=AVG\_RCH\_VAL\_L15=AVG\_RCH\_VAL\_L15\_DATA

rename=DLY\_AVG\_RCH\_VAL\_L15=DLY\_AVG\_RCH\_VAL\_L15\_DATA

rename=AVG\_RCH\_VAL\_L30=AVG\_RCH\_VAL\_L30\_DATA

rename=DLY\_AVG\_RCH\_VAL\_L30=DLY\_AVG\_RCH\_VAL\_L30\_DATA

rename=AVG\_RCH\_VAL\_L37=AVG\_RCH\_VAL\_L37\_DATA

rename=DLY\_AVG\_RCH\_VAL\_L37=DLY\_AVG\_RCH\_VAL\_L37\_DATA

rename=AVG\_RCH\_VAL\_L67=AVG\_RCH\_VAL\_L67\_DATA

rename=DLY\_AVG\_RCH\_VAL\_L67=DLY\_AVG\_RCH\_VAL\_L67\_DATA

rename=CNT\_RCH\_VAL\_GT\_50\_L7=CNT\_RCH\_VAL\_GT\_50\_L7\_DATA

rename=CNT\_RCH\_VAL\_GT\_50\_L15=CNT\_RCH\_VAL\_GT\_50\_L15\_DATA

rename=CNT\_RCH\_VAL\_GT\_50\_L30=CNT\_RCH\_VAL\_GT\_50\_L30\_DATA

rename=CNT\_RCH\_VAL\_GT\_50\_L37=CNT\_RCH\_VAL\_GT\_50\_L37\_DATA

rename=CNT\_RCH\_VAL\_GT\_100\_L7=CNT\_RCH\_VAL\_GT\_100\_L7\_DATA

rename=CNT\_RCH\_VAL\_GT\_100\_L15=CNT\_RCH\_VAL\_GT\_100\_L15\_DATA

rename=CNT\_RCH\_VAL\_GT\_100\_L30=CNT\_RCH\_VAL\_GT\_100\_L30\_DATA

rename=CNT\_RCH\_VAL\_GT\_100\_L37=CNT\_RCH\_VAL\_GT\_100\_L37\_DATA

RENAME=AVG\_NIG\_USG\_L30=AVG\_NIG\_USG\_L30\_DATA

RENAME=AVG\_DAY\_USG\_L30=AVG\_DAY\_USG\_L30\_DATA

RENAME=AVG\_NIG\_USG\_L37=AVG\_NIG\_USG\_L37\_DATA

RENAME=AVG\_DAY\_USG\_L37=AVG\_DAY\_USG\_L37\_DATA

)

;

set &base.;

**RUN**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*end\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

**proc** **contents** data=adijit.DATA\_DIU\_ABT\_PB;

**run**;

/\*proc contents data=adijit.DATA\_DIU\_MH\_ABT\_VOICE\_1;\*/

/\*run;\*/

VOICE ABT

libname shimoh2'/sasdata3/SAS\_MINING/egusers/shimoh';

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Code for ABT generation\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

%Let Base=shimoh2.DATA\_DIU\_MH\_ABT\_VOICE;

%Let rawdata=shimoh2.DATA\_DIU\_MH\_MART\_X\_Voice\_1;

%Let rawdatatest=shimoh2.DATA\_DIU\_MH\_SUBS\_KEY\_VOICE;

%Let run\_date = '19AUG2017'D;

options symbolgen mprint macrogen;

%include '/sasdata3/SAS\_MINING/egusers/priban/Codes\_Priban/VINTAGE.sas';

%include '/sasdata3/SAS\_MINING/egusers/priban/Codes\_Priban/CREATEFILE.sas';

%include '/sasdata3/SAS\_MINING/egusers/priban/Codes\_Priban/SUM\_RAT\_PCT.sas';

%include '/sasdata3/SAS\_MINING/egusers/priban/Codes\_Priban/INS\_ALL\_FLAGVAR.sas';

%include '/sasdata3/SAS\_MINING/egusers/priban/Codes\_Priban/LOW\_ZERO\_MOU\_REV.sas';

%include '/sasdata3/SAS\_MINING/egusers/priban/Codes\_Priban/LOWBAL\_DAYS.sas';

%include '/sasdata3/SAS\_MINING/egusers/priban/Codes\_Priban/AVG\_SUM\_SD.sas';

%include '/sasdata3/SAS\_MINING/egusers/priban/Codes\_Priban/SLOPE.sas';

%include '/sasdata3/SAS\_MINING/egusers/priban/Codes\_Priban/SD\_X\_DB\_L36.sas';

%include '/sasdata3/SAS\_MINING/egusers/priban/Codes\_Priban/RECHARGE\_VALUE\_HIGHRECHARGE.sas';

**data** &rawdatatest;

set &rawdata (keep=subs\_key);

**run**;

**proc** **sort** data=&rawdatatest nodupkey;

by subs\_key;

**run**;

**data** &base;

set &rawdatatest;

**run**;

/\*TOTAL\_MOU\*/

%***create\_file***(TOTAL\_MOU,OUTFILE=shimoh2.RTD\_MOU);

%***SUM\_VINTAGE***(RTD\_MOU,INFILE=shimoh2.RTD\_MOU);

%***PCT\_CHG***(RTD\_MOU);

%***SUM***(**"&Last4days"d**, &run\_date,RTD\_MOU\_L4,INFILE=shimoh2.RTD\_MOU);

%***SUM***(**"&Last7days"d**, &run\_date,RTD\_MOU\_L7,INFILE=shimoh2.RTD\_MOU);

%***SUM***(**"&Last15days"d**, &run\_date,RTD\_MOU\_L15,INFILE=shimoh2.RTD\_MOU);

%***SUM***(**"&Last37days"d**, **"&Last8days"d**,RTD\_MOU\_M2,INFILE=shimoh2.RTD\_MOU);

%***SUM***(**"&Last37days"d**, &run\_date,RTD\_MOU\_L37,INFILE=shimoh2.RTD\_MOU);

%***SLOPE*** ( INFILE=shimoh2.RTD\_MOU, DATE1=**"&Last7days."D** ,DATE2= &run\_date. , ABT\_VAR=RTD\_MOU , OUT=RTD\_MOU\_L7);

%***SLOPE*** ( INFILE=shimoh2.RTD\_MOU, DATE1=**"&Last15days."D** ,DATE2= &run\_date. , ABT\_VAR=RTD\_MOU , OUT=RTD\_MOU\_L15);

%***SLOPE*** ( INFILE=shimoh2.RTD\_MOU, DATE1=**"&Last37days."D** ,DATE2=**"&Last8days"d** , ABT\_VAR=RTD\_MOU , OUT=RTD\_MOU\_M2);

%***SLOPE*** ( INFILE=shimoh2.RTD\_MOU, DATE1=**"&Last37days."D** ,DATE2= &run\_date. , ABT\_VAR=RTD\_MOU , OUT=RTD\_MOU\_L37);

%***SD\_4DB\_L36***(RTD\_MOU,INFILE=shimoh2.RTD\_MOU);

%***SD\_3DB\_L36***(RTD\_MOU,INFILE=shimoh2.RTD\_MOU);

%***DELETE\_FILE***(shimoh2,RTD\_MOU);

/\*CUST\_REV\*/

%***create\_file***(CUST\_REV,OUTFILE=shimoh2.REV);

%***SUM\_VINTAGE***(REV,INFILE=shimoh2.REV);

%***PCT\_CHG***(REV);

%***SUM***(**"&Last4days"d**, &run\_date,REV\_L4,INFILE=shimoh2.REV);

%***SUM***(**"&Last7days"d**, &run\_date,REV\_L7,INFILE=shimoh2.REV);

%***SUM***(**"&Last15days"d**, &run\_date,REV\_L15,INFILE=shimoh2.REV);

%***SUM***(**"&Last37days"d**, **"&Last8days"d**,REV\_M2,INFILE=shimoh2.REV);

%***SUM***(**"&Last37days"d**, &run\_date,REV\_L37,INFILE=shimoh2.REV);

%***SLOPE*** ( INFILE=shimoh2.REV, DATE1=**"&Last7days."D** ,DATE2= &run\_date. , ABT\_VAR=REV , OUT=REV\_L7);

%***SLOPE*** ( INFILE=shimoh2.REV, DATE1=**"&Last15days."D** ,DATE2= &run\_date. , ABT\_VAR=REV , OUT=REV\_L15);

%***SLOPE*** ( INFILE=shimoh2.REV, DATE1=**"&Last37days."D** ,DATE2= &run\_date. , ABT\_VAR=REV , OUT=REV\_L37);

%***SLOPE*** ( INFILE=shimoh2.REV, DATE1=**"&Last37days."D** ,DATE2=**"&Last8days"d** , ABT\_VAR=REV , OUT=REV\_M2);

%***SD\_4DB\_L36***(REV,INFILE=shimoh2.REV);

%***SD\_3DB\_L36***(REV,INFILE=shimoh2.REV);

%***DELETE\_FILE***(shimoh2,REV);

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*MAIN BALANCE\*/

%***create\_file***(MAIN\_BAL\_INR,OUTFILE=shimoh2.MAIN\_BAL);

%***SUM***(**"&Last4days"d**, &run\_date,MBL\_L4,INFILE=shimoh2.MAIN\_BAL);

%***SUM***(**"&Last7days"d**, &run\_date,MBL\_L7,INFILE=shimoh2.MAIN\_BAL);

%***SUM***(**"&Last15days"d**, &run\_date,MBL\_L15,INFILE=shimoh2.MAIN\_BAL);

%***SUM***(**"&Last37days"d**, **"&Last8days"d**,MBL\_M2,INFILE=shimoh2.MAIN\_BAL);

%***SUM***(**"&Last37days"d**, &run\_date,MBL\_L37,INFILE=shimoh2.MAIN\_BAL);

%***SLOPE*** ( INFILE=shimoh2.MAIN\_BAL, DATE1=**"&Last7days."D** ,DATE2= &run\_date. , ABT\_VAR=MBL , OUT=MBL\_L7);

%***SLOPE*** ( INFILE=shimoh2.MAIN\_BAL, DATE1=**"&Last15days."D** ,DATE2= &run\_date. , ABT\_VAR=MBL , OUT=MBL\_L15);

%***SLOPE*** ( INFILE=shimoh2.MAIN\_BAL, DATE1=**"&Last37days."D** ,DATE2= &run\_date. , ABT\_VAR=MBL , OUT=MBL\_L37);

%***SLOPE*** ( INFILE=shimoh2.MAIN\_BAL, DATE1=**"&Last37days."D** ,DATE2=**"&Last8days"d** , ABT\_VAR=MBL , OUT=MBL\_M2);

%***SD\_4DB\_L36***(MBL,INFILE=shimoh2.MAIN\_BAL);

%***SD\_3DB\_L36***(MBL,INFILE=shimoh2.MAIN\_BAL);

%***DELETE\_FILE***(shimoh2,MAIN\_BAL);

/\* DAYS\_INSTANCES\*/

%***create\_flag\_file***( ROAMING\_FLAG,OUTFILE=shimoh2.ROAMING);

%***CNT***(**"&last4days."d**, &run\_date,RMG\_INS\_L4,INFILE=shimoh2.ROAMING);

%***CNT***(**"&last7days."d**, &run\_date,RMG\_INS\_L7,INFILE=shimoh2.ROAMING);

%***CNT***(**"&last14days."d**, &run\_date,RMG\_INS\_L14,INFILE=shimoh2.ROAMING);

%***CNT***(**"&Last37days"d**, **"&Last8days"d**,RMG\_INS\_M2,INFILE=shimoh2.ROAMING);

%***CNT***(**"&last37days."d**, &run\_date,RMG\_INS\_L37,INFILE=shimoh2.ROAMING);

%***DELETE\_FILE***(shimoh2,ROAMING);

/\*Sum/Average Recharge and High Recharge variables\*/

%***CREATE\_RECHARGE\_FILE***(OUTFILE=shimoh2.RECHARGE,EVENTDATE=EVENT\_DT) ;

%***RCHRG\_VALUE*** (OUT=L37 , DATE1=**"&LAST37DAYS."D** , DATE2= &RUN\_DATE.,INFILE=shimoh2.RECHARGE,EVENTDATE=EVENT\_DT);

%***RCHRG\_VALUE*** (OUT=L67 , DATE1=**"&LAST67DAYS."D** , DATE2= &RUN\_DATE.,INFILE=shimoh2.RECHARGE,EVENTDATE=EVENT\_DT);

%***HIGHRECHARGE***(OUT=L7 , DATE1=**"&LAST7DAYS."D** , DATE2= &RUN\_DATE.,INFILE=shimoh2.RECHARGE, AMOUNT=**30**,EVENTDATE=EVENT\_DT);

%***HIGHRECHARGE***(OUT=L15 , DATE1=**"&LAST15DAYS."D** , DATE2= &RUN\_DATE.,INFILE=shimoh2.RECHARGE,AMOUNT=**30**,EVENTDATE=EVENT\_DT);

%***HIGHRECHARGE***(OUT=L37 , DATE1=**"&LAST37DAYS."D** , DATE2= &RUN\_DATE.,INFILE=shimoh2.RECHARGE,AMOUNT=**30**,EVENTDATE=EVENT\_DT);

%***HIGHRECHARGE***(OUT=L7 , DATE1=**"&LAST7DAYS."D** , DATE2= &RUN\_DATE.,INFILE=shimoh2.RECHARGE,AMOUNT=**50**,EVENTDATE=EVENT\_DT);

%***HIGHRECHARGE***(OUT=L15 , DATE1=**"&LAST15DAYS."D** , DATE2= &RUN\_DATE.,INFILE=shimoh2.RECHARGE,AMOUNT=**50**,EVENTDATE=EVENT\_DT);

%***HIGHRECHARGE***(OUT=L37 , DATE1=**"&LAST37DAYS."D** , DATE2= &RUN\_DATE.,INFILE=shimoh2.RECHARGE,AMOUNT=**50**,EVENTDATE=EVENT\_DT);

%***HIGHRECHARGE***(OUT=L7 , DATE1=**"&LAST7DAYS."D** , DATE2= &RUN\_DATE.,INFILE=shimoh2.RECHARGE,AMOUNT=**100**,EVENTDATE=EVENT\_DT);

%***HIGHRECHARGE***(OUT=L15 , DATE1=**"&LAST15DAYS."D** , DATE2= &RUN\_DATE.,INFILE=shimoh2.RECHARGE,AMOUNT=**100**,EVENTDATE=EVENT\_DT);

%***HIGHRECHARGE***(OUT=L37 , DATE1=**"&LAST37DAYS."D** , DATE2= &RUN\_DATE.,INFILE=shimoh2.RECHARGE,AMOUNT=**100**,EVENTDATE=EVENT\_DT);

%***DELETE\_FILE***(shimoh2,RECHARGE);

/\*???????????????????????????????????????????????????????????????????????????\*/

/\*???????????????? Count of outgoing home & revenue SMS count ???????????????\*/

/\*???????????????????????????????????????????????????????????????????????????\*/

**PROC** **DATASETS** LIB=WORK KILL;

**RUN**;

**%MACRO** ***create\_file***;

PROC SQL;

CREATE TABLE TEMP AS

SELECT SUBS\_KEY,

EVENT\_DT,

SUM(TOT\_IC\_SMS\_CNT,**0**) AS TOT\_IC\_SMS\_CNT,

SUM(TOT\_OG\_SMS\_HOME\_CNT,**0**) AS TOT\_OG\_SMS\_HOME\_CNT,

SUM(TOT\_OG\_SMS\_ROAMING\_CNT,**0**) AS TOT\_OG\_SMS\_ROAMING\_CNT

FROM &rawdata.

GROUP BY SUBS\_KEY

ORDER BY SUBS\_KEY;

QUIT;

**%MEND**;

**%MACRO** SMS\_CNT(date1, date2, out);

PROC SQL;

CREATE TABLE TEM1 AS

SELECT

SUBS\_KEY,

SUM(TOT\_IC\_SMS\_CNT) AS CNT\_SMS\_IC\_ALL\_&out.,

SUM(SUM(TOT\_OG\_SMS\_HOME\_CNT,TOT\_OG\_SMS\_ROAMING\_CNT)) AS CNT\_SMS\_OG\_ALL\_&out.,

SUM(SUM(TOT\_OG\_SMS\_HOME\_CNT,TOT\_OG\_SMS\_ROAMING\_CNT,TOT\_IC\_SMS\_CNT)) AS CNT\_SMS\_TOT\_ALL\_&out.

FROM TEMP

WHERE EVENT\_DT BETWEEN &date1. and &date2.

GROUP BY SUBS\_KEY;

quit;

PROC SQL;

CREATE TABLE abt1 AS

SELECT T1.\*,

T2.CNT\_SMS\_OG\_ALL\_&out.,

T2.CNT\_SMS\_TOT\_ALL\_&out.

FROM &base. T1 LEFT JOIN TEM1 T2 ON (T1.SUBS\_KEY=T2.SUBS\_KEY);

QUIT;

data &base.;

set abt1;

run;

proc datasets lib=work nolist;

delete TEM1;

quit;

**%MEND**;

%***create\_file***;

%***SMS\_CNT***(**"&last7days"d**, &run\_date., L7);

%***SMS\_CNT***(**"&last15days"d**, &run\_date., L15);

%***SMS\_CNT***(**"&last37days"d**, &run\_date., L37);

/\*??????? Days since last recharge ?????\*/

**PROC** **SQL**;

CREATE TABLE WORK.RCHRG\_day AS

SELECT

T1.SUBS\_KEY,

T1. EVENT\_DT,

SUM(T1.RCHG\_CNT\_PAPER ,T1.RCHG\_CNT\_V\_TOP\_UP,**0**) AS CNT\_TOT\_RCHRG

FROM &rawdata T1 WHERE ((**"&Last67days"D** <= EVENT\_DT <= &run\_date ) and (calculated CNT\_TOT\_RCHRG ne **0** or **.**))

order by SUBS\_KEY, EVENT\_DT;

**quit**;

**DATA** work.day\_last\_rchg;

SET work.RCHRG\_day ;

BY SUBS\_KEY ;

IF last.SUBS\_KEY;

**run**;

**data** work.day\_last\_rchg;

set work.day\_last\_rchg;

DS\_RCH\_L67 = intck ('day', EVENT\_DT,&run\_date );

**run**;

**PROC** **SQL**;

CREATE TABLE ABT\_DS\_RCH (compress=binary) AS

SELECT t1.\*,

t2.DS\_RCH\_L67

FROM &base. t1 LEFT JOIN WORK.DAY\_LAST\_RCHG t2 ON (t1.SUBS\_KEY = t2.SUBS\_KEY)

order by t1.subs\_key;

**QUIT**;

**data** &base. (compress=binary);

set ABT\_DS\_RCH;

if DS\_RCH\_L67 = **.** then DS\_RCH\_L67 = **99**;

**run**;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*end\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*end\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*data SHIMOH2.DATA\_DIU\_AP\_ABT\_VOICE\_final(keep=SUBS\_KEY\*/

/\*SUM\_RTD\_MOU\_L15\*/

/\*SUM\_RTD\_MOU\_L30\*/

/\*SUM\_RTD\_MOU\_L37\*/

/\*SUM\_RTD\_MOU\_M1\*/

/\*SUM\_RTD\_MOU\_M2\*/

/\*RAT\_RTD\_MOU\_M1\_M2\*/

/\*CHG\_RTD\_MOU\_L7\_M2\*/

/\*MAX\_RTD\_MOU\_L15\*/

/\*SD\_RTD\_MOU\_L15\*/

/\*MAX\_RTD\_MOU\_M2\*/

/\*SD\_RTD\_MOU\_M2\*/

/\*MAX\_RTD\_MOU\_L37\*/

/\*SD\_RTD\_MOU\_L37\*/

/\*SLP\_RTD\_MOU\_L15\*/

/\*SLP\_RTD\_MOU\_M2\*/

/\*SLP\_RTD\_MOU\_L37\*/

/\*SD\_RTD\_MOU\_4DB\_L36\*/

/\*SD\_RTD\_MOU\_3DB\_L36\*/

/\*SUM\_REV\_L15\*/

/\*SUM\_REV\_L30\*/

/\*SUM\_REV\_L37\*/

/\*SUM\_REV\_M1\*/

/\*SUM\_REV\_M2\*/

/\*RAT\_REV\_M1\_M2\*/

/\*CHG\_REV\_L7\_M2\*/

/\*MAX\_REV\_L15\*/

/\*SD\_REV\_L15\*/

/\*MAX\_REV\_M2\*/

/\*SD\_REV\_M2\*/

/\*MAX\_REV\_L37\*/

/\*SD\_REV\_L37\*/

/\*SLP\_REV\_L7\*/

/\*SLP\_REV\_L15\*/

/\*SLP\_REV\_L37\*/

/\*SLP\_REV\_M2\*/

/\*SD\_REV\_4DB\_L36\*/

/\*SD\_REV\_3DB\_L36\*/

/\*SUM\_OG\_MOU\_ALL\_L15\*/

/\*SUM\_OG\_MOU\_ALL\_L30\*/

/\*SUM\_OG\_MOU\_ALL\_L37\*/

/\*SUM\_OG\_MOU\_ALL\_M1\*/

/\*SUM\_OG\_MOU\_ALL\_M2\*/

/\*CHG\_OG\_MOU\_ALL\_L7\_M2\*/

/\*MAX\_OG\_MOU\_ALL\_L15\*/

/\*SD\_OG\_MOU\_ALL\_L15\*/

/\*MAX\_OG\_MOU\_ALL\_M2\*/

/\*SD\_OG\_MOU\_ALL\_M2\*/

/\*MAX\_OG\_MOU\_ALL\_L37\*/

/\*SD\_OG\_MOU\_ALL\_L37\*/

/\*SLP\_OG\_MOU\_ALL\_L15\*/

/\*SLP\_OG\_MOU\_ALL\_L37\*/

/\*SLP\_OG\_MOU\_ALL\_M2\*/

/\*SD\_OG\_MOU\_ALL\_4DB\_L36\*/

/\*SD\_OG\_MOU\_ALL\_3DB\_L36\*/

/\*CNT\_VLR\_INS\_L14\*/

/\*CNT\_VLR\_INS\_M2\*/

/\*CNT\_VLR\_INS\_L37\*/

/\*AVG\_RCH\_VAL\_L37\*/

/\*DLY\_AVG\_RCH\_VAL\_L37\*/

/\*AVG\_RCH\_VAL\_L67\*/

/\*DLY\_AVG\_RCH\_VAL\_L67\*/

/\*CNT\_RCH\_VAL\_GT\_30\_L7\*/

/\*CNT\_RCH\_VAL\_GT\_30\_L15\*/

/\*CNT\_RCH\_VAL\_GT\_30\_L37\*/

/\*CNT\_RCH\_VAL\_GT\_50\_L7\*/

/\*CNT\_RCH\_VAL\_GT\_50\_L15\*/

/\*CNT\_RCH\_VAL\_GT\_50\_L37\*/

/\*CNT\_RCH\_VAL\_GT\_100\_L7\*/

/\*CNT\_RCH\_VAL\_GT\_100\_L15\*/

/\*CNT\_RCH\_VAL\_GT\_100\_L37\*/

/\*MAX\_MBL\_L15\*/

/\*SD\_MBL\_L15\*/

/\*MAX\_MBL\_M2\*/

/\*SD\_MBL\_M2\*/

/\*MAX\_MBL\_L37\*/

/\*SD\_MBL\_L37\*/

/\*SLP\_MBL\_L15\*/

/\*SLP\_MBL\_L37\*/

/\*SLP\_MBL\_M2\*/

/\*SD\_MBL\_4DB\_L36\*/

/\*SD\_MBL\_3DB\_L36\*/

/\*CNT\_RMG\_INS\_L14\*/

/\*CNT\_RMG\_INS\_M2\*/

/\*CNT\_RMG\_INS\_L37\*/

/\*CNT\_SMS\_OG\_ALL\_L7\*/

/\*CNT\_SMS\_TOT\_ALL\_L7\*/

/\*CNT\_SMS\_OG\_ALL\_L15\*/

/\*CNT\_SMS\_TOT\_ALL\_L15\*/

/\*CNT\_SMS\_OG\_ALL\_L37\*/

/\*CNT\_SMS\_TOT\_ALL\_L37\*/

/\*CNT\_OG\_UNQ\_ANY\_L37\*/

/\*CNT\_OG\_UNQ\_ANY\_L15\*/

/\*);\*/

/\*SET shimoh2.DATA\_DIU\_AP\_ABT\_VOICE\_2;\*/

/\*RUN;\*/