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Housekeeping

```
clear all;
close all;
clc;
```

Set up the Import Options and import the data

```
opts = delimitedTextImportOptions("NumVariables", 14);

% Specify range and delimiter
opts.DataLines = [2, Inf];
opts.Delimiter = ",";

% Specify column names and types
opts.VariableNames =
    ["PERMNO", "date", "SHRCD", "EXHCD", "SICCD", "TICKER", "COMNAM", "SHRCLS", "NSDI"];
opts.VariableTypes =
    ["double", "datetime", "double", "double", "double", "categorical", "categorical"];
```

```

% Specify file level properties
opts.ExtraColumnsRule = "ignore";
opts.EmptyLineRule = "read";

% Specify variable properties
opts = setvaropts(opts,
  ["TICKER", "COMNAM", "SHRCLS"], "EmptyFieldRule", "auto");
opts = setvaropts(opts, "date", "InputFormat", "");

% Import the data
MTDATA = readtable("/Users/nicolasthorkildsen/Documents/Skole/MASTER
  THESIS/Data/MTDATA.csv", opts);

% Clear temporary variables
clear opts

MTDATA = movevars(MTDATA, 'RET', 'Before', 'RETX');
MTDATA = movevars(MTDATA, 'SHROUT', 'Before', 'VOL');

```

Data cleaning

```

% Removes share price below 5
MTDATA = MTDATA(MTDATA.PRC >= 5, :);

% Removes bottom 5 % MCAP
MCAP = times(MTDATA.SHROUT, MTDATA.PRC);
MCAP = array2table(MCAP);
MTDATA = [MTDATA MCAP];
clear MCAP
CAP = prctile(MTDATA.MCAP, [5]);
MTDATA = MTDATA(MTDATA.MCAP >= CAP, :);
clear CAP

% Removes top 1% return
CAP = prctile(MTDATA.RET, [99]);
MTDATA = MTDATA(MTDATA.RET <= CAP, :);
clear CAP

% Removes bottom 1% return
CAPP = prctile(MTDATA.RET, [1]);
MTDATA = MTDATA(MTDATA.RET >= CAPP, :);
clear CAPP

% Removes companies not from stock exchanges
MTDATAO = MTDATA(MTDATA.EXHCD == 1, :);
MTDATAT = MTDATA(MTDATA.EXHCD == 2, :);
MTDATATT = MTDATA(MTDATA.EXHCD == 3, :);

MTDATA = [MTDATAO; MTDATAT; MTDATATT];

clear MTDATAO

```

```
clear MTDATAT
clear MTDATATT
```

LOG RETURN

```
MTDATA.RET = log(1+MTDATA.RET);
```

HOLDING PERIOD DEFINITION JANUARY

```
infmt           = 'dd-MM-yyyy';
starttime1     = datetime('1-1-1980', 'InputFormat', infmt);
endtime1      = datenum(starttime1);
endtime1      = addtodate(endtime1, 6, 'month');
endtime1      = datestr(endtime1);
FORM66        = MTDATA(isbetween(MTDATA.date, starttime1,
    endtime1), :); % extracts formation period into own matrix

clear infmt
clear endtime1

TT             = accumarray(FORM66.PERMNO, FORM66.RET, [], @sum, 8000);
TT             = TT(TT~=8000);
TP             = unique(FORM66.PERMNO);
TT             = [TP TT];
TT             = TT(sum(isnan(TT), 2)==0, :);
TT             = array2table(TT);
TT             = sortrows(TT, 'TT2', 'descend'); % Gives average return

if mod(numel(TT.TT2), 10)
    TT.TT2(end+1:ceil(numel(TT.TT2)/10)*10) = 0;
end

clear FORM66
clear TP

TT             = sortrows(TT, 'TT2', 'descend');
C              = size(TT, 1)/10;
B              = mat2cell(TT, [C C C C C C C C C C], [2]);

one            = B{1, 1};
two            = B{2, 1};
three         = B{3, 1};
four           = B{4, 1};
five           = B{5, 1};
six            = B{6, 1};
seven          = B{7, 1};
eight         = B{8, 1};
nine           = B{9, 1};
ten            = B{10, 1};

clear TT
clear C
```

```

clear B

infmt          = 'dd-MM-yyyy';
starttime2    = datenum(starttime1);
starttime2    = addtodate(starttime2, 7, 'month');
starttime2    = datestr(starttime2);
endtime2      = datenum(starttime1);
endtime2      = addtodate(endtime2, 13, 'month');
endtime2      = datestr(endtime2);
HOLD66        = MTDATA(isbetween(MTDATA.date, starttime2,
    endtime2), :);

% FORMATION PERIOD P1

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = one.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETONEA       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETONEB       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETONEC       = A(Y(X),:);

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 11, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETONEA = A(Y(X),:);

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 12, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETONEB = A(Y(X),:);

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETONEC = A(Y(X),:);

```

```

RETONE = [RETONEA;RETONEB;RETONEC;RETONEA;RETONEB;RETONEC];

```

```

MRETONE = removevars(RETONE,

```

```

{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S

```

```

MRETONE = table2timetable(MRETONE);

```

```

MRETONE = retime(MRETONE,'monthly','mean');

```

```

MRETONE = timetable2table(MRETONE);

```

```

MRETONE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

```

```

% FORMATION PERIOD P2

```

```

clear infmt
clear endtime2

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');

```

```

endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT         = two.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOA         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 8, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 9, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOB         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 9, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 10, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOC         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 10, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 11, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOD         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 11, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 12, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);

```

```

RETTWOE          = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 12, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 13, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOF         = A(Y(X),:);

RETTWO          = [RETTWOA;RETTWOB;RETTWOC;RETTWOD;RETTWOE;RETTWOF];
MRETTWO        = removevars(RETTWO,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTWO        = table2timetable(MRETTWO);
MRETTWO        = retime(MRETTWO,'monthly','mean');
MRETTWO        = timetable2table(MRETTWO);
MRETTWO.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P3

clear infmt
clear endtime2

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 7, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 8, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = three.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTTHREEA     = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 8, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 9, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTTHREEB     = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 9, 'month');

```

```

starttime = datestr(starttime);
endtime   = datenum(starttime);
endtime   = addtodate(endtime, 10, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETTTHREEC = A(Y(X),:);

starttime = datenum(starttime);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime);
endtime   = addtodate(endtime, 11, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETTTHREED = A(Y(X),:);

starttime = datenum(starttime);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime);
endtime   = addtodate(endtime, 12, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETTTHREEE = A(Y(X),:);

starttime = datenum(starttime);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime);
endtime   = addtodate(endtime, 13, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETTTHREEF = A(Y(X),:);

RETTTHREE =
    [RETTTHREEA;RETTTHREEB;RETTTHREEC;RETTTHREED;RETTTHREEE;RETTTHREEF];
MRETTTHREE = removevars(RETTTHREE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTTHREE = table2timetable(MRETTTHREE);
MRETTTHREE = retime(MRETTTHREE,'monthly','mean');
MRETTTHREE = timetable2table(MRETTTHREE);
MRETTTHREE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

```

```
% FORMATION PERIOD P4
```

```
clear infmt
clear endtime2
```

```
starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);
```

```
FIRSTTT       = four.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFOURA     = A(Y(X),:);
```

```
starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);
```

```
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFOURB     = A(Y(X),:);
```

```
starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);
```

```
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFOURC     = A(Y(X),:);
```

```
starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);
```

```
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFOURD     = A(Y(X),:);
```

```

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETFOURE       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETFOURF       = A(Y(X),:);

RETFOUR        =
    [RETFOURA;RETFOURB;RETFOURC;RETFOURD;RETFOURE;RETFOURF];
MRETFOUR       = removevars(RETFOUR,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFOUR       = table2timetable(MRETFOUR);
MRETFOUR       = retime(MRETFOUR,'monthly','mean');
MRETFOUR       = timetable2table(MRETFOUR);
MRETFOUR.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P5

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = five.TT1;
[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETFIVEA       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');

```

```

starttime = datestr(starttime);
endtime   = datenum(starttime);
endtime   = addtodate(endtime, 9, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETFIVEB  = A(Y(X),:);

starttime = datenum(starttime);
starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime);
endtime   = addtodate(endtime, 10, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETFIVEC  = A(Y(X),:);

starttime = datenum(starttime);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime);
endtime   = addtodate(endtime, 11, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETFIVED  = A(Y(X),:);

starttime = datenum(starttime);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime);
endtime   = addtodate(endtime, 12, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETFIVEE  = A(Y(X),:);

starttime = datenum(starttime);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime);
endtime   = addtodate(endtime, 13, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETFIVEF      = A(Y(X),:);

RETFIVE       =
  [RETFIVEA;RETFIVEB;RETFIVEC;RETFIVED;RETFIVEE;RETFIVEF];
MRETFIVE      = removevars(RETFIVE,
  {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFIVE      = table2timetable(MRETFIVE);
MRETFIVE      = retime(MRETFIVE,'monthly','mean');
MRETFIVE      = timetable2table(MRETFIVE);
MRETFIVE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P6

clear infmt
clear endtime2

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 7, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 8, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
  endtime), :);

FIRSTTT      = six.TT1;
[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETSIXA      = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 8, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 9, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
  endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETSIXB      = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 9, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 10, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
  endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETSIXC      = A(Y(X),:);

```

```

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETSIXD        = A(Y(X),:);

```

```

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETSIXE        = A(Y(X),:);

```

```

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETSIXF        = A(Y(X),:);

```

```

RETFSEX        = [RETSIXA;RETSIXB;RETSIXC;RETSIXD;RETSIXE;RETSIXF];

```

```

MRETSIX        = removevars(RETFSEX,

```

```

    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S

```

```

MRETSIX        = table2timetable(MRETSIX);

```

```

MRETSIX        = retime(MRETSIX,'monthly','mean');

```

```

MRETSIX        = timetable2table(MRETSIX);

```

```

MRETSIX.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

```

```

% FORMATION PERIOD P7

```

```

clear infmt
clear endtime2

```

```

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);

```

```

endtime      = addtodate(endtime, 8, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT      = seven.TT1;
[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETSIXA      = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 8, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 9, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETB         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 9, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 10, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETC         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 10, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 11, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETD         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 11, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETE           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETF           = A(Y(X),:);

RETFSEVEN      = [RETSIXA;RETB;RETC;RETD;RETE;RETF];
MRETSEVEN      = removevars(RETFSEVEN,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSEVEN      = table2timetable(MRETSEVEN);
MRETSEVEN      = retime(MRETSEVEN,'monthly','mean');
MRETSEVEN      = timetable2table(MRETSEVEN);
MRETSEVEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P8

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = eight.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETA         = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETB         = A(Y(X),:);

starttime      = datenum(starttime1);

```

```

starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime);
endtime = addtodate(endtime, 10, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETC = A(Y(X),:);

```

```

starttime = datenum(starttime);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime);
endtime = addtodate(endtime, 11, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETD = A(Y(X),:);

```

```

starttime = datenum(starttime);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime);
endtime = addtodate(endtime, 12, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETE = A(Y(X),:);

```

```

starttime = datenum(starttime);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETF = A(Y(X),:);

```

```

RETEIGHT = [RETA;RETB;RETC;RETD;RETE;RETF];

```

```

MRETEIGHT = removevars(RETEIGHT,

```

```

    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S

```

```

MRETEIGHT = table2timetable(MRETEIGHT);

```

```

MRETEIGHT = retime(MRETEIGHT,'monthly','mean');

```

```

MRETEIGHT = timetable2table(MRETEIGHT);

```

```

MRETEIGHT.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

```

```
% FORMATION PERIOD P9
```

```
clear infmt
clear endtime2
```

```
starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);
```

```
FIRSTTT       = nine.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETA          = A(Y(X),:);
```

```
starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);
```

```
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETB          = A(Y(X),:);
```

```
starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);
```

```
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETC          = A(Y(X),:);
```

```
starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);
```

```
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETD          = A(Y(X),:);
```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 12, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETE = A(Y(X),:);

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETF = A(Y(X),:);

```

```

RETFNINE = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETNINE = removevars(RETFNINE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETNINE = table2timetable(MRETNINE);
MRETNINE = retime(MRETNINE,'monthly','mean');
MRETNINE = timetable2table(MRETNINE);
MRETNINE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

```

```

% FORMATION PERIOD P10

```

```

clear infmt
clear endtime2

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

FIRSTTT = ten.TT1;
[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETA = A(Y(X),:);

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);

```

```

endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 9, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETB             = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 9, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 10, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETC             = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 10, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 11, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETD             = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 11, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 12, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETE             = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 12, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 13, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETF          = A(Y(X),:);

RETTEN        = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETTEN       = removevars(RETTEN,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTEN       = table2timetable(MRETTEN);
MRETTEN       = retime(MRETTEN,'monthly','mean');
MRETTEN       = timetable2table(MRETTEN);
MRETTEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

MRETTWO       = MRETTWO.AVGRETURN;
MRETTWO       = array2table(MRETTWO);

MRETTTHREE    = MRETTTHREE.AVGRETURN;
MRETTTHREE    = array2table(MRETTTHREE);

MRETFOUR      = MRETFOUR.AVGRETURN;
MRETFOUR      = array2table(MRETFOUR);

MRETFIVE      = MRETFIVE.AVGRETURN;
MRETFIVE      = array2table(MRETFIVE);

MRETSIX       = MRETSIX.AVGRETURN;
MRETSIX       = array2table(MRETSIX);

MRETSEVEN     = MRETSEVEN.AVGRETURN;
MRETSEVEN     = array2table(MRETSEVEN);

MRETEIGHT     = MRETEIGHT.AVGRETURN;
MRETEIGHT     = array2table(MRETEIGHT);

MRETNINE      = MRETNINE.AVGRETURN;
MRETNINE      = array2table(MRETNINE);

MRETTEN       = MRETTEN.AVGRETURN;
MRETTEN       = array2table(MRETTEN);

MEANPORTONE   = [MRETONE MRETTWO MRETTTHREE MRETFOUR MRETFIVE MRETSIX
MRETSEVEN MRETEIGHT MRETNINE MRETTEN];
MEANPORTONE.Properties.VariableNames =
{'MONTH' 'P1' 'P2' 'P3' 'P4' 'P5' 'P6' 'P7' 'P8' 'P9' 'P10'};

TRADINGRET    = MEANPORTONE.P1 - MEANPORTONE.P10;
TRADINGRET    = array2table(TRADINGRET);

MEANPORTONE   = [MEANPORTONE TRADINGRET];

```

HOLDING PERIOD LOOP JANUARY

```
for K = 1 : 90;
```

```

infmt          = 'dd-MM-yyyy';
starttime1     = datenum(starttime1);
starttime1     = addtodate(starttime1, 6, 'month');
starttime1     = datestr(starttime1);
endtime1       = datenum(starttime1);
endtime1       = addtodate(endtime1, 6, 'month');
endtime1       = datestr(endtime1);
FORM66         = MTDATA(isbetween(MTDATA.date, starttime1,
    endtime1), :); % extracts formation period into own matrix

clear infmt
clear endtime1

TT             = accumarray(FORM66.PERMNO,FORM66.RET,[],@sum,8000);
TT             = TT(TT~=8000);
TP             = unique(FORM66.PERMNO);
TT             = [TP TT];
TT             = TT(sum(isnan(TT),2)==0,:);
TT             = array2table(TT);
TT             = sortrows(TT,'TT2','descend'); % Gives average return

if mod(numel(TT.TT2),10)
    TT.TT2(end+1:ceil(numel(TT.TT2)/10)*10) = 0;
end

clear FORM66
clear TP

TT             = sortrows(TT,'TT2','descend');
C              = size(TT,1)/10;
B              = mat2cell(TT,[C C C C C C C C C C],[2]);

one            = B{1, 1};
two            = B{2, 1};
three         = B{3, 1};
four          = B{4, 1};
five         = B{5, 1};
six          = B{6, 1};
seven        = B{7, 1};
eight        = B{8, 1};
nine         = B{9, 1};
ten          = B{10, 1};

clear TT
clear C
clear B

infmt          = 'dd-MM-yyyy';
starttime2     = datenum(starttime1);
starttime2     = addtodate(starttime2, 7, 'month');
starttime2     = datestr(starttime2);
endtime2       = datenum(starttime1);
endtime2       = addtodate(endtime2, 13, 'month');
endtime2       = datestr(endtime2);

```

```

HOLD66          = MTDATA(isbetween(MTDATA.date, starttime2,
    endtime2), :);

% FORMATION PERIOD P1

clear infmt
clear endtime2

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 7, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 8, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = one.TT1;
[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETONEA        = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 8, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 9, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETONEB        = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 9, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 10, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETONEC        = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 10, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 11, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONEA        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONEB        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONEC        = A(Y(X),:);

RETONE         = [RETONEA;RETONEB;RETONEC;RETONEA;RETONEB;RETONEC];
MRETONE        = removevars(RETONE,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETONE        = table2timetable(MRETONE);
MRETONE        = retime(MRETONE,'monthly','mean');
MRETONE        = timetable2table(MRETONE);
MRETONE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P2

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = two.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOA        = A(Y(X),:);

starttime      = datenum(starttime1);

```

```

starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETTWOB       = A(Y(X),:);

starttime      = datenum(starttime);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETTWOC       = A(Y(X),:);

starttime      = datenum(starttime);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETTWOD       = A(Y(X),:);

starttime      = datenum(starttime);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETTWOE       = A(Y(X),:);

starttime      = datenum(starttime);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);

```

```

A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTWOF = A(Y(X),:);

RETTWO = [RETTWOA;RETTWOB;RETTWOC;RETTWOD;RETTWOE;RETTWOF];
MRETTWO = removevars(RETTWO,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTWO = table2timetable(MRETTWO);
MRETTWO = retime(MRETTWO,'monthly','mean');
MRETTWO = timetable2table(MRETTWO);
MRETTWO.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P3

clear infmt
clear endtime2

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT = three.TT1;
[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTTHREEA = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 9, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTTHREEB = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 10, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);

```

```

RETTHREEC      = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 10, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 11, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETTHREED     = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 11, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 12, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETTHREEE     = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 12, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 13, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETHREEEF     = A(Y(X),:);

RETTHREE      =
    [RETTHREEEA;RETTHREEEB;RETTHREEC;RETTHREED;RETTHREEE;RETHREEEF];
MRETTHREE     = removevars(RETTHREE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTHREE     = table2timetable(MRETTHREE);
MRETTHREE     = retime(MRETTHREE,'monthly','mean');
MRETTHREE     = timetable2table(MRETTHREE);
MRETTHREE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P4

clear infmt
clear endtime2

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 7, 'month');

```

```

starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 8, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT   = four.TT1;
[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETFOURA = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 9, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETFOURB  = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 10, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETFOURC  = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 11, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETFOURD  = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 12, 'month');
endtime   = datestr(endtime);

```

```

A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFOURE = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFOURF = A(Y(X),:);

RETFOUR =
    [RETFOURA;RETFOURB;RETFOURC;RETFOURD;RETFOURE;RETFOURF];
MRETFOUR = removevars(RETFOUR,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFOUR = table2timetable(MRETFOUR);
MRETFOUR = retime(MRETFOUR,'monthly','mean');
MRETFOUR = timetable2table(MRETFOUR);
MRETFOUR.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P5

clear infmt
clear endtime2

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT = five.TT1;
[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFIVEA = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 9, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEB       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEC       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVED       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEE       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEF       = A(Y(X),:);

RETFIVE        =
    [RETFIVEA;RETFIVEB;RETFIVEC;RETFIVED;RETFIVEE;RETFIVEF];

```

```

MRETFIVE      = removevars(RETFIVE,
{'PERMNO', 'SICCD', 'TICKER', 'COMNAM', 'NSDINX', 'PRC', 'SHROUT', 'VOL', 'RETX', 'MCAP', 'S
MRETFIVE      = table2timetable(MRETFIVE);
MRETFIVE      = retime(MRETFIVE, 'monthly', 'mean');
MRETFIVE      = timetable2table(MRETFIVE);
MRETFIVE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P6

clear infmt
clear endtime2

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 7, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 8, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT      = six.TT1;
[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETSIXA      = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 8, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 9, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETSIXB      = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 9, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 10, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETSIXC      = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 10, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 11, 'month');

```

```

endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXD        = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 11, 'month');
starttime       = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXE        = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 12, 'month');
starttime       = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXF        = A(Y(X),:);

RETFSEX        = [RETSIXA;RETSIXB;RETSIXC;RETSIXD;RETSIXE;RETSIXF];
MRETSIX        = removevars(RETFSEX,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSIX        = table2timetable(MRETSIX);
MRETSIX        = retime(MRETSIX,'monthly','mean');
MRETSIX        = timetable2table(MRETSIX);
MRETSIX.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P7

clear infmt
clear endtime2

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 7, 'month');
starttime       = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = seven.TT1;

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXA        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETB           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETC           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETD           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETE           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);

```

```

endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 13, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETF            = A(Y(X),:);

RETFSEVEN       = [RETSIXA;RETB;RETC;RETD;RETE;RETF];
MRETSEVEN       = removevars(RETFSEVEN,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSEVEN       = table2timetable(MRETSEVEN);
MRETSEVEN       = retime(MRETSEVEN,'monthly','mean');
MRETSEVEN       = timetable2table(MRETSEVEN);
MRETSEVEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P8

clear infmt
clear endtime2

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 7, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 8, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT         = eight.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETA            = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 8, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 9, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETB            = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 9, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 10, 'month');
endtime          = datestr(endtime);

```

```

A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETC = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 11, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETD = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 12, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETE = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETF = A(Y(X),:);

RETEIGHT = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETEIGHT = removevars(RETEIGHT,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETEIGHT = table2timetable(MRETEIGHT);
MRETEIGHT = retime(MRETEIGHT,'monthly','mean');
MRETEIGHT = timetable2table(MRETEIGHT);
MRETEIGHT.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P9

clear infmt
clear endtime2

```

```

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = nine.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETA          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETB          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETC          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETD          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);

```

```

endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETE        = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 13, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETF        = A(Y(X),:);

RETFNINE     = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETNINE     = removevars(RETFNINE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETNINE     = table2timetable(MRETNINE);
MRETNINE     = retime(MRETNINE,'monthly','mean');
MRETNINE     = timetable2table(MRETNINE);
MRETNINE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P10

clear infmt
clear endtime2

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 7, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 8, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT     = ten.TT1;
[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETA        = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 8, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 9, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETB           = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 9, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 10, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETC           = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 10, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 11, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETD           = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 11, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 12, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETE           = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 12, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 13, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETF           = A(Y(X),:);

RETTEN        = [RETA;RETB;RETC;RETD;RETE;RETF];

```

```

MRETTEN          = removevars(RETTEN,
{'PERMNO', 'SICCD', 'TICKER', 'COMNAM', 'NSDINX', 'PRC', 'SHROUT', 'VOL', 'RETX', 'MCAP', 'S
MRETTEN          = table2timetable(MRETTEN);
MRETTEN          = retime(MRETTEN, 'monthly', 'mean');
MRETTEN          = timetable2table(MRETTEN);
MRETTEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

MRETTWO          = MRETTWO.AVGRETURN;
MRETTWO          = array2table(MRETTWO);

MRETTTHREE       = MRETTTHREE.AVGRETURN;
MRETTTHREE       = array2table(MRETTTHREE);

MRETTFOUR        = MRETTFOUR.AVGRETURN;
MRETTFOUR        = array2table(MRETTFOUR);

MRETTFIVE        = MRETTFIVE.AVGRETURN;
MRETTFIVE        = array2table(MRETTFIVE);

MRETTSEX         = MRETTSEX.AVGRETURN;
MRETTSEX         = array2table(MRETTSEX);

MRETTSEVEN       = MRETTSEVEN.AVGRETURN;
MRETTSEVEN       = array2table(MRETTSEVEN);

MRETT EIGHT      = MRETT EIGHT.AVGRETURN;
MRETT EIGHT      = array2table(MRETT EIGHT);

MRETTNINE        = MRETTNINE.AVGRETURN;
MRETTNINE        = array2table(MRETTNINE);

MRETTTEN         = MRETTTEN.AVGRETURN;
MRETTTEN         = array2table(MRETTTEN);

MEANPORTONE      = [MRETTONE MRETTTWO MRETTTHREE MRETTFOUR MRETTFIVE MRETTSEX
MRETTSEVEN MRETT EIGHT MRETTNINE MRETTTEN];
MEANPORTONE.Properties.VariableNames =
{'MONTH' 'P1' 'P2' 'P3' 'P4' 'P5' 'P6' 'P7' 'P8' 'P9' 'P10'};

TRADINGRET       = MEANPORTONE.P1 - MEANPORTONE.P10;
TRADINGRET       = array2table(TRADINGRET);

MEANPORTONE      = [MEANPORTONE TRADINGRET];

```

end

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CLEAR VARIABLES

```
clear A
clear eight
clear endtime
clear FIRSTTT
clear five
clear four
clear HOLD66
clear K
clear MEAN
clear MRETEIGHT
clear MRETFIVE
clear MRETFOUR
clear MRETNINE
clear MRETONE
clear MRETSEVEN
clear MRETSIX
clear MRETTEN
```

clear MRETTTHREE
clear MRETTTWO
clear nine
clear one
clear RETA
clear RETB
clear RETC
clear RETD
clear RETE
clear RETEIGHT
clear RETF
clear RETFIVE
clear RETFIVEA
clear RETFIVEB
clear RETFIVEC
clear RETFIVED
clear RETFIVEE
clear RETFIVEF
clear RETFNINE
clear RETFOUR
clear RETFOURA
clear RETFOURB
clear RETFOURC
clear RETFOURD
clear RETFOURE
clear RETFOURF
clear RETFSEVEN
clear RETFSIX
clear RETHREEF
clear RETONE
clear RETONEA
clear RETONEB
clear RETONEC
clear RETONED
clear RETONEE
clear RETONEF
clear RETSIXA
clear RETSIXB
clear RETSIXC
clear RETSIXD
clear RETSIXE
clear RETSIXF
clear RETTEN
clear RETTHREE
clear RETTHREEA
clear RETTHREEB
clear RETTHREEC
clear RETTHREED
clear RETTHREEE
clear RETTWO
clear RETTWOA
clear RETTWOB
clear RETTWOC
clear RETTWOD

```

clear RETTWOE
clear RETTWOF
clear seven
clear six
clear starttime
clear starttime1
clear starttime2
clear ten
clear three
clear TRADINGRET
clear two
clear X
clear Y

```

HOLDING PERIOD DEFINITION FEBRUARY

```

infmt          = 'dd-MM-yyyy';
starttime1     = datetime('1-2-1980', 'InputFormat', infmt);
endtime1       = datenum(starttime1);
endtime2       = addtodate(endtime1, 6, 'month');
endtime3       = datestr(endtime2);
FORM66         = MTDATA(isbetween(MTDATA.date, starttime1,
    endtime3), :); % extracts formation period into own matrix

clear infmt
clear endtime1

TT              = accumarray(FORM66.PERMNO, FORM66.RET, [], @sum, 8000);
TT              = TT(TT~=8000);
TP              = unique(FORM66.PERMNO);
TT              = [TP TT];
TT              = TT(sum(isnan(TT), 2)==0, :);
TT              = array2table(TT);
TT              = sortrows(TT, 'TT2', 'descend'); % Gives average return

if mod(numel(TT.TT2), 10)
    TT.TT2(end+1:ceil(numel(TT.TT2)/10)*10) = 0;
end

clear FORM66
clear TP

TT              = sortrows(TT, 'TT2', 'descend');
C                = size(TT, 1)/10;
B                = mat2cell(TT, [C C C C C C C C C C], [2]);

one              = B{1, 1};
two              = B{2, 1};
three            = B{3, 1};
four             = B{4, 1};
five             = B{5, 1};
six              = B{6, 1};
seven            = B{7, 1};

```

```

eight          = B{8, 1};
nine           = B{9, 1};
ten            = B{10, 1};

clear TT
clear C
clear B

infmt          = 'dd-MM-yyyy';
starttime2    = datenum(starttime1);
starttime2    = addtodate(starttime2, 7, 'month');
starttime2    = datestr(starttime2);
endtime2      = datenum(starttime1);
endtime2      = addtodate(endtime2, 13, 'month');
endtime2      = datestr(endtime2);
HOLD66        = MTDATA(isbetween(MTDATA.date, starttime2,
    endtime2), :);
% HOLDING PERIOD P1

clear infmt
clear endtime2

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 7, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 8, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT      = one.TT1;
[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETONEA      = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 8, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 9, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETONEB      = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 9, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 10, 'month');
endtime       = datestr(endtime);

```

```

A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETONEC = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 11, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETONED = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 12, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETONEE = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETONEF = A(Y(X),:);

RETONE = [RETONEA;RETONEB;RETONEC;RETONED;RETONEE;RETONEF];
MRETONE = removevars(RETONE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETONE = table2timetable(MRETONE);
MRETONE = retime(MRETONE,'monthly','mean');
MRETONE = timetable2table(MRETONE);
MRETONE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% HOLDING PERIOD P2

clear infmt
clear endtime2

```

```

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = two.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETTWOA       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETTWOB       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETTWOC       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETTWOD       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);

```

```

endtime          = addtodate(endtime, 12, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETTWOE          = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 12, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 13, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETTWOF          = A(Y(X),:);

RETTWO           = [RETTWOA;RETTWOB;RETTWOC;RETTWOD;RETTWOE;RETTWOF];
MRETTWO          = removevars(RETTWO,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTWO          = table2timetable(MRETTWO);
MRETTWO          = retime(MRETTWO,'monthly','mean');
MRETTWO          = timetable2table(MRETTWO);
MRETTWO.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% HOLDING PERIOD P3

clear infmt
clear endtime2

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 7, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 8, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT         = three.TT1;
[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETTTHREEA      = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 8, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 9, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTTHREEEB    = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTTHREEEC    = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTTHREED     = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTTHREEEE    = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETHREEEF      = A(Y(X),:);

RETTTHREE      =
    [RETTTHREEEA;RETTTHREEEB;RETTTHREEEC;RETTTHREED;RETTTHREEEE;RETHREEEF];

```

```

MRETTTHREE      = removevars(RETTTHREE,
{'PERMNO', 'SICCD', 'TICKER', 'COMNAM', 'NSDINX', 'PRC', 'SHROUT', 'VOL', 'RETX', 'MCAP', 'S
MRETTTHREE      = table2timetable(MRETTTHREE);
MRETTTHREE      = retime(MRETTTHREE, 'monthly', 'mean');
MRETTTHREE      = timetable2table(MRETTTHREE);
MRETTTHREE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% HOLDING PERIOD P4

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = four.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFOURA     = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFOURB     = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFOURC     = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');

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```

endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFOURD        = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 11, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 12, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFOURE        = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 12, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 13, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFOURF        = A(Y(X),:);

RETFOUR         =
    [RETFOURA;RETFOURB;RETFOURC;RETFOURD;RETFOURE;RETFOURF];
MRETFOUR        = removevars(RETFOUR,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFOUR        = table2timetable(MRETFOUR);
MRETFOUR        = retime(MRETFOUR,'monthly','mean');
MRETFOUR        = timetable2table(MRETFOUR);
MRETFOUR.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% HOLDING PERIOD P5

clear infmt
clear endtime2

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 7, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 8, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

FIRSTTTT      = five.TT1;
[X,Y]         = ismember(FIRSTTTT,A.PERMNO);
RETFIVEA     = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 8, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 9, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTTT,A.PERMNO);
RETFIVEB     = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 9, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 10, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTTT,A.PERMNO);
RETFIVEC     = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 10, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 11, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTTT,A.PERMNO);
RETFIVED     = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 11, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTTT,A.PERMNO);
RETFIVEE     = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');

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```

starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFIVEF      = A(Y(X),:);

RETFIVE       =
    [RETFIVEA;RETFIVEB;RETFIVEC;RETFIVED;RETFIVEE;RETFIVEF];
MRETFIVE      = removevars(RETFIVE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFIVE      = table2timetable(MRETFIVE);
MRETFIVE      = retime(MRETFIVE,'monthly','mean');
MRETFIVE      = timetable2table(MRETFIVE);
MRETFIVE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% HOLDING PERIOD P6

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = six.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETSIXA       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETSIXB       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');

```

```

endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXC         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 10, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 11, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXD         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 11, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 12, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXE         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 12, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 13, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXF         = A(Y(X),:);

RETFSEX        = [RETSIXA;RETSIXB;RETSIXC;RETSIXD;RETSIXE;RETSIXF];
MRETSIX        = removevars(RETFSEX,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSIX        = table2timetable(MRETSIX);
MRETSIX        = retime(MRETSIX,'monthly','mean');
MRETSIX        = timetable2table(MRETSIX);
MRETSIX.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% HOLDING PERIOD P7

clear infmt

```

```

clear endtime2

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT = seven.TT1;
[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETSIXA = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 9, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETB = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 10, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETC = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 11, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETD = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);

```

```

endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 12, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETE            = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 12, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 13, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETF            = A(Y(X),:);

RETFSEVEN       = [RETSIXA;RETB;RETC;RETD;RETE;RETF];
MRETSEVEN       = removevars(RETFSEVEN,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSEVEN       = table2timetable(MRETSEVEN);
MRETSEVEN       = retime(MRETSEVEN,'monthly','mean');
MRETSEVEN       = timetable2table(MRETSEVEN);
MRETSEVEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% HOLDING PERIOD P8

clear infmt
clear endtime2

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 7, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 8, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = eight.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETA            = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 8, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 9, 'month');
endtime         = datestr(endtime);

```

```

A          = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETB      = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 10, 'month');
endtime   = datestr(endtime);
A          = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETC      = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 11, 'month');
endtime   = datestr(endtime);
A          = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETD      = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 12, 'month');
endtime   = datestr(endtime);
A          = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETE      = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 13, 'month');
endtime   = datestr(endtime);
A          = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETF      = A(Y(X),:);

```

```

RETEIGHT      = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETEIGHT     = removevars(RETEIGHT,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETEIGHT     = table2timetable(MRETEIGHT);
MRETEIGHT     = retime(MRETEIGHT,'monthly','mean');
MRETEIGHT     = timetable2table(MRETEIGHT);
MRETEIGHT.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% HOLDING PERIOD P9

clear infmt
clear endtime2

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 7, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 8, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT      = nine.TT1;
[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETA         = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 8, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 9, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETB         = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 9, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 10, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETC         = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 10, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);

```

```

endtime      = addtodate(endtime, 11, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETD         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 11, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETE         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 13, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETF         = A(Y(X),:);

RETFNINE     = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETNINE     = removevars(RETFNINE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETNINE     = table2timetable(MRETNINE);
MRETNINE     = retime(MRETNINE,'monthly','mean');
MRETNINE     = timetable2table(MRETNINE);
MRETNINE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% HOLDING PERIOD P10

clear infmt
clear endtime2

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 7, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 8, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

FIRSTTT      = ten.TT1;
[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETA         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 8, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 9, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETB         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 9, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 10, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETC         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 10, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 11, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETD         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 11, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETE         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');

```

```

starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETF           = A(Y(X),:);

RETTEN        = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETTEN       = removevars(RETTEN,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTEN       = table2timetable(MRETTEN);
MRETTEN       = retime(MRETTEN,'monthly','mean');
MRETTEN       = timetable2table(MRETTEN);
MRETTEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

MRETTWO       = MRETTWO.AVGRETURN;
MRETTWO       = array2table(MRETTWO);

MRETTTHREE    = MRETTTHREE.AVGRETURN;
MRETTTHREE    = array2table(MRETTTHREE);

MRETFOUR      = MRETFOUR.AVGRETURN;
MRETFOUR      = array2table(MRETFOUR);

MRETFIVE      = MRETFIVE.AVGRETURN;
MRETFIVE      = array2table(MRETFIVE);

MRETSIX       = MRETSIX.AVGRETURN;
MRETSIX       = array2table(MRETSIX);

MRETSEVEN     = MRETSEVEN.AVGRETURN;
MRETSEVEN     = array2table(MRETSEVEN);

MRETEIGHT     = MRETEIGHT.AVGRETURN;
MRETEIGHT     = array2table(MRETEIGHT);

MRETNINE      = MRETNINE.AVGRETURN;
MRETNINE      = array2table(MRETNINE);

MRETTEN       = MRETTEN.AVGRETURN;
MRETTEN       = array2table(MRETTEN);

MEANPORTTWO   = [MRETTONE MRETTWO MRETTTHREE MRETFOUR MRETFIVE MRETSIX
    MRETSEVEN MRETEIGHT MRETNINE MRETTEN];
MEANPORTTWO.Properties.VariableNames =
    {'MONTH' 'P1' 'P2' 'P3' 'P4' 'P5' 'P6' 'P7' 'P8' 'P9' 'P10'};

TRADINGRET    = MEANPORTTWO.P1 - MEANPORTTWO.P10;
TRADINGRET    = array2table(TRADINGRET);

```

```
MEANPORTTWO      = [MEANPORTTWO TRADINGRET];
```

Warning: The assignment added rows to the table, but did not assign values to all of the table's existing variables. Those variables are extended with rows containing default values.

HOLDING PERIOD LOOP FABRUARY

```
for K = 1 : 90;

    infmt          = 'dd-MM-yyyy';
    starttimel     = datenum(starttimel);
    starttimel     = addtodate(starttimel, 6, 'month');
    starttimel     = datestr(starttimel);
    endtimel       = datenum(starttimel);
    endtimel       = addtodate(endtimel, 6, 'month');
    endtimel       = datestr(endtimel);
    FORM66        = MTDATA(isbetween(MTDATA.date, starttimel,
    endtimel), :); % extracts formation period into own matrix

    clear infmt
    clear endtimel

    TT            = accumarray(FORM66.PERMNO,FORM66.RET,[],@sum,8000);
    TT            = TT(TT~=8000);
    TP            = unique(FORM66.PERMNO);
    TT            = [TP TT];
    TT            = TT(sum(isnan(TT),2)==0,:);
    TT            = array2table(TT);
    TT            = sortrows(TT,'TT2','descend'); % Gives average return

    if mod(numel(TT.TT2),10)
        TT.TT2(end+1:ceil(numel(TT.TT2)/10)*10) = 0;
    end

    clear FORM66
    clear TP

    TT            = sortrows(TT,'TT2','descend');
    C              = size(TT,1)/10;
    B              = mat2cell(TT,[C C C C C C C C C C],[2]);

    one           = B{1, 1};
    two           = B{2, 1};
    three         = B{3, 1};
    four          = B{4, 1};
    five          = B{5, 1};
    six           = B{6, 1};
    seven         = B{7, 1};
    eight         = B{8, 1};
    nine          = B{9, 1};
```

```

ten                = B{10, 1};

clear TT
clear C
clear B

infmt              = 'dd-MM-yyyy';
starttime2        = datenum(starttime1);
starttime2        = addtodate(starttime2, 7, 'month');
starttime2        = datestr(starttime2);
endtime2          = datenum(starttime1);
endtime2          = addtodate(endtime2, 13, 'month');
endtime2          = datestr(endtime2);
HOLD66            = MTDATA(isbetween(MTDATA.date, starttime2,
    endtime2), :);
% HOLDING PERIOD P1

clear infmt
clear endtime2

starttime         = datenum(starttime1);
starttime         = addtodate(starttime, 7, 'month');
starttime         = datestr(starttime);
endtime           = datenum(starttime1);
endtime           = addtodate(endtime, 8, 'month');
endtime           = datestr(endtime);
A                 = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT          = one.TT1;
[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETONEA          = A(Y(X),:);

starttime         = datenum(starttime1);
starttime         = addtodate(starttime, 8, 'month');
starttime         = datestr(starttime);
endtime           = datenum(starttime1);
endtime           = addtodate(endtime, 9, 'month');
endtime           = datestr(endtime);
A                 = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETONEB          = A(Y(X),:);

starttime         = datenum(starttime1);
starttime         = addtodate(starttime, 9, 'month');
starttime         = datestr(starttime);
endtime           = datenum(starttime1);
endtime           = addtodate(endtime, 10, 'month');
endtime           = datestr(endtime);
A                 = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONEC        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONED        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONEE        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONEF        = A(Y(X),:);

RETONE         = [RETONEA;RETONEB;RETONEC;RETONED;RETONEE;RETONEF];
MRETONE        = removevars(RETONE,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETONE        = table2timetable(MRETONE);
MRETONE        = retime(MRETONE,'monthly','mean');
MRETONE        = timetable2table(MRETONE);
MRETONE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% HOLDING PERIOD P2

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');

```

```

starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 8, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT   = two.TT1;
[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETTWOA   = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 9, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETTWOB   = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 10, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETTWOC   = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 11, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETTWOD   = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 12, 'month');
endtime   = datestr(endtime);

```

```

A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTWOE = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTWOF = A(Y(X),:);

RETTWO = [RETTWOA;RETTWOB;RETTWOC;RETTWOD;RETTWOE;RETTWOF];
MRETTWO = removevars(RETTWO,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTWO = table2timetable(MRETTWO);
MRETTWO = retime(MRETTWO,'monthly','mean');
MRETTWO = timetable2table(MRETTWO);
MRETTWO.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% HOLDING PERIOD P3

clear infmt
clear endtime2

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT = three.TT1;
[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTTHREEA = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 9, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);

```

```

RETTHREEB      = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETTHREEC      = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETTHREED      = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETTHREEE      = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETHREEF      = A(Y(X),:);

RETTHREE      =
    [RETTHREEA;RETTHREEB;RETTHREEC;RETTHREED;RETTHREEE;RETHREEF];
MRETTHREE      = removevars(RETTHREE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S

```

```

MRETTHREE      = table2timetable(MRETTHREE);
MRETTHREE      = retime(MRETTHREE, 'monthly', 'mean');
MRETTHREE      = timetable2table(MRETTHREE);
MRETTHREE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% HOLDING PERIOD P4

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = four.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFOURA     = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFOURB     = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFOURC     = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);

```

```

A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFOURD = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 12, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFOURE = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFOURF = A(Y(X),:);

RETFOUR =
    [RETFOURA;RETFOURB;RETFOURC;RETFOURD;RETFOURE;RETFOURF];
MRETFOUR = removevars(RETFOUR,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFOUR = table2timetable(MRETFOUR);
MRETFOUR = retime(MRETFOUR,'monthly','mean');
MRETFOUR = timetable2table(MRETFOUR);
MRETFOUR.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% HOLDING PERIOD P5

clear infmt
clear endtime2

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT = five.TT1;

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEA       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEB       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEC       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVED       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEE       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);

```

```

endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 13, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEF        = A(Y(X),:);

RETFIVE         =
    [RETFIVEA;RETFIVEB;RETFIVEC;RETFIVED;RETFIVEE;RETFIVEF];
MRETFIVE        = removevars(RETFIVE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFIVE        = table2timetable(MRETFIVE);
MRETFIVE        = retime(MRETFIVE,'monthly','mean');
MRETFIVE        = timetable2table(MRETFIVE);
MRETFIVE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% HOLDING PERIOD P6

clear infmt
clear endtime2

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 7, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 8, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT         = six.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXA         = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 8, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 9, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXB         = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 9, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 10, 'month');
endtime          = datestr(endtime);

```

```

A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETSIXC = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 11, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETSIXD = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 12, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETSIXE = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETSIXF = A(Y(X),:);

RETSIX = [RETSIXA;RETSIXB;RETSIXC;RETSIXD;RETSIXE;RETSIXF];
MRETSIX = removevars(RETSIX,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSIX = table2timetable(MRETSIX);
MRETSIX = retime(MRETSIX,'monthly','mean');
MRETSIX = timetable2table(MRETSIX);
MRETSIX.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% HOLDING PERIOD P7

clear infmt
clear endtime2

```

```

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = seven.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETSIXA      = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETB          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETC          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETD          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);

```

```

endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETE         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 13, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETF         = A(Y(X),:);

RETFSEVEN    = [RETSIXA;RETB;RETC;RETD;RETE;RETF];
MRETSEVEN    = removevars(RETFSEVEN,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSEVEN    = table2timetable(MRETSEVEN);
MRETSEVEN    = retime(MRETSEVEN,'monthly','mean');
MRETSEVEN    = timetable2table(MRETSEVEN);
MRETSEVEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% HOLDING PERIOD P8

clear infmt
clear endtime2

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 7, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 8, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT      = eight.TT1;
[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETA         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 8, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 9, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETB           = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 9, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 10, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETC           = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 10, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 11, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETD           = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 11, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 12, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETE           = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 12, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 13, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETF           = A(Y(X),:);

RETEIGHT      = [RETA;RETB;RETC;RETD;RETE;RETF];

```

```

MRETEIGHT      = removevars(RETEIGHT,
{'PERMNO', 'SICCD', 'TICKER', 'COMNAM', 'NSDINX', 'PRC', 'SHROUT', 'VOL', 'RETX', 'MCAP', 'S
MRETEIGHT      = table2timetable(MRETEIGHT);
MRETEIGHT      = retime(MRETEIGHT, 'monthly', 'mean');
MRETEIGHT      = timetable2table(MRETEIGHT);
MRETEIGHT.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% HOLDING PERIOD P9

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = nine.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETA          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETB          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETC          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');

```

```

endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETD            = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 11, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 12, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETE            = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 12, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 13, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETF            = A(Y(X),:);

RETFNINE        = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETNINE        = removevars(RETFNINE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETNINE        = table2timetable(MRETNINE);
MRETNINE        = retime(MRETNINE,'monthly','mean');
MRETNINE        = timetable2table(MRETNINE);
MRETNINE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% HOLDING PERIOD P10

clear infmt
clear endtime2

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 7, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 8, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = ten.TT1;

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETA           = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 8, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 9, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETB           = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 9, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 10, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETC           = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 10, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 11, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETD           = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 11, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 12, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETE           = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 12, 'month');
starttime     = datestr(starttime);

```

```

endtime          = datenum(starttime);
endtime          = addtodate(endtime, 13, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETF             = A(Y(X),:);

RETTEN          = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETTEN         = removevars(RETTEN,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTEN         = table2timetable(MRETTEN);
MRETTEN         = retime(MRETTEN,'monthly','mean');
MRETTEN         = timetable2table(MRETTEN);
MRETTEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

MRETTWO         = MRETTWO.AVGRETURN;
MRETTWO         = array2table(MRETTWO);

MRETTTHREE     = MRETTTHREE.AVGRETURN;
MRETTTHREE     = array2table(MRETTTHREE);

MRETFOUR       = MRETFOUR.AVGRETURN;
MRETFOUR       = array2table(MRETFOUR);

MRETFIVE       = MRETFIVE.AVGRETURN;
MRETFIVE       = array2table(MRETFIVE);

MRETSIX        = MRETSIX.AVGRETURN;
MRETSIX        = array2table(MRETSIX);

MRETSEVEN      = MRETSEVEN.AVGRETURN;
MRETSEVEN      = array2table(MRETSEVEN);

MRETEIGHT      = MRETEIGHT.AVGRETURN;
MRETEIGHT      = array2table(MRETEIGHT);

MRETNINE       = MRETNINE.AVGRETURN;
MRETNINE       = array2table(MRETNINE);

MRETTEN        = MRETTEN.AVGRETURN;
MRETTEN        = array2table(MRETTEN);

MEANPORTTWO    = [MRETTONE MRETTWO MRETTTHREE MRETFOUR MRETFIVE MRETSIX
    MRETSEVEN MRETEIGHT MRETNINE MRETTEN];
MEANPORTTWO.Properties.VariableNames =
    {'MONTH' 'P1' 'P2' 'P3' 'P4' 'P5' 'P6' 'P7' 'P8' 'P9' 'P10'};

TRADINGRET     = MEANPORTTWO.P1 - MEANPORTTWO.P10;
TRADINGRET     = array2table(TRADINGRET);

MEANPORTTWO    = [MEANPORTTWO TRADINGRET];

```

end

Warning: The assignment added rows to the table, but did not assign values to all of the table's existing variables. Those variables are extended with rows containing default values.

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CLEAR VARIABLES

```
clear A
clear eight
clear endtime
clear FIRSTTT
clear five
clear four
clear HOLD66
clear K
clear MEAN
clear MRETEIGHT
clear MRETFIVE
clear MRETFOUR
clear MRETNINE
clear MRETONE
clear MRETSEVEN
clear MRETSIX
clear MRETTEN
clear MRETTTHREE
clear MRETTWO
clear nine
clear one
clear RETA
clear RETB
clear RETC
clear RETD
clear RETE
clear RETEIGHT
clear RETF
clear RETFIVE
clear RETFIVEA
clear RETFIVEB
clear RETFIVEC
clear RETFIVED
clear RETFIVEE
clear RETFIVEF
clear RETFNINE
clear RETFOUR
clear RETFOURA
clear RETFOURB
clear RETFOURC
```

```
clear RETFOURD
clear RETFOURE
clear RETFOURF
clear RETFSEVEN
clear RETFSIX
clear RETHREEF
clear RETONE
clear RETONEA
clear RETONEB
clear RETONEC
clear RETONED
clear RETONEE
clear RETONEF
clear RETSIXA
clear RETSIXB
clear RETSIXC
clear RETSIXD
clear RETSIXE
clear RETSIXF
clear RETTEN
clear RETTHREE
clear RETTHREEA
clear RETTHREEB
clear RETTHREEC
clear RETTHREED
clear RETTHREEE
clear RETTWO
clear RETTWOA
clear RETTWOB
clear RETTWOC
clear RETTWOD
clear RETTWOE
clear RETTWOF
clear seven
clear six
clear starttime
clear starttime1
clear starttime2
clear ten
clear three
clear TRADINGRET
clear two
clear X
clear Y
```

HOLDING PERIOD DEFINITION MARCH

```
infmt          = 'dd-MM-yyyy';
starttime1     = datetime('1-3-1980', 'InputFormat', infmt);
endtime1      = datenum(starttime1);
endtime1      = addtodate(endtime1, 6, 'month');
endtime1      = datestr(endtime1);
```

```

FORM66          = MTDATA(isbetween(MTDATA.date, starttime1,
    endtime1), :); % extracts formation period into own matrix

clear infmt
clear endtime1

TT              = accumarray(FORM66.PERMNO,FORM66.RET,[],@sum,8000);
TT              = TT(TT~=8000);
TP              = unique(FORM66.PERMNO);
TT              = [TP TT];
TT              = TT(sum(isnan(TT),2)==0,:);
TT              = array2table(TT);
TT              = sortrows(TT,'TT2','descend'); % Gives average return

if mod(numel(TT.TT2),10)
    TT.TT2(end+1:ceil(numel(TT.TT2)/10)*10) = 0;
end

clear FORM66
clear TP

TT              = sortrows(TT,'TT2','descend');
C               = size(TT,1)/10;
B               = mat2cell(TT,[C C C C C C C C C C],[2]);

one             = B{1, 1};
two             = B{2, 1};
three          = B{3, 1};
four           = B{4, 1};
five           = B{5, 1};
six            = B{6, 1};
seven          = B{7, 1};
eight          = B{8, 1};
nine           = B{9, 1};
ten            = B{10, 1};

clear TT
clear C
clear B

infmt           = 'dd-MM-yyyy';
starttime2     = datenum(starttime1);
starttime2     = addtodate(starttime2, 7, 'month');
starttime2     = datestr(starttime2);
endtime2       = datenum(starttime1);
endtime2       = addtodate(endtime2, 13, 'month');
endtime2       = datestr(endtime2);
HOLD66        = MTDATA(isbetween(MTDATA.date, starttime2,
    endtime2), :);

% FORMATION PERIOD P1

clear infmt
clear endtime2

```

```

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = one.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETONEA       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETONEB       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETONEC       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETONEC       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);

```

```

endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETONEE     = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 13, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETONEF     = A(Y(X),:);

RETONE      = [RETONEA;RETONEB;RETONEC;RETONED;RETONEE;RETONEF];
MRETONE     = removevars(RETONE,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETONE     = table2timetable(MRETONE);
MRETONE     = retime(MRETONE,'monthly','mean');
MRETONE     = timetable2table(MRETONE);
MRETONE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P2

clear infmt
clear endtime2

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 7, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 8, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT     = two.TT1;
[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETTWOA     = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 8, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 9, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOB        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOC        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOD        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOE        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOF        = A(Y(X),:);

RETTWO        = [RETTWOA;RETTWOB;RETTWOC;RETTWOD;RETTWOE;RETTWOF];

```

```

MRETTWO          = removevars(RETTWO,
{'PERMNO', 'SICCD', 'TICKER', 'COMNAM', 'NSDINX', 'PRC', 'SHROUT', 'VOL', 'RETX', 'MCAP', 'S
MRETTWO          = table2timetable(MRETTWO);
MRETTWO          = retime(MRETTWO, 'monthly', 'mean');
MRETTWO          = timetable2table(MRETTWO);
MRETTWO.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P3

clear infmt
clear endtime2

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 7, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 8, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT         = three.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTTHREEEA     = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 8, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 9, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTTHREEEB     = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 9, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 10, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTTHREEEC     = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 10, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 11, 'month');

```

```

endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTTHREED     = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 11, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 12, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTTHREEE     = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 12, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 13, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETHREEEF     = A(Y(X),:);

RETTTHREE      =
    [RETTTHREEA;RETTTHREEB;RETTTHREEC;RETTTHREED;RETTTHREEE;RETHREEF];
MRETTTHREE     = removevars(RETTTHREE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTTHREE     = table2timetable(MRETTTHREE);
MRETTTHREE     = retime(MRETTTHREE,'monthly','mean');
MRETTTHREE     = timetable2table(MRETTTHREE);
MRETTTHREE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P4

clear infmt
clear endtime2

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 7, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 8, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

FIRSTTTT      = four.TT1;
[X,Y]         = ismember(FIRSTTTT,A.PERMNO);
RETFOURA     = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 8, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 9, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTTT,A.PERMNO);
RETFOURB     = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 9, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 10, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTTT,A.PERMNO);
RETFOURC     = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 10, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 11, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTTT,A.PERMNO);
RETFOURD     = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 11, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 12, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTTT,A.PERMNO);
RETFOURE     = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 12, 'month');

```

```

starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFOURF      = A(Y(X),:);

RETFOUR       =
    [RETFOURA;RETFOURB;RETFOURC;RETFOURD;RETFOURE;RETFOURF];
MRETFOUR      = removevars(RETFOUR,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFOUR      = table2timetable(MRETFOUR);
MRETFOUR      = retime(MRETFOUR,'monthly','mean');
MRETFOUR      = timetable2table(MRETFOUR);
MRETFOUR.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P5

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = five.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFIVEA      = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFIVEB      = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');

```

```

endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETFIVEC    = A(Y(X),:);

```

```

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 10, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 11, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETFIVED    = A(Y(X),:);

```

```

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 11, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETFIVEE    = A(Y(X),:);

```

```

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 13, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETFIVEF    = A(Y(X),:);

```

```

RETFIVE      =
    [RETFIVEA;RETFIVEB;RETFIVEC;RETFIVED;RETFIVEE;RETFIVEF];
MRETFIVE     = removevars(RETFIVE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFIVE     = table2timetable(MRETFIVE);
MRETFIVE     = retime(MRETFIVE,'monthly','mean');
MRETFIVE     = timetable2table(MRETFIVE);
MRETFIVE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

```

```

% FORMATION PERIOD P6

```

```

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = six.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETSIXA       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETSIXB       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETSIXC       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETSIXD       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');

```

```

starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETSIXE        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETSIXF        = A(Y(X),:);

RETFSEX        = [RETSIXA;RETSIXB;RETSIXC;RETSIXD;RETSIXE;RETSIXF];
MRETSIX        = removevars(RETFSEX,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSIX        = table2timetable(MRETSIX);
MRETSIX        = retime(MRETSIX,'monthly','mean');
MRETSIX        = timetable2table(MRETSIX);
MRETSIX.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P7

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = seven.TT1;
[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETSIXA        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);

```

```

A          = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETB      = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 10, 'month');
endtime   = datestr(endtime);
A          = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETC      = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 11, 'month');
endtime   = datestr(endtime);
A          = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETD      = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 12, 'month');
endtime   = datestr(endtime);
A          = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETE      = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 13, 'month');
endtime   = datestr(endtime);
A          = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETF      = A(Y(X),:);

```

```

RETFSSEVEN      = [RETSIXA;RETB;RETC;RETD;RETE;RETF];
MRETSEVEN       = removevars(RETFSEVEN,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSEVEN       = table2timetable(MRETSEVEN);
MRETSEVEN       = retime(MRETSEVEN,'monthly','mean');
MRETSEVEN       = timetable2table(MRETSEVEN);
MRETSEVEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P8

clear infmt
clear endtime2

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 7, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 8, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = eight.TT1;
[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETA           = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 8, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 9, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETB           = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 9, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 10, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETC           = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 10, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);

```

```

endtime      = addtodate(endtime, 11, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETD         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 11, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETE         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 13, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETF         = A(Y(X),:);

RETEIGHT     = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETEIGHT    = removevars(RETEIGHT,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETEIGHT    = table2timetable(MRETEIGHT);
MRETEIGHT    = retime(MRETEIGHT,'monthly','mean');
MRETEIGHT    = timetable2table(MRETEIGHT);
MRETEIGHT.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P9

clear infmt
clear endtime2

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 7, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 8, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

FIRSTTT      = nine.TT1;
[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETA         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 8, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 9, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETB         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 9, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 10, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETC         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 10, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 11, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETD         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 11, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETE         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');

```

```

starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETF           = A(Y(X),:);

RETFNINE       = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETNINE       = removevars(RETFNINE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETNINE       = table2timetable(MRETNINE);
MRETNINE       = retime(MRETNINE,'monthly','mean');
MRETNINE       = timetable2table(MRETNINE);
MRETNINE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P10

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = ten.TT1;
[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETA           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETB           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);

```

```

A          = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETC      = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 11, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETD      = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 12, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETE      = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 13, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETF      = A(Y(X),:);

RETTEN    = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETTEN   = removevars(RETTEN,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTEN   = table2timetable(MRETTEN);
MRETTEN   = retime(MRETTEN,'monthly','mean');
MRETTEN   = timetable2table(MRETTEN);
MRETTEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

MRETTWO   = MRETTWO.AVGRETURN;
MRETTWO   = array2table(MRETTWO);

```

```

MRETTTHREE      = MRETTTHREE.AVGRETURN;
MRETTTHREE      = array2table(MRETTTHREE);

MRETFOUR        = MRETFOUR.AVGRETURN;
MRETFOUR        = array2table(MRETFOUR);

MRETFIVE        = MRETFIVE.AVGRETURN;
MRETFIVE        = array2table(MRETFIVE);

MRETSIX         = MRETSIX.AVGRETURN;
MRETSIX         = array2table(MRETSIX);

MRETSEVEN       = MRETSEVEN.AVGRETURN;
MRETSEVEN       = array2table(MRETSEVEN);

MRETEIGHT       = MRETEIGHT.AVGRETURN;
MRETEIGHT       = array2table(MRETEIGHT);

MRETNINE        = MRETNINE.AVGRETURN;
MRETNINE        = array2table(MRETNINE);

MRETTEN         = MRETTEN.AVGRETURN;
MRETTEN         = array2table(MRETTEN);

MEANPORTTHREE  = [MRETTONE MRETTWO MRETTTHREE MRETFOUR MRETFIVE MRETSIX
  MRETSEVEN MRETEIGHT MRETNINE MRETTEN];
MEANPORTTHREE.Properties.VariableNames =
  {'MONTH' 'P1' 'P2' 'P3' 'P4' 'P5' 'P6' 'P7' 'P8' 'P9' 'P10'};

TRADINGRET     = MEANPORTTHREE.P1 - MEANPORTTHREE.P10;
TRADINGRET     = array2table(TRADINGRET);

MEANPORTTHREE  = [MEANPORTTHREE TRADINGRET];

```

Warning: The assignment added rows to the table, but did not assign values to all of the table's existing variables. Those variables are extended with rows containing default values.

HOLDING PERIOD LOOP MARCH

```

for K = 1 : 90;

infmt          = 'dd-MM-yyyy';
starttimel    = datenum(starttimel);
starttimel    = addtodate(starttimel, 6, 'month');
starttimel    = datestr(starttimel);
endtimel      = datenum(starttimel);
endtimel      = addtodate(endtimel, 6, 'month');
endtimel      = datestr(endtimel);
FORM66        = MTDATA(isbetween(MTDATA.date, starttimel,
  endtimel), :); % extracts formation period into own matrix

```

```

clear infmt
clear endtime1

TT          = accumarray(FORM66.PERMNO,FORM66.RET,[],@sum,8000);
TT          = TT(TT~=8000);
TP          = unique(FORM66.PERMNO);
TT          = [TP TT];
TT          = TT(sum(isnan(TT),2)==0,:);
TT          = array2table(TT);
TT          = sortrows(TT,'TT2','descend'); % Gives average return

if mod(numel(TT.TT2),10)
    TT.TT2(end+1:ceil(numel(TT.TT2)/10)*10) = 0;
end

clear FORM66
clear TP

TT          = sortrows(TT,'TT2','descend');
C           = size(TT,1)/10;
B           = mat2cell(TT,[C C C C C C C C C C],[2]);

one         = B{1, 1};
two         = B{2, 1};
three       = B{3, 1};
four        = B{4, 1};
five        = B{5, 1};
six         = B{6, 1};
seven       = B{7, 1};
eight       = B{8, 1};
nine        = B{9, 1};
ten         = B{10, 1};

clear TT
clear C
clear B

infmt       = 'dd-MM-yyyy';
starttime2  = datenum(starttime1);
starttime2  = addtodate(starttime2, 7, 'month');
starttime2  = datestr(starttime2);
endtime2    = datenum(starttime1);
endtime2    = addtodate(endtime2, 13, 'month');
endtime2    = datestr(endtime2);
HOLD66      = MTDATA(isbetween(MTDATA.date, starttime2,
    endtime2), :);

% FORMATION PERIOD P1

clear infmt
clear endtime2

starttime   = datenum(starttime1);

```

```

starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = one.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETONEA       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETONEB       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETONEC       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETONEC       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);

```

```

A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETONEE = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETONEF = A(Y(X),:);

RETONE = [RETONEA;RETONEB;RETONEC;RETONED;RETONEE;RETONEF];
MRETONE = removevars(RETONE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETONE = table2timetable(MRETONE);
MRETONE = retime(MRETONE,'monthly','mean');
MRETONE = timetable2table(MRETONE);
MRETONE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P2

clear infmt
clear endtime2

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT = two.TT1;
[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTWOA = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 9, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);

```

```

RETTWOB          = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 9, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 10, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOC         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 10, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 11, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOD         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 11, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 12, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOE         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 12, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 13, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOF         = A(Y(X),:);

RETTWO          = [RETTWOA;RETTWOB;RETTWOC;RETTWOD;RETTWOE;RETTWOF];
MRETTWO         = removevars(RETTWO,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTWO         = table2timetable(MRETTWO);

```

```

MRETTWO          = retime(MRETTWO,'monthly','mean');
MRETTWO          = timetable2table(MRETTWO);
MRETTWO.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P3

clear infmt
clear endtime2

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 7, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 8, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT         = three.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTTHREEA      = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 8, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 9, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTTHREEB      = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 9, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 10, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTTHREEC      = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 10, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 11, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTTHREED     = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTTHREEE     = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETHREEEF      = A(Y(X),:);

RETTTHREE      =
    [RETTTHREEA;RETTTHREEB;RETTTHREEC;RETTTHREED;RETTTHREEE;RETHREEF];
MRETTTHREE     = removevars(RETTTHREE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTTHREE     = table2timetable(MRETTTHREE);
MRETTTHREE     = retime(MRETTTHREE,'monthly','mean');
MRETTTHREE     = timetable2table(MRETTTHREE);
MRETTTHREE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P4

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = four.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFOURA      = A(Y(X),:);

```

```

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETFOURB      = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETFOURC      = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETFOURD      = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETFOURE      = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');

```

```

endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFOURF        = A(Y(X),:);

RETFOUR         =
    [RETFOURA;RETFOURB;RETFOURC;RETFOURD;RETFOURE;RETFOURF];
MRETFOUR        = removevars(RETFOUR,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFOUR        = table2timetable(MRETFOUR);
MRETFOUR        = retime(MRETFOUR,'monthly','mean');
MRETFOUR        = timetable2table(MRETFOUR);
MRETFOUR.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P5

clear infmt
clear endtime2

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 7, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 8, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT         = five.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEA        = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 8, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 9, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEB        = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 9, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 10, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEC       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVED       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEE       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEF       = A(Y(X),:);

RETFIVE        =
    [RETFIVEA;RETFIVEB;RETFIVEC;RETFIVED;RETFIVEE;RETFIVEF];
MRETFIVE       = removevars(RETFIVE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFIVE       = table2timetable(MRETFIVE);
MRETFIVE       = retime(MRETFIVE,'monthly','mean');
MRETFIVE       = timetable2table(MRETFIVE);
MRETFIVE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P6

clear infmt
clear endtime2

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT = six.TT1;
[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETSIXA = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 9, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETSIXB = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 10, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETSIXC = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 11, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETSIXD = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 12, 'month');

```

```

endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXE         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 12, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 13, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXF         = A(Y(X),:);

RETFSEX         = [RETSIXA;RETSIXB;RETSIXC;RETSIXD;RETSIXE;RETSIXF];
MRETSIX         = removevars(RETFSEX,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSIX         = table2timetable(MRETSIX);
MRETSIX         = retime(MRETSIX,'monthly','mean');
MRETSIX         = timetable2table(MRETSIX);
MRETSIX.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P7

clear infmt
clear endtime2

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 7, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 8, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = seven.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXA        = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 8, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 9, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETB           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETC           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETD           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETE           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETF           = A(Y(X),:);

RETFSEVEN      = [RETSIXA;RETB;RETC;RETD;RETE;RETF];
MRETSEVEN      = removevars(RETFSEVEN,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S

```

```

MRETSEVEN      = table2timetable(MRETSEVEN);
MRETSEVEN      = retime(MRETSEVEN, 'monthly', 'mean');
MRETSEVEN      = timetable2table(MRETSEVEN);
MRETSEVEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P8

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = eight.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETA          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETB          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETC          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);

```

```

A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETD = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 12, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETE = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETF = A(Y(X),:);

RETEIGHT = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETEIGHT = removevars(RETEIGHT,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETEIGHT = table2timetable(MRETEIGHT);
MRETEIGHT = retime(MRETEIGHT,'monthly','mean');
MRETEIGHT = timetable2table(MRETEIGHT);
MRETEIGHT.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P9

clear infmt
clear endtime2

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT = nine.TT1;
[X,Y] = ismember(FIRSTTT,A.PERMNO);

```

```

RETA          = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 8, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 9, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETB         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 9, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 10, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETC         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 10, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 11, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETD         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 11, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETE         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);

```

```

endtime      = addtodate(endtime, 13, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETF         = A(Y(X),:);

RETFNINE     = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETNINE     = removevars(RETFNINE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETNINE     = table2timetable(MRETNINE);
MRETNINE     = retime(MRETNINE,'monthly','mean');
MRETNINE     = timetable2table(MRETNINE);
MRETNINE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P10

clear infmt
clear endtime2

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 7, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 8, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT     = ten.TT1;
[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETA        = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 8, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 9, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETB        = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 9, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 10, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETC           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETD           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETE           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETF           = A(Y(X),:);

RETTEN         = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETTEN        = removevars(RETTEN,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTEN        = table2timetable(MRETTEN);
MRETTEN        = retime(MRETTEN,'monthly','mean');
MRETTEN        = timetable2table(MRETTEN);
MRETTEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

MRETTWO        = MRETTWO.AVGRETURN;
MRETTWO        = array2table(MRETTWO);

MRETTTHREE     = MRETTTHREE.AVGRETURN;
MRETTTHREE     = array2table(MRETTTHREE);

```

```

MRETFOUR      = MRETFOUR.AVGRETURN;
MRETFOUR      = array2table(MRETFOUR);

MRETFIVE      = MRETFIVE.AVGRETURN;
MRETFIVE      = array2table(MRETFIVE);

MRETSIX       = MRETSIX.AVGRETURN;
MRETSIX       = array2table(MRETSIX);

MRETSEVEN     = MRETSEVEN.AVGRETURN;
MRETSEVEN     = array2table(MRETSEVEN);

MRETEIGHT     = MRETEIGHT.AVGRETURN;
MRETEIGHT     = array2table(MRETEIGHT);

MRETNINE      = MRETNINE.AVGRETURN;
MRETNINE      = array2table(MRETNINE);

MRETTEN       = MRETTEN.AVGRETURN;
MRETTEN       = array2table(MRETTEN);

MEANPORTTHREE = [MRETONE MRETTWO MRETTHREE MRETFOUR MRETFIVE MRETSIX
  MRETSEVEN MRETEIGHT MRETNINE MRETTEN];
MEANPORTTHREE.Properties.VariableNames =
  {'MONTH' 'P1' 'P2' 'P3' 'P4' 'P5' 'P6' 'P7' 'P8' 'P9' 'P10'};

TRADINGRET    = MEANPORTTHREE.P1 - MEANPORTTHREE.P10;
TRADINGRET    = array2table(TRADINGRET);

MEANPORTTHREE = [MEANPORTTHREE TRADINGRET];

```

`end`

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CLEAR VARIABLES

```
clear A
clear eight
clear endtime
clear FIRSTTT
clear five
clear four
clear HOLD66
clear K
clear MEAN
clear MRETEIGHT
clear MRETFIVE
clear MRETFOUR
clear MRETNINE
clear MRETONE
clear MRETSEVEN
clear MRETSIX
clear MRETTEN
clear MRETTTHREE
clear MRETTWO
clear nine
clear one
clear RETA
clear RETB
clear RETC
clear RETD
```

```
clear RETE
clear RETEIGHT
clear RETF
clear RETFIVE
clear RETFIVEA
clear RETFIVEB
clear RETFIVEC
clear RETFIVED
clear RETFIVEE
clear RETFIVEF
clear RETFNINE
clear RETFOUR
clear RETFOURA
clear RETFOURB
clear RETFOURC
clear RETFOURD
clear RETFOURE
clear RETFOURF
clear RETFSEVEN
clear RETFSIX
clear RETHREEF
clear RETONE
clear RETONEA
clear RETONEB
clear RETONEC
clear RETONED
clear RETONEE
clear RETONEF
clear RETSIXA
clear RETSIXB
clear RETSIXC
clear RETSIXD
clear RETSIXE
clear RETSIXF
clear RETTEN
clear RETTHREE
clear RETTHREEA
clear RETTHREEB
clear RETTHREEC
clear RETTHREED
clear RETTHREEE
clear RETTWO
clear RETTWOA
clear RETTWOB
clear RETTWOC
clear RETTWOD
clear RETTWOE
clear RETTWOF
clear seven
clear six
clear starttime
clear starttime1
clear starttime2
clear ten
```

```

clear three
clear TRADINGRET
clear two
clear X
clear Y

```

HOLDING PERIOD DEFINITION APRIL

```

infmt          = 'dd-MM-yyyy';
starttimel     = datetime('1-4-1980', 'InputFormat', infmt);
endtimel       = datenum(starttimel);
endtimel       = addtodate(endtimel, 6, 'month');
endtimel       = datestr(endtimel);
FORM66         = MTDATA(isbetween(MTDATA.date, starttimel,
    endtimel), :); % extracts formation period into own matrix

clear infmt
clear endtimel

TT             = accumarray(FORM66.PERMNO, FORM66.RET, [], @sum, 8000);
TT             = TT(TT~=8000);
TP             = unique(FORM66.PERMNO);
TT             = [TP TT];
TT             = TT(sum(isnan(TT), 2)==0, :);
TT             = array2table(TT);
TT             = sortrows(TT, 'TT2', 'descend'); % Gives average return

if mod(numel(TT.TT2), 10)
    TT.TT2(end+1:ceil(numel(TT.TT2)/10)*10) = 0;
end

clear FORM66
clear TP

TT             = sortrows(TT, 'TT2', 'descend');
C              = size(TT, 1)/10;
B              = mat2cell(TT, [C C C C C C C C C C], [2]);

one            = B{1, 1};
two           = B{2, 1};
three         = B{3, 1};
four          = B{4, 1};
five          = B{5, 1};
six           = B{6, 1};
seven         = B{7, 1};
eight         = B{8, 1};
nine          = B{9, 1};
ten           = B{10, 1};

clear TT
clear C
clear B

```

```

infmt          = 'dd-MM-yyyy';
starttime2     = datenum(starttime1);
starttime2     = addtodate(starttime2, 7, 'month');
starttime2     = datestr(starttime2);
endtime2       = datenum(starttime1);
endtime2       = addtodate(endtime2, 13, 'month');
endtime2       = datestr(endtime2);
HOLD66         = MTDATA(isbetween(MTDATA.date, starttime2,
    endtime2), :);

% FORMATION PERIOD P1

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = one.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETONEA       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETONEB       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETONEC       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');

```

```

starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETONEA       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETONEB       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETONEC       = A(Y(X),:);

RETONE        = [RETONEA;RETONEB;RETONEC;RETONEA;RETONEB;RETONEC];
MRETONE       = removevars(RETONE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETONE       = table2timetable(MRETONE);
MRETONE       = retime(MRETONE,'monthly','mean');
MRETONE       = timetable2table(MRETONE);
MRETONE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P2

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);

```

```

A                = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

FIRSTTT         = two.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOA         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 8, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 9, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOB         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 9, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 10, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOC         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 10, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 11, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOD         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 11, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 12, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOE         = A(Y(X),:);

```

```

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETTWOF        = A(Y(X),:);

RETTWO         = [RETTWOA;RETTWOB;RETTWOC;RETTWOD;RETTWOE;RETTWOF];
MRETTWO        = removevars(RETTWO,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTWO        = table2timetable(MRETTWO);
MRETTWO        = retime(MRETTWO,'monthly','mean');
MRETTWO        = timetable2table(MRETTWO);
MRETTWO.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P3

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = three.TT1;
[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETTTHREEA     = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETTTHREEB     = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);

```

```

endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 10, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETTTHREEC      = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 10, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 11, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETTTHREED      = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 11, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 12, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETTTHREEE      = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 12, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 13, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETTTHREEEF     = A(Y(X),:);

RETTTHREE       =
    [RETTTHREEEA;RETTTHREEEB;RETTTHREEC;RETTTHREED;RETTTHREEE;RETTTHREEEF];
MRETTTHREE      = removevars(RETTTHREE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTTHREE      = table2timetable(MRETTTHREE);
MRETTTHREE      = retime(MRETTTHREE,'monthly','mean');
MRETTTHREE      = timetable2table(MRETTTHREE);
MRETTTHREE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

```

```
% FORMATION PERIOD P4
```

```
clear infmt
clear endtime2
```

```
starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);
```

```
FIRSTTT       = four.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFOURA     = A(Y(X),:);
```

```
starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);
```

```
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFOURB     = A(Y(X),:);
```

```
starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);
```

```
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFOURC     = A(Y(X),:);
```

```
starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);
```

```
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFOURD     = A(Y(X),:);
```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 12, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFOURE = A(Y(X),:);

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFOURF = A(Y(X),:);

```

```

RETFOUR =
    [RETFOURA;RETFOURB;RETFOURC;RETFOURD;RETFOURE;RETFOURF];
MRETFOUR = removevars(RETFOUR,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFOUR = table2timetable(MRETFOUR);
MRETFOUR = retime(MRETFOUR,'monthly','mean');
MRETFOUR = timetable2table(MRETFOUR);
MRETFOUR.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

```

```
% FORMATION PERIOD P5
```

```
clear infmt
clear endtime2
```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

FIRSTTT = five.TT1;
[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFIVEA = A(Y(X),:);

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);

```

```

endtime           = datenum(starttime1);
endtime           = addtodate(endtime, 9, 'month');
endtime           = datestr(endtime);
A                 = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]             = ismember(FIRSTTT,A.PERMNO);
RETFIVEB         = A(Y(X),:);

starttime         = datenum(starttime1);
starttime         = addtodate(starttime, 9, 'month');
starttime         = datestr(starttime);
endtime           = datenum(starttime1);
endtime           = addtodate(endtime, 10, 'month');
endtime           = datestr(endtime);
A                 = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]             = ismember(FIRSTTT,A.PERMNO);
RETFIVEC         = A(Y(X),:);

starttime         = datenum(starttime1);
starttime         = addtodate(starttime, 10, 'month');
starttime         = datestr(starttime);
endtime           = datenum(starttime1);
endtime           = addtodate(endtime, 11, 'month');
endtime           = datestr(endtime);
A                 = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]             = ismember(FIRSTTT,A.PERMNO);
RETFIVED         = A(Y(X),:);

starttime         = datenum(starttime1);
starttime         = addtodate(starttime, 11, 'month');
starttime         = datestr(starttime);
endtime           = datenum(starttime1);
endtime           = addtodate(endtime, 12, 'month');
endtime           = datestr(endtime);
A                 = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]             = ismember(FIRSTTT,A.PERMNO);
RETFIVEE         = A(Y(X),:);

starttime         = datenum(starttime1);
starttime         = addtodate(starttime, 12, 'month');
starttime         = datestr(starttime);
endtime           = datenum(starttime1);
endtime           = addtodate(endtime, 13, 'month');
endtime           = datestr(endtime);
A                 = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETFIVEF      = A(Y(X),:);

RETFIVE       =
  [RETFIVEA;RETFIVEB;RETFIVEC;RETFIVED;RETFIVEE;RETFIVEF];
MRETFIVE      = removevars(RETFIVE,
  {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFIVE      = table2timetable(MRETFIVE);
MRETFIVE      = retime(MRETFIVE,'monthly','mean');
MRETFIVE      = timetable2table(MRETFIVE);
MRETFIVE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P6

clear infmt
clear endtime2

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 7, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 8, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
  endtime), :);

FIRSTTT      = six.TT1;
[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETSIXA      = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 8, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 9, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
  endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETSIXB      = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 9, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 10, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
  endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETSIXC      = A(Y(X),:);

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 11, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETSIXD = A(Y(X),:);

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 12, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETSIXE = A(Y(X),:);

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETSIXF = A(Y(X),:);

```

```

RETFSEX = [RETSIXA;RETSIXB;RETSIXC;RETSIXD;RETSIXE;RETSIXF];
MRETSIX = removevars(RETFSEX,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSIX = table2timetable(MRETSIX);
MRETSIX = retime(MRETSIX,'monthly','mean');
MRETSIX = timetable2table(MRETSIX);
MRETSIX.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

```

```

% FORMATION PERIOD P7

```

```

clear infmt
clear endtime2

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');

```

```

endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT         = seven.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXA         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 8, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 9, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETB            = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 9, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 10, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETC            = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 10, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 11, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETD            = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 11, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 12, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);

```

```

RETE = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETF = A(Y(X),:);

RETFSEVEN = [RETSIXA;RETB;RETC;RETD;RETE;RETF];
MRETSEVEN = removevars(RETFSEVEN,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSEVEN = table2timetable(MRETSEVEN);
MRETSEVEN = retime(MRETSEVEN,'monthly','mean');
MRETSEVEN = timetable2table(MRETSEVEN);
MRETSEVEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P8

clear infmt
clear endtime2

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT = eight.TT1;
[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETA = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 9, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETB = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 9, 'month');

```

```

starttime = datestr(starttime);
endtime   = datenum(starttime);
endtime   = addtodate(endtime, 10, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETC      = A(Y(X),:);

```

```

starttime = datenum(starttime);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime);
endtime   = addtodate(endtime, 11, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETD      = A(Y(X),:);

```

```

starttime = datenum(starttime);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime);
endtime   = addtodate(endtime, 12, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETE      = A(Y(X),:);

```

```

starttime = datenum(starttime);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime);
endtime   = addtodate(endtime, 13, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETF      = A(Y(X),:);

```

```

RETEIGHT  = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETEIGHT = removevars(RETEIGHT,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETEIGHT = table2timetable(MRETEIGHT);
MRETEIGHT = retime(MRETEIGHT,'monthly','mean');
MRETEIGHT = timetable2table(MRETEIGHT);
MRETEIGHT.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

```

```
% FORMATION PERIOD P9
```

```
clear infmt
clear endtime2
```

```
starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);
```

```
FIRSTTT       = nine.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETA          = A(Y(X),:);
```

```
starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);
```

```
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETB          = A(Y(X),:);
```

```
starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);
```

```
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETC          = A(Y(X),:);
```

```
starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);
```

```
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETD          = A(Y(X),:);
```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 12, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETE = A(Y(X),:);

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETF = A(Y(X),:);

```

```

RETFNINE = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETNINE = removevars(RETFNINE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETNINE = table2timetable(MRETNINE);
MRETNINE = retime(MRETNINE,'monthly','mean');
MRETNINE = timetable2table(MRETNINE);
MRETNINE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

```

```

% FORMATION PERIOD P10

```

```

clear infmt
clear endtime2

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

FIRSTTT = ten.TT1;
[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETA = A(Y(X),:);

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);

```

```

endtime          = addtodate(endtime, 9, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETB            = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 9, 'month');
starttime       = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETC            = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 10, 'month');
starttime       = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETD            = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 11, 'month');
starttime       = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETE            = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 12, 'month');
starttime       = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);

```

```

RETF          = A(Y(X),:);

RETTEN        = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETTEN       = removevars(RETTEN,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTEN       = table2timetable(MRETTEN);
MRETTEN       = retime(MRETTEN,'monthly','mean');
MRETTEN       = timetable2table(MRETTEN);
MRETTEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

MRETTWO       = MRETTWO.AVGRETURN;
MRETTWO       = array2table(MRETTWO);

MRETTTHREE    = MRETTTHREE.AVGRETURN;
MRETTTHREE    = array2table(MRETTTHREE);

MRETFOUR      = MRETFOUR.AVGRETURN;
MRETFOUR      = array2table(MRETFOUR);

MRETFIVE      = MRETFIVE.AVGRETURN;
MRETFIVE      = array2table(MRETFIVE);

MRETSIX       = MRETSIX.AVGRETURN;
MRETSIX       = array2table(MRETSIX);

MRETSEVEN     = MRETSEVEN.AVGRETURN;
MRETSEVEN     = array2table(MRETSEVEN);

MRETEIGHT     = MRETEIGHT.AVGRETURN;
MRETEIGHT     = array2table(MRETEIGHT);

MRETNINE      = MRETNINE.AVGRETURN;
MRETNINE      = array2table(MRETNINE);

MRETTEN       = MRETTEN.AVGRETURN;
MRETTEN       = array2table(MRETTEN);

MEANPORTFOUR  = [MRETONONE MRETTWO MRETTTHREE MRETFOUR MRETFIVE MRETSIX
MRETSEVEN MRETEIGHT MRETNINE MRETTEN];
MEANPORTFOUR.Properties.VariableNames =
{'MONTH' 'P1' 'P2' 'P3' 'P4' 'P5' 'P6' 'P7' 'P8' 'P9' 'P10'};

TRADINGRET    = MEANPORTFOUR.P1 - MEANPORTFOUR.P10;
TRADINGRET    = array2table(TRADINGRET);

MEANPORTFOUR = [MEANPORTFOUR TRADINGRET];

```

Warning: The assignment added rows to the table, but did not assign values to all of the table's existing variables. Those variables are extended with rows containing default values.

HOLDING PERIOD LOOP APRIL

```
for K = 1 : 90;

    infmt          = 'dd-MM-yyyy';
    starttimel     = datenum(starttimel);
    starttimel     = addtodate(starttimel, 6, 'month');
    starttimel     = datestr(starttimel);
    endtimel       = datenum(starttimel);
    endtimel       = addtodate(endtimel, 6, 'month');
    endtimel       = datestr(endtimel);
    FORM66        = MTDATA(isbetween(MTDATA.date, starttimel,
        endtimel), :); % extracts formation period into own matrix

    clear infmt
    clear endtimel

    TT            = accumarray(FORM66.PERMNO,FORM66.RET,[],@sum,8000);
    TT            = TT(TT~=8000);
    TP            = unique(FORM66.PERMNO);
    TT            = [TP TT];
    TT            = TT(sum(isnan(TT),2)==0,:);
    TT            = array2table(TT);
    TT            = sortrows(TT,'TT2','descend'); % Gives average return

    if mod(numel(TT.TT2),10)
        TT.TT2(end+1:ceil(numel(TT.TT2)/10)*10) = 0;
    end

    clear FORM66
    clear TP

    TT            = sortrows(TT,'TT2','descend');
    C              = size(TT,1)/10;
    B              = mat2cell(TT,[C C C C C C C C C C],[2]);

    one           = B{1, 1};
    two           = B{2, 1};
    three         = B{3, 1};
    four          = B{4, 1};
    five          = B{5, 1};
    six           = B{6, 1};
    seven         = B{7, 1};
    eight         = B{8, 1};
    nine          = B{9, 1};
    ten           = B{10, 1};

    clear TT
    clear C
    clear B

    infmt         = 'dd-MM-yyyy';
    starttime2    = datenum(starttimel);
```

```

starttime2      = addtodate(starttime2, 7, 'month');
starttime2      = datestr(starttime2);
endtime2        = datenum(starttime1);
endtime2        = addtodate(endtime2, 13, 'month');
endtime2        = datestr(endtime2);
HOLD66          = MTDATA(isbetween(MTDATA.date, starttime2,
    endtime2), :);

% FORMATION PERIOD P1

clear infmt
clear endtime2

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 7, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 8, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = one.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONEA         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 8, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 9, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONEB         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 9, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 10, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONEC         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 10, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);

```

```

endtime      = addtodate(endtime, 11, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETONEA      = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 11, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETONEB      = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 13, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETONEC      = A(Y(X),:);

RETONE       = [RETONEA;RETONEB;RETONEC;RETONEA;RETONEB;RETONEC];
MRETONE      = removevars(RETONE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETONE      = table2timetable(MRETONE);
MRETONE      = retime(MRETONE,'monthly','mean');
MRETONE      = timetable2table(MRETONE);
MRETONE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P2

clear infmt
clear endtime2

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 7, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 8, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

FIRSTTT      = two.TT1;
[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETTWOA      = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 8, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 9, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETTWOB      = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 9, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 10, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETTWOC      = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 10, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 11, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETTWOD      = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 11, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETTWOE      = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');

```

```

starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETTWOF       = A(Y(X),:);

RETTWO        = [RETTWOA;RETTWOB;RETTWOC;RETTWOD;RETTWOE;RETTWOF];
MRETTWO       = removevars(RETTWO,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTWO       = table2timetable(MRETTWO);
MRETTWO       = retime(MRETTWO,'monthly','mean');
MRETTWO       = timetable2table(MRETTWO);
MRETTWO.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P3

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = three.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETTTHREEEA   = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETTTHREEEB   = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);

```

```

A          = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETTTHREEC = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 11, 'month');
endtime   = datestr(endtime);
A          = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETTTHREED = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 12, 'month');
endtime   = datestr(endtime);
A          = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETTTHREEE = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 13, 'month');
endtime   = datestr(endtime);
A          = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETTTHREEF = A(Y(X),:);

RETTTHREE =
    [RETTTHREEA;RETTTHREEB;RETTTHREEC;RETTTHREED;RETTTHREEE;RETTTHREEF];
MRETTTHREE = removevars(RETTTHREE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTTHREE = table2timetable(MRETTTHREE);
MRETTTHREE = retime(MRETTTHREE,'monthly','mean');
MRETTTHREE = timetable2table(MRETTTHREE);
MRETTTHREE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P4

clear infmt

```

```

clear endtime2

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT = four.TT1;
[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFOURA = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 9, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFOURB = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 10, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFOURC = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 11, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFOURD = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);

```

```

endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETFOURE     = A(Y(X),:);

```

```

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 13, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETFOURF     = A(Y(X),:);

```

```

RETFOUR      =
    [RETFOURA;RETFOURB;RETFOURC;RETFOURD;RETFOURE;RETFOURF];
MRETFOUR     = removevars(RETFOUR,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFOUR     = table2timetable(MRETFOUR);
MRETFOUR     = retime(MRETFOUR,'monthly','mean');
MRETFOUR     = timetable2table(MRETFOUR);
MRETFOUR.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

```

```

% FORMATION PERIOD P5

```

```

clear infmt
clear endtime2

```

```

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 7, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 8, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

FIRSTTT      = five.TT1;
[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETFIVEA     = A(Y(X),:);

```

```

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 8, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 9, 'month');
endtime      = datestr(endtime);

```

```

A                = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEB       = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 9, 'month');
starttime       = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEC       = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 10, 'month');
starttime       = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVED       = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 11, 'month');
starttime       = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEE       = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 12, 'month');
starttime       = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEF       = A(Y(X),:);

```

```

RETFFIVE          =
  [RETFFIVEA;RETFFIVEB;RETFFIVEC;RETFFIVED;RETFFIVEE;RETFFIVEF];
MRETFFIVE        = removevars(RETFFIVE,
  {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFFIVE        = table2timetable(MRETFFIVE);
MRETFFIVE        = rettime(MRETFFIVE,'monthly','mean');
MRETFFIVE        = timetable2table(MRETFFIVE);
MRETFFIVE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P6

clear infmt
clear endtime2

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 7, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 8, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
  endtime), :);

FIRSTTT         = six.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXA         = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 8, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 9, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
  endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXB         = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 9, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 10, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
  endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXC         = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 10, 'month');
starttime        = datestr(starttime);

```

```

endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 11, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXD         = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 11, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 12, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXE         = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 12, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 13, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXF         = A(Y(X),:);

RETFSEX         = [RETSIXA;RETSIXB;RETSIXC;RETSIXD;RETSIXE;RETSIXF];
MRETSIX         = removevars(RETFSEX,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSIX         = table2timetable(MRETSIX);
MRETSIX         = retime(MRETSIX,'monthly','mean');
MRETSIX         = timetable2table(MRETSIX);
MRETSIX.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P7

clear infmt
clear endtime2

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 7, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 8, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

FIRSTTT      = seven.TT1;
[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETSIXA      = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 8, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 9, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETB         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 9, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 10, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETC         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 10, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 11, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETD         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 11, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETE         = A(Y(X),:);

starttime    = datenum(starttime1);

```

```

starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETF           = A(Y(X),:);

RETFSEVEN      = [RETSIXA;RETB;RETC;RETD;RETE;RETF];
MRETSEVEN      = removevars(RETFSEVEN,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSEVEN      = table2timetable(MRETSEVEN);
MRETSEVEN      = retime(MRETSEVEN,'monthly','mean');
MRETSEVEN      = timetable2table(MRETSEVEN);
MRETSEVEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P8

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = eight.TT1;
[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETA           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETB           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');

```

```

endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETC            = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 10, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 11, 'month');
endtime         = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETD            = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 11, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 12, 'month');
endtime         = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETE            = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 12, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 13, 'month');
endtime         = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETF            = A(Y(X),:);

RETEIGHT        = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETEIGHT        = removevars(RETEIGHT,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETEIGHT        = table2timetable(MRETEIGHT);
MRETEIGHT        = retime(MRETEIGHT,'monthly','mean');
MRETEIGHT        = timetable2table(MRETEIGHT);
MRETEIGHT.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P9

clear infmt

```

```

clear endtime2

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT = nine.TT1;
[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETA = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 9, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETB = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 10, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETC = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 11, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETD = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);

```

```

endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETE         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 13, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETF         = A(Y(X),:);

RETFNINE     = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETNINE     = removevars(RETFNINE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETNINE     = table2timetable(MRETNINE);
MRETNINE     = retime(MRETNINE,'monthly','mean');
MRETNINE     = timetable2table(MRETNINE);
MRETNINE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P10

clear infmt
clear endtime2

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 7, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 8, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT      = ten.TT1;
[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETA         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 8, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 9, 'month');
endtime      = datestr(endtime);

```

```

A          = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETB      = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 10, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETC      = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 11, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETD      = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 12, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETE      = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 13, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETF      = A(Y(X),:);

```

```

RETTEN          = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETTEN         = removevars(RETTEN,
{'PERMNO', 'SICCD', 'TICKER', 'COMNAM', 'NSDINX', 'PRC', 'SHROUT', 'VOL', 'RETX', 'MCAP', 'S
MRETTEN         = table2timetable(MRETTEN);
MRETTEN         = retime(MRETTEN, 'monthly', 'mean');
MRETTEN         = timetable2table(MRETTEN);
MRETTEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

MRETTWO         = MRETTWO.AVGRETURN;
MRETTWO         = array2table(MRETTWO);

MRETTTHREE     = MRETTTHREE.AVGRETURN;
MRETTTHREE     = array2table(MRETTTHREE);

MRETFOUR       = MRETFOUR.AVGRETURN;
MRETFOUR       = array2table(MRETFOUR);

MRETFIVE       = MRETFIVE.AVGRETURN;
MRETFIVE       = array2table(MRETFIVE);

MRETSIX        = MRETSIX.AVGRETURN;
MRETSIX        = array2table(MRETSIX);

MRETSEVEN     = MRETSEVEN.AVGRETURN;
MRETSEVEN     = array2table(MRETSEVEN);

MRETEIGHT     = MRETEIGHT.AVGRETURN;
MRETEIGHT     = array2table(MRETEIGHT);

MRETNINE      = MRETNINE.AVGRETURN;
MRETNINE      = array2table(MRETNINE);

MRETTEN       = MRETTEN.AVGRETURN;
MRETTEN       = array2table(MRETTEN);

MEANPORTFOUR  = [MRETONONE MRETTWO MRETTTHREE MRETFOUR MRETFIVE MRETSIX
MRETSEVEN MRETEIGHT MRETNINE MRETTEN];
MEANPORTFOUR.Properties.VariableNames =
{'MONTH' 'P1' 'P2' 'P3' 'P4' 'P5' 'P6' 'P7' 'P8' 'P9' 'P10'};

TRADINGRET    = MEANPORTFOUR.P1 - MEANPORTFOUR.P10;
TRADINGRET    = array2table(TRADINGRET);

MEANPORTFOUR = [MEANPORTFOUR TRADINGRET];

```

end

Warning: The assignment added rows to the table, but did not assign values to all of the table's existing variables. Those variables are extended with rows containing default values.

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CLEAR VARIABLES

```
clear A
clear eight
clear endtime
clear FIRSTTT
clear five
clear four
clear HOLD66
clear K
clear MEAN
clear MRETEIGHT
clear MRETFIVE
clear MRETFOUR
clear MRETNINE
clear MRETONE
clear MRETSEVEN
clear MRETSIX
clear MRETTEN
clear MRETTTHREE
clear MRETTWO
clear nine
```

clear one
clear RETA
clear RETB
clear RETC
clear RETD
clear RETE
clear RETEIGHT
clear RETF
clear RETFIVE
clear RETFIVEA
clear RETFIVEB
clear RETFIVEC
clear RETFIVED
clear RETFIVEE
clear RETFIVEF
clear RETFNINE
clear RETFOUR
clear RETFOURA
clear RETFOURB
clear RETFOURC
clear RETFOURD
clear RETFOURE
clear RETFOURF
clear RETFSEVEN
clear RETFSIX
clear RETHREEF
clear RETONE
clear RETONEA
clear RETONEB
clear RETONEC
clear RETONED
clear RETONEE
clear RETONEF
clear RETSIXA
clear RETSIXB
clear RETSIXC
clear RETSIXD
clear RETSIXE
clear RETSIXF
clear RETTEN
clear RETTHREE
clear RETTHREEA
clear RETTHREEB
clear RETTHREEC
clear RETTHREED
clear RETTHREEE
clear RETTWO
clear RETTWOA
clear RETTWOB
clear RETTWOC
clear RETTWOD
clear RETTWOE
clear RETTWOF
clear seven

```

clear six
clear starttime
clear starttime1
clear starttime2
clear ten
clear three
clear TRADINGRET
clear two
clear X
clear Y

```

HOLDING PERIOD DEFINITION MAY

```

infmt          = 'dd-MM-yyyy';
starttime1     = datetime('1-5-1980', 'InputFormat', infmt);
endtime1       = datenum(starttime1);
endtime2       = addtodate(endtime1, 6, 'month');
endtime3       = datestr(endtime1);
FORM66         = MTDATA(isbetween(MTDATA.date, starttime1,
    endtime1), :); % extracts formation period into own matrix

clear infmt
clear endtime1

TT             = accumarray(FORM66.PERMNO, FORM66.RET, [], @sum, 8000);
TT             = TT(TT~=8000);
TP             = unique(FORM66.PERMNO);
TT             = [TP TT];
TT             = TT(sum(isnan(TT), 2)==0, :);
TT             = array2table(TT);
TT             = sortrows(TT, 'TT2', 'descend'); % Gives average return

if mod(numel(TT.TT2), 10)
    TT.TT2(end+1:ceil(numel(TT.TT2)/10)*10) = 0;
end

clear FORM66
clear TP

TT             = sortrows(TT, 'TT2', 'descend');
C              = size(TT, 1)/10;
B              = mat2cell(TT, [C C C C C C C C C C], [2]);

one            = B{1, 1};
two            = B{2, 1};
three         = B{3, 1};
four          = B{4, 1};
five          = B{5, 1};
six           = B{6, 1};
seven         = B{7, 1};
eight        = B{8, 1};
nine         = B{9, 1};
ten          = B{10, 1};

```

```

clear TT
clear C
clear B

infmt          = 'dd-MM-yyyy';
starttime2    = datenum(starttime1);
starttime2    = addtodate(starttime2, 7, 'month');
starttime2    = datestr(starttime2);
endtime2      = datenum(starttime1);
endtime2      = addtodate(endtime2, 13, 'month');
endtime2      = datestr(endtime2);
HOLD66        = MTDATA(isbetween(MTDATA.date, starttime2,
    endtime2), :);

% FORMATION PERIOD P1

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = one.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETONEA       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETONEB       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONEC        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONED        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONEE        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONEF        = A(Y(X),:);

RETONE         = [RETONEA;RETONEB;RETONEC;RETONED;RETONEE;RETONEF];
MRETONE        = removevars(RETONE,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETONE        = table2timetable(MRETONE);
MRETONE        = retime(MRETONE,'monthly','mean');
MRETONE        = timetable2table(MRETONE);
MRETONE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P2

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');

```

```

starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 8, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT   = two.TT1;
[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETTWOA   = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 9, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETTWOB   = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 10, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETTWOC   = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 11, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETTWOD   = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 12, 'month');
endtime   = datestr(endtime);

```

```

A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTWOE = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTWOF = A(Y(X),:);

RETTWO = [RETTWOA;RETTWOB;RETTWOC;RETTWOD;RETTWOE;RETTWOF];
MRETTWO = removevars(RETTWO,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTWO = table2timetable(MRETTWO);
MRETTWO = retime(MRETTWO,'monthly','mean');
MRETTWO = timetable2table(MRETTWO);
MRETTWO.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P3

clear infmt
clear endtime2

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT = three.TT1;
[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTTHREEA = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 9, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);

```

```

RETTHREEB      = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 9, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 10, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETTHREEC     = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 10, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 11, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETTHREED     = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 11, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 12, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETTHREEE     = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 12, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 13, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETHREEEF     = A(Y(X),:);

RETTHREE      =
    [RETTHREEA;RETTHREEB;RETTHREEC;RETTHREED;RETTHREEE;RETHREEF];
MRETTHREE     = removevars(RETTHREE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S

```

```

MRETTHREE      = table2timetable(MRETTHREE);
MRETTHREE      = retime(MRETTHREE, 'monthly', 'mean');
MRETTHREE      = timetable2table(MRETTHREE);
MRETTHREE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P4

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = four.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFOURA     = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFOURB     = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETFOURC     = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);

```

```

A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFOURD = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 12, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFOURE = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFOURF = A(Y(X),:);

RETFOUR =
    [RETFOURA;RETFOURB;RETFOURC;RETFOURD;RETFOURE;RETFOURF];
MRETFOUR = removevars(RETFOUR,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFOUR = table2timetable(MRETFOUR);
MRETFOUR = retime(MRETFOUR,'monthly','mean');
MRETFOUR = timetable2table(MRETFOUR);
MRETFOUR.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P5

clear infmt
clear endtime2

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT = five.TT1;

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEA       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEB       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEC       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVED       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEE       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);

```

```

endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 13, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETFIVEF        = A(Y(X),:);

RETFIVE          =
    [RETFIVEA;RETFIVEB;RETFIVEC;RETFIVED;RETFIVEE;RETFIVEF];
MRETFIVE        = removevars(RETFIVE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFIVE        = table2timetable(MRETFIVE);
MRETFIVE        = retime(MRETFIVE,'monthly','mean');
MRETFIVE        = timetable2table(MRETFIVE);
MRETFIVE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P6

clear infmt
clear endtime2

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 7, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 8, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT         = six.TT1;
[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETSIXA         = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 8, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 9, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETSIXB         = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 9, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 10, 'month');
endtime          = datestr(endtime);

```

```

A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETSIXC = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 11, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETSIXD = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 12, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETSIXE = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETSIXF = A(Y(X),:);

RETSFIX = [RETSIXA;RETSIXB;RETSIXC;RETSIXD;RETSIXE;RETSIXF];
MRETSIX = removevars(RETSFIX,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSIX = table2timetable(MRETSIX);
MRETSIX = retime(MRETSIX,'monthly','mean');
MRETSIX = timetable2table(MRETSIX);
MRETSIX.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P7

clear infmt
clear endtime2

```

```

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = seven.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETSIXA       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETB          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETC          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETD          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);

```

```

endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETE         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 13, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETF         = A(Y(X),:);

RETFSEVEN    = [RETSIXA;RETB;RETC;RETD;RETE;RETF];
MRETSEVEN    = removevars(RETFSEVEN,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSEVEN    = table2timetable(MRETSEVEN);
MRETSEVEN    = retime(MRETSEVEN,'monthly','mean');
MRETSEVEN    = timetable2table(MRETSEVEN);
MRETSEVEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P8

clear infmt
clear endtime2

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 7, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 8, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT      = eight.TT1;
[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETA         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 8, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 9, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETB           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETC           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETD           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETE           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETF           = A(Y(X),:);

RETEIGHT       = [RETA;RETB;RETC;RETD;RETE;RETF];

```

```

MRETEIGHT      = removevars(RETEIGHT,
{'PERMNO', 'SICCD', 'TICKER', 'COMNAM', 'NSDINX', 'PRC', 'SHROUT', 'VOL', 'RETX', 'MCAP', 'S
MRETEIGHT      = table2timetable(MRETEIGHT);
MRETEIGHT      = retime(MRETEIGHT, 'monthly', 'mean');
MRETEIGHT      = timetable2table(MRETEIGHT);
MRETEIGHT.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P9

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = nine.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETA          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETB          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETC          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');

```

```

endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETD            = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 11, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 12, 'month');
endtime         = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETE            = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 12, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 13, 'month');
endtime         = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETF            = A(Y(X),:);

RETFNINE        = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETNINE        = removevars(RETFNINE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETNINE        = table2timetable(MRETNINE);
MRETNINE        = retime(MRETNINE,'monthly','mean');
MRETNINE        = timetable2table(MRETNINE);
MRETNINE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P10

clear infmt
clear endtime2

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 7, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 8, 'month');
endtime         = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = ten.TT1;

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETA           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETB           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETC           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETD           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETE           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);

```

```

endtime      = datenum(starttime);
endtime      = addtodate(endtime, 13, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETF         = A(Y(X),:);

RETTEN      = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETTEN     = removevars(RETTEN,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTEN     = table2timetable(MRETTEN);
MRETTEN     = retime(MRETTEN,'monthly','mean');
MRETTEN     = timetable2table(MRETTEN);
MRETTEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

MRETTWO     = MRETTWO.AVGRETURN;
MRETTWO     = array2table(MRETTWO);

MRETTTHREE  = MRETTTHREE.AVGRETURN;
MRETTTHREE  = array2table(MRETTTHREE);

MRETFOUR    = MRETFOUR.AVGRETURN;
MRETFOUR    = array2table(MRETFOUR);

MRETFIVE    = MRETFIVE.AVGRETURN;
MRETFIVE    = array2table(MRETFIVE);

MRETSIX     = MRETSIX.AVGRETURN;
MRETSIX     = array2table(MRETSIX);

MRETSEVEN   = MRETSEVEN.AVGRETURN;
MRETSEVEN   = array2table(MRETSEVEN);

MRETEIGHT   = MRETEIGHT.AVGRETURN;
MRETEIGHT   = array2table(MRETEIGHT);

MRETNINE    = MRETNINE.AVGRETURN;
MRETNINE    = array2table(MRETNINE);

MRETTEN     = MRETTEN.AVGRETURN;
MRETTEN     = array2table(MRETTEN);

MEANPORTFIVE = [MRETTONE MRETTWO MRETTTHREE MRETFOUR MRETFIVE MRETSIX
    MRETSEVEN MRETEIGHT MRETNINE MRETTEN];
MEANPORTFIVE.Properties.VariableNames =
    {'MONTH' 'P1' 'P2' 'P3' 'P4' 'P5' 'P6' 'P7' 'P8' 'P9' 'P10'};

TRADINGRET  = MEANPORTFIVE.P1 - MEANPORTFIVE.P10;
TRADINGRET  = array2table(TRADINGRET);

MEANPORTFIVE = [MEANPORTFIVE TRADINGRET];

```

Warning: The assignment added rows to the table, but did not assign values to all of the table's existing variables. Those variables are extended with rows containing default values.

HOLDING PERIOD LOOP MAY

```
for K = 1 : 90;

    infmt           = 'dd-MM-yyyy';
    starttimel      = datenum(starttimel);
    starttimel      = addtodate(starttimel, 6, 'month');
    starttimel      = datestr(starttimel);
    endtimel        = datenum(starttimel);
    endtimel        = addtodate(endtimel, 6, 'month');
    endtimel        = datestr(endtimel);
    FORM66          = MTDATA(isbetween(MTDATA.date, starttimel,
    endtimel), :); % extracts formation period into own matrix

    clear infmt
    clear endtimel

    TT              = accumarray(FORM66.PERMNO,FORM66.RET,[],@sum,8000);
    TT              = TT(TT~=8000);
    TP              = unique(FORM66.PERMNO);
    TT              = [TP TT];
    TT              = TT(sum(isnan(TT),2)==0,:);
    TT              = array2table(TT);
    TT              = sortrows(TT,'TT2','descend'); % Gives average return

    if mod(numel(TT.TT2),10)
        TT.TT2(end+1:ceil(numel(TT.TT2)/10)*10) = 0;
    end

    clear FORM66
    clear TP

    TT              = sortrows(TT,'TT2','descend');
    C               = size(TT,1)/10;
    B               = mat2cell(TT,[C C C C C C C C C C],[2]);

    one             = B{1, 1};
    two             = B{2, 1};
    three           = B{3, 1};
    four            = B{4, 1};
    five            = B{5, 1};
    six             = B{6, 1};
    seven           = B{7, 1};
    eight           = B{8, 1};
    nine            = B{9, 1};
    ten             = B{10, 1};
```

```

clear TT
clear C
clear B

infmt           = 'dd-MM-yyyy';
starttime2     = datenum(starttime1);
starttime2     = addtodate(starttime2, 7, 'month');
starttime2     = datestr(starttime2);
endtime2       = datenum(starttime1);
endtime2       = addtodate(endtime2, 13, 'month');
endtime2       = datestr(endtime2);
HOLD66         = MTDATA(isbetween(MTDATA.date, starttime2,
    endtime2), :);

% FORMATION PERIOD P1

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = one.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETONEA       = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 8, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 9, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETONEB       = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 9, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 10, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);

```

```

RETONEC          = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 10, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 11, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONED         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 11, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 12, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONEE        = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 12, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 13, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONEF        = A(Y(X),:);

RETONE          = [RETONEA;RETONEB;RETONEC;RETONED;RETONEE;RETONEF];
MRETONE        = removevars(RETONE,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETONE        = table2timetable(MRETONE);
MRETONE        = retime(MRETONE,'monthly','mean');
MRETONE        = timetable2table(MRETONE);
MRETONE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P2

clear infmt
clear endtime2

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 7, 'month');
starttime       = datestr(starttime);

```

```

endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 8, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT         = two.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOA         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 8, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 9, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOB         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 9, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 10, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOC         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 10, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 11, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOD         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 11, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 12, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOE        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOF        = A(Y(X),:);

RETTWO         = [RETTWOA;RETTWOB;RETTWOC;RETTWOD;RETTWOE;RETTWOF];
MRETTWO        = removevars(RETTWO,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTWO        = table2timetable(MRETTWO);
MRETTWO        = retime(MRETTWO,'monthly','mean');
MRETTWO        = timetable2table(MRETTWO);
MRETTWO.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P3

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = three.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTTHREEA     = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTTHREEB     = A(Y(X),:);

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 10, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTTHREEC = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 11, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTTHREED = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 12, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTTHREEE = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTTHREEF = A(Y(X),:);

RETTTHREE =
    [RETTTHREEA;RETTTHREEB;RETTTHREEC;RETTTHREED;RETTTHREEE;RETTTHREEF];
MRETTTHREE = removevars(RETTTHREE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTTHREE = table2timetable(MRETTTHREE);
MRETTTHREE = retime(MRETTTHREE,'monthly','mean');

```

```

MRETTTHREE      = timetable2table(MRETTTHREE);
MRETTTHREE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P4

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTTT       = four.TT1;
[X,Y]          = ismember(FIRSTTTT,A.PERMNO);
RETFOURA      = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTTT,A.PERMNO);
RETFOURB      = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTTT,A.PERMNO);
RETFOURC      = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFOURD       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFOURE       = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFOURF       = A(Y(X),:);

RETFOUR        =
    [RETFOURA;RETFOURB;RETFOURC;RETFOURD;RETFOURE;RETFOURF];
MRETFOUR       = removevars(RETFOUR,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFOUR       = table2timetable(MRETFOUR);
MRETFOUR       = retime(MRETFOUR,'monthly','mean');
MRETFOUR       = timetable2table(MRETFOUR);
MRETFOUR.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P5

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = five.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEA       = A(Y(X),:);

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 9, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFIVEB = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 10, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFIVEC = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 11, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFIVED = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 12, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFIVEE = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);

```

```

A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETFIVEF = A(Y(X),:);

RETFIVE =
    [RETFIVEA;RETFIVEB;RETFIVEC;RETFIVED;RETFIVEE;RETFIVEF];
MRETFIVE = removevars(RETFIVE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFIVE = table2timetable(MRETFIVE);
MRETFIVE = retime(MRETFIVE,'monthly','mean');
MRETFIVE = timetable2table(MRETFIVE);
MRETFIVE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P6

clear infmt
clear endtime2

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT = six.TT1;
[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETSIXA = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 9, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETSIXB = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 10, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXC        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXD        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXE        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXF        = A(Y(X),:);

RETSFIX        = [RETSIXA;RETSIXB;RETSIXC;RETSIXD;RETSIXE;RETSIXF];
MRETSIX        = removevars(RETSFIX,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSIX        = table2timetable(MRETSIX);
MRETSIX        = retime(MRETSIX,'monthly','mean');
MRETSIX        = timetable2table(MRETSIX);
MRETSIX.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P7

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');

```

```

starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 8, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT   = seven.TT1;
[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETSIXA   = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 9, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETB      = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 10, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETC      = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 11, 'month');
endtime   = datestr(endtime);
A         = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETD      = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 12, 'month');
endtime   = datestr(endtime);

```

```

A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETE = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETF = A(Y(X),:);

RETFSEVEN = [RETSIXA;RETB;RETC;RETD;RETE;RETF];
MRETSEVEN = removevars(RETFSEVEN,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSEVEN = table2timetable(MRETSEVEN);
MRETSEVEN = retime(MRETSEVEN,'monthly','mean');
MRETSEVEN = timetable2table(MRETSEVEN);
MRETSEVEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P8

clear infmt
clear endtime2

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT = eight.TT1;
[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETA = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 9, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);

```

```

RETBA = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 10, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETB = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 11, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETC = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 12, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETD = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETE = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 13, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 14, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETF = A(Y(X),:);

RETEIGHT = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETEIGHT = removevars(RETEIGHT,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETEIGHT = table2timetable(MRETEIGHT);

```

```

MRETEIGHT      = retime(MRETEIGHT,'monthly','mean');
MRETEIGHT      = timetable2table(MRETEIGHT);
MRETEIGHT.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P9

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = nine.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETA          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETB          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETC          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETD           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETE           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETF           = A(Y(X),:);

RETFNINE       = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETNINE       = removevars(RETFNINE,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETNINE       = table2timetable(MRETNINE);
MRETNINE       = retime(MRETNINE,'monthly','mean');
MRETNINE       = timetable2table(MRETNINE);
MRETNINE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P10

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = ten.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETA          = A(Y(X),:);

```

```

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETB           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETC           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETD           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETE           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);

```

```

A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETF            = A(Y(X),:);

RETTEN          = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETTEN         = removevars(RETTEN,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTEN         = table2timetable(MRETTEN);
MRETTEN         = retime(MRETTEN,'monthly','mean');
MRETTEN         = timetable2table(MRETTEN);
MRETTEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

MRETTWO         = MRETTWO.AVGRETURN;
MRETTWO         = array2table(MRETTWO);

MRETTTHREE      = MRETTTHREE.AVGRETURN;
MRETTTHREE      = array2table(MRETTTHREE);

MRETFOUR        = MRETFOUR.AVGRETURN;
MRETFOUR        = array2table(MRETFOUR);

MRETFIVE        = MRETFIVE.AVGRETURN;
MRETFIVE        = array2table(MRETFIVE);

MRETSIX         = MRETSIX.AVGRETURN;
MRETSIX         = array2table(MRETSIX);

MRETSEVEN       = MRETSEVEN.AVGRETURN;
MRETSEVEN       = array2table(MRETSEVEN);

MRETEIGHT       = MRETEIGHT.AVGRETURN;
MRETEIGHT       = array2table(MRETEIGHT);

MRETNINE        = MRETNINE.AVGRETURN;
MRETNINE        = array2table(MRETNINE);

MRETTEN         = MRETTEN.AVGRETURN;
MRETTEN         = array2table(MRETTEN);

MEANPORTFIVE    = [MRETONONE MRETTWO MRETTTHREE MRETFOUR MRETFIVE MRETSIX
    MRETSEVEN MRETEIGHT MRETNINE MRETTEN];
MEANPORTFIVE.Properties.VariableNames =
    {'MONTH' 'P1' 'P2' 'P3' 'P4' 'P5' 'P6' 'P7' 'P8' 'P9' 'P10'};

TRADINGRET      = MEANPORTFIVE.P1 - MEANPORTFIVE.P10;
TRADINGRET      = array2table(TRADINGRET);

MEANPORTFIVE    = [MEANPORTFIVE TRADINGRET];
end

```

containing default values.

CLEAR VARIABLES

```
clear A
clear eight
clear endtime
clear FIRSTTT
clear five
clear four
clear HOLD66
clear K
clear MEAN
clear MRETEIGHT
clear MRETFIVE
clear MRETFOUR
clear MRETNINE
clear MRETONE
clear MRETSEVEN
clear MRETSIX
clear MRETTEN
clear MRETTTHREE
clear MRETTWO
clear nine
clear one
clear RETA
clear RETB
clear RETC
clear RETD
clear RETE
clear RETEIGHT
clear RETF
clear RETFIVE
clear RETFIVEA
clear RETFIVEB
clear RETFIVEC
clear RETFIVED
clear RETFIVEE
clear RETFIVEF
clear RETFNINE
clear RETFOUR
clear RETFOURA
clear RETFOURB
clear RETFOURC
clear RETFOURD
clear RETFOURE
clear RETFOURF
clear RETFSEVEN
clear RETFSIX
clear RETHREEF
clear RETONE
clear RETONEA
clear RETONEB
```

```

clear RETONEC
clear RETONED
clear RETONEE
clear RETONEF
clear RETSIXA
clear RETSIXB
clear RETSIXC
clear RETSIXD
clear RETSIXE
clear RETSIXF
clear RETTEN
clear RETTHREE
clear RETTHREEA
clear RETTHREEB
clear RETTHREEC
clear RETTHREED
clear RETTHREEE
clear RETTWO
clear RETTWOA
clear RETTWOB
clear RETTWOC
clear RETTWOD
clear RETTWOE
clear RETTWOF
clear seven
clear six
clear starttime
clear starttime1
clear starttime2
clear ten
clear three
clear TRADINGRET
clear two
clear X
clear Y

```

HOLDING PERIOD DEFINITION JUNE

```

infmt          = 'dd-MM-yyyy';
starttime1    = datetime('1-6-1980', 'InputFormat', infmt);
endtime1      = datenum(starttime1);
endtime1      = addtodate(endtime1, 6, 'month');
endtime1      = datestr(endtime1);
FORM66        = MTDATA(isbetween(MTDATA.date, starttime1,
    endtime1), :); % extracts formation period into own matrix

clear infmt
clear endtime1

TT            = accumarray(FORM66.PERMNO, FORM66.RET, [], @sum, 8000);
TT            = TT(TT~=8000);
TP            = unique(FORM66.PERMNO);
TT            = [TP TT];

```

```

TT          = TT(sum(isnan(TT),2)==0,:);
TT          = array2table(TT);
TT          = sortrows(TT,'TT2','descend'); % Gives average return

if mod(numel(TT.TT2),10)
    TT.TT2(end+1:ceil(numel(TT.TT2)/10)*10) = 0;
end

clear FORM66
clear TP

TT          = sortrows(TT,'TT2','descend');
C           = size(TT,1)/10;
B           = mat2cell(TT,[C C C C C C C C C C],[2]);

one         = B{1, 1};
two        = B{2, 1};
three      = B{3, 1};
four       = B{4, 1};
five      = B{5, 1};
six       = B{6, 1};
seven     = B{7, 1};
eight     = B{8, 1};
nine     = B{9, 1};
ten      = B{10, 1};

clear TT
clear C
clear B

infmt      = 'dd-MM-yyyy';
starttime2 = datenum(starttime1);
starttime2 = addtodate(starttime2, 7, 'month');
starttime2 = datestr(starttime2);
endtime2   = datenum(starttime1);
endtime2   = addtodate(endtime2, 13, 'month');
endtime2   = datestr(endtime2);
HOLD66     = MTDATA(isbetween(MTDATA.date, starttime2,
    endtime2), :);

% FORMATION PERIOD P1

clear infmt
clear endtime2

starttime  = datenum(starttime1);
starttime  = addtodate(starttime, 7, 'month');
starttime  = datestr(starttime);
endtime    = datenum(starttime1);
endtime    = addtodate(endtime, 8, 'month');
endtime    = datestr(endtime);
A          = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

FIRSTTTT      = one.TT1;
[X,Y]         = ismember(FIRSTTTT,A.PERMNO);
RETONEA       = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 8, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 9, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTTT,A.PERMNO);
RETONEB       = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 9, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 10, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTTT,A.PERMNO);
RETONEC       = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 10, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 11, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTTT,A.PERMNO);
RETONED       = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 11, 'month');
starttime     = datestr(starttime);
endtime       = datenum(starttime1);
endtime       = addtodate(endtime, 12, 'month');
endtime       = datestr(endtime);
A             = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTTT,A.PERMNO);
RETONEE       = A(Y(X),:);

starttime     = datenum(starttime1);
starttime     = addtodate(starttime, 12, 'month');

```

```

starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETONEF        = A(Y(X),:);

RETONE         = [RETONEA;RETONEB;RETONEC;RETONED;RETONEE;RETONEF];
MRETONE        = removevars(RETONE,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETONE        = table2timetable(MRETONE);
MRETONE        = retime(MRETONE,'monthly','mean');
MRETONE        = timetable2table(MRETONE);
MRETONE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P2

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = two.TT1;
[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETTWOA        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETTWOB        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);

```

```

A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTWOC = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 11, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTWOD = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 12, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTWOE = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTWOF = A(Y(X),:);

RETTWO = [RETTWOA;RETTWOB;RETTWOC;RETTWOD;RETTWOE;RETTWOF];
MRETTWO = removevars(RETTWO,
    {'PERMNO','SICCD','TICKER','CONNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTWO = table2timetable(MRETTWO);
MRETTWO = retime(MRETTWO,'monthly','mean');
MRETTWO = timetable2table(MRETTWO);
MRETTWO.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P3

clear infmt
clear endtime2

```

```

starttime = datenum(starttime1);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT = three.TT1;
[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTTHREEA = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 9, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTTHREEB = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 10, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTTHREEC = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);
endtime = addtodate(endtime, 11, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETTTHREED = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime1);

```

```

endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETTTHREEE  = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 13, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETHREEEF   = A(Y(X),:);

RETTTHREE   =
    [RETTTHREEA;RETTTHREEB;RETTTHREEC;RETTTHREED;RETTTHREEE;RETHREEF];
MRETTTHREE  = removevars(RETTTHREE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTTHREE  = table2timetable(MRETTTHREE);
MRETTTHREE  = retime(MRETTTHREE,'monthly','mean');
MRETTTHREE  = timetable2table(MRETTTHREE);
MRETTTHREE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P4

clear infmt
clear endtime2

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 7, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 8, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT     = four.TT1;
[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETFOURA    = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 8, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 9, 'month');
endtime      = datestr(endtime);

```

```

A                = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFOURB       = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 9, 'month');
starttime       = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFOURC       = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 10, 'month');
starttime       = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFOURD       = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 11, 'month');
starttime       = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFOURE       = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 12, 'month');
starttime       = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFOURF       = A(Y(X),:);

```

```

RETFOUR          =
  [RETFOURA;RETFOURB;RETFOURC;RETFOURD;RETFOURE;RETFOURF];
MRETFOUR         = removevars(RETFOUR,
  {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFOUR         = table2timetable(MRETFOUR);
MRETFOUR         = retime(MRETFOUR,'monthly','mean');
MRETFOUR         = timetable2table(MRETFOUR);
MRETFOUR.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P5

clear infmt
clear endtime2

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 7, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 8, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
  endtime), :);

FIRSTTT        = five.TT1;
[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETFIVEA       = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 8, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 9, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
  endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETFIVEB       = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 9, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 10, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
  endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETFIVEC       = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 10, 'month');
starttime       = datestr(starttime);

```

```

endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 11, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVED        = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 11, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 12, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEE        = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 12, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 13, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEF        = A(Y(X),:);

RETFIVE         =
    [RETFIVEA;RETFIVEB;RETFIVEC;RETFIVED;RETFIVEE;RETFIVEF];
MRETFIVE        = removevars(RETFIVE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFIVE        = table2timetable(MRETFIVE);
MRETFIVE        = retime(MRETFIVE,'monthly','mean');
MRETFIVE        = timetable2table(MRETFIVE);
MRETFIVE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P6

clear infmt
clear endtime2

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 7, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 8, 'month');
endtime         = datestr(endtime);

```

```

A                = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

FIRSTTT         = six.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXA         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 8, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 9, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXB         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 9, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 10, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXC         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 10, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 11, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXD         = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 11, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 12, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETSIXE         = A(Y(X),:);

```

```

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETSIXF        = A(Y(X),:);

RETSFSIX       = [RETSIXA;RETSIXB;RETSIXC;RETSIXD;RETSIXE;RETSIXF];
MRETSIX        = removevars(RETSFSIX,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSIX        = table2timetable(MRETSIX);
MRETSIX        = retime(MRETSIX,'monthly','mean');
MRETSIX        = timetable2table(MRETSIX);
MRETSIX.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P7

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = seven.TT1;
[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETSIXA        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETB           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);

```

```

endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 10, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETC              = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 10, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 11, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETD              = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 11, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 12, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETE              = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 12, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 13, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]            = ismember(FIRSTTT,A.PERMNO);
RETF              = A(Y(X),:);

RETFSEVEN        = [RETSIXA;RETB;RETC;RETD;RETE;RETF];
MRETSEVEN        = removevars(RETFSEVEN,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSEVEN        = table2timetable(MRETSEVEN);
MRETSEVEN        = retime(MRETSEVEN,'monthly','mean');
MRETSEVEN        = timetable2table(MRETSEVEN);
MRETSEVEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P8

```

```

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = eight.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETA          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETB          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETC          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETD          = A(Y(X),:);

starttime      = datenum(starttime1);

```

```

starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETE           = A(Y(X),:);

```

```

starttime      = datenum(starttime);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETF           = A(Y(X),:);

```

```

RETEIGHT       = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETEIGHT      = removevars(RETEIGHT,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETEIGHT      = table2timetable(MRETEIGHT);
MRETEIGHT      = retime(MRETEIGHT,'monthly','mean');
MRETEIGHT      = timetable2table(MRETEIGHT);
MRETEIGHT.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

```

```

% FORMATION PERIOD P9

```

```

clear infmt
clear endtime2

```

```

starttime      = datenum(starttime);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

FIRSTTT        = nine.TT1;
[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETA           = A(Y(X),:);

```

```

starttime      = datenum(starttime);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime);
endtime        = addtodate(endtime, 9, 'month');

```

```

endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETB           = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 9, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 10, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETC           = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 10, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 11, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETD           = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 11, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 12, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETE           = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 12, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 13, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETF           = A(Y(X),:);

```

```

RETFNINE      = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETNNINE    = removevars(RETFNINE,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETNNINE    = table2timetable(MRETNNINE);
MRETNNINE    = retime(MRETNNINE,'monthly','mean');
MRETNNINE    = timetable2table(MRETNNINE);
MRETNNINE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P10

clear infmt
clear endtime2

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 7, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 8, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT      = ten.TT1;
[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETA        = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 8, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 9, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETB        = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 9, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 10, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETC        = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 10, 'month');
starttime    = datestr(starttime);

```

```

endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 11, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETD         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 11, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETE         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 13, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETF         = A(Y(X),:);

RETTEN       = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETTEN      = removevars(RETTEN,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTEN      = table2timetable(MRETTEN);
MRETTEN      = retime(MRETTEN,'monthly','mean');
MRETTEN      = timetable2table(MRETTEN);
MRETTEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

MRETTWO      = MRETTWO.AVGRETURN;
MRETTWO      = array2table(MRETTWO);

MRETTTHREE   = MRETTTHREE.AVGRETURN;
MRETTTHREE   = array2table(MRETTTHREE);

MRETFOUR     = MRETFOUR.AVGRETURN;
MRETFOUR     = array2table(MRETFOUR);

MRETFIVE     = MRETFIVE.AVGRETURN;
MRETFIVE     = array2table(MRETFIVE);

```

```

MRETSIX      = MRETSIX.AVGRETURN;
MRETSIX      = array2table(MRETSIX);

MRETSEVEN    = MRETSEVEN.AVGRETURN;
MRETSEVEN    = array2table(MRETSEVEN);

MRETEIGHT    = MRETEIGHT.AVGRETURN;
MRETEIGHT    = array2table(MRETEIGHT);

MRETNINE     = MRETNINE.AVGRETURN;
MRETNINE     = array2table(MRETNINE);

MRETTEN      = MRETTEN.AVGRETURN;
MRETTEN      = array2table(MRETTEN);

MEANPORTSIX  = [MRETONONE MRETTWO MRETTTHREE MRETFOUR MRETFIVE MRETSIX
MRETSEVEN MRETEIGHT MRETNINE MRETTEN];
MEANPORTSIX.Properties.VariableNames =
    {'MONTH' 'P1' 'P2' 'P3' 'P4' 'P5' 'P6' 'P7' 'P8' 'P9' 'P10'};

TRADINGRET   = MEANPORTSIX.P1 - MEANPORTSIX.P10;
TRADINGRET   = array2table(TRADINGRET);

MEANPORTSIX  = [MEANPORTSIX TRADINGRET];

```

Warning: The assignment added rows to the table, but did not assign values to all of the table's existing variables. Those variables are extended with rows containing default values.

HOLDING PERIOD LOOP JUNE

```

for K = 1 : 90;

    infmt = 'dd-MM-yyyy';
    starttimel = datenum(starttimel);
    starttimel = addtodate(starttimel, 6, 'month');
    starttimel = datestr(starttimel);
    endtimel = datenum(starttimel);
    endtimel = addtodate(endtimel, 6, 'month');
    endtimel = datestr(endtimel);
    FORM66 = MTDATA(isbetween(MTDATA.date, starttimel,
        endtimel), :); % extracts formation period into own matrix

    clear infmt
    clear endtimel

    TT = accumarray(FORM66.PERMNO, FORM66.RET, [], @sum, 8000);
    TT = TT(TT~=8000);
    TP = unique(FORM66.PERMNO);
    TT = [TP TT];
    TT = TT(sum(isnan(TT), 2)==0, :);

```

```

TT          = array2table(TT);
TT          = sortrows(TT, 'TT2', 'descend'); % Gives average return

if mod(numel(TT.TT2),10)
    TT.TT2(end+1:ceil(numel(TT.TT2)/10)*10) = 0;
end

clear FORM66
clear TP

TT          = sortrows(TT, 'TT2', 'descend');
C           = size(TT,1)/10;
B           = mat2cell(TT,[C C C C C C C C C C],[2]);

one         = B{1, 1};
two         = B{2, 1};
three       = B{3, 1};
four        = B{4, 1};
five        = B{5, 1};
six         = B{6, 1};
seven       = B{7, 1};
eight       = B{8, 1};
nine        = B{9, 1};
ten         = B{10, 1};

clear TT
clear C
clear B

infmt       = 'dd-MM-yyyy';
starttime2  = datenum(starttime1);
starttime2  = addtodate(starttime2, 7, 'month');
starttime2  = datestr(starttime2);
endtime2    = datenum(starttime1);
endtime2    = addtodate(endtime2, 13, 'month');
endtime2    = datestr(endtime2);
HOLD66      = MTDATA(isbetween(MTDATA.date, starttime2,
    endtime2), :);

% FORMATION PERIOD P1

clear infmt
clear endtime2

starttime   = datenum(starttime1);
starttime   = addtodate(starttime, 7, 'month');
starttime   = datestr(starttime);
endtime     = datenum(starttime1);
endtime     = addtodate(endtime, 8, 'month');
endtime     = datestr(endtime);
A           = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT     = one.TT1;

```

```

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONEA        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONEB        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONEC        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONED        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 12, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONEE        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);

```

```

endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 13, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETONEF         = A(Y(X),:);

RETONE          = [RETONEA;RETONEB;RETONEC;RETONED;RETONEE;RETONEF];
MRETONE         = removevars(RETONE,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETONE         = table2timetable(MRETONE);
MRETONE         = retime(MRETONE,'monthly','mean');
MRETONE         = timetable2table(MRETONE);
MRETONE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P2

clear infmt
clear endtime2

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 7, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 8, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT         = two.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOA         = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 8, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 9, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETTWOB         = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 9, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 10, 'month');
endtime          = datestr(endtime);

```

```

A          = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]      = ismember(FIRSTTT,A.PERMNO);
RETTWOC    = A(Y(X),:);

starttime  = datenum(starttime1);
starttime  = addtodate(starttime, 10, 'month');
starttime  = datestr(starttime);
endtime    = datenum(starttime1);
endtime    = addtodate(endtime, 11, 'month');
endtime    = datestr(endtime);
A          = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]      = ismember(FIRSTTT,A.PERMNO);
RETTWOD    = A(Y(X),:);

starttime  = datenum(starttime1);
starttime  = addtodate(starttime, 11, 'month');
starttime  = datestr(starttime);
endtime    = datenum(starttime1);
endtime    = addtodate(endtime, 12, 'month');
endtime    = datestr(endtime);
A          = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]      = ismember(FIRSTTT,A.PERMNO);
RETTWOE    = A(Y(X),:);

starttime  = datenum(starttime1);
starttime  = addtodate(starttime, 12, 'month');
starttime  = datestr(starttime);
endtime    = datenum(starttime1);
endtime    = addtodate(endtime, 13, 'month');
endtime    = datestr(endtime);
A          = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]      = ismember(FIRSTTT,A.PERMNO);
RETTWOF    = A(Y(X),:);

RETTWO     = [RETTWOA;RETTWOB;RETTWOC;RETTWOD;RETTWOE;RETTWOF];
MRETTWO    = removevars(RETTWO,
    {'PERMNO','SICCD','TICKER','CONNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTWO    = table2timetable(MRETTWO);
MRETTWO    = retime(MRETTWO,'monthly','mean');
MRETTWO    = timetable2table(MRETTWO);
MRETTWO.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P3

clear infmt
clear endtime2

```

```

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = three.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETTTHREEEA   = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETTTHREEEB   = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETTTHREEEC   = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETTTHREED    = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 11, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);

```

```

endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETTTHREEE   = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 13, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETHREEEF    = A(Y(X),:);

RETTTHREE    =
    [RETTTHREEA;RETTTHREEB;RETTTHREEC;RETTTHREED;RETTTHREEE;RETHREEF];
MRETTTHREE   = removevars(RETTTHREE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTTHREE   = table2timetable(MRETTTHREE);
MRETTTHREE   = retime(MRETTTHREE,'monthly','mean');
MRETTTHREE   = timetable2table(MRETTTHREE);
MRETTTHREE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P4

clear infmt
clear endtime2

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 7, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 8, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT      = four.TT1;
[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETFOURA     = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 8, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 9, 'month');
endtime      = datestr(endtime);

```

```

A                = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFOURB        = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 9, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 10, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFOURC        = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 10, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 11, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFOURD        = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 11, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 12, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFOURE        = A(Y(X),:);

starttime       = datenum(starttime1);
starttime       = addtodate(starttime, 12, 'month');
starttime       = datestr(starttime);
endtime         = datenum(starttime1);
endtime         = addtodate(endtime, 13, 'month');
endtime         = datestr(endtime);
A               = HOLD66(isbetween(HOLD66.date, starttime,
endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFOURF        = A(Y(X),:);

```

```

RETFOUR          =
  [RETFOURA;RETFOURB;RETFOURC;RETFOURD;RETFOURE;RETFOURF];
MRETFOUR         = removevars(RETFOUR,
  {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFOUR         = table2timetable(MRETFOUR);
MRETFOUR         = retime(MRETFOUR,'monthly','mean');
MRETFOUR         = timetable2table(MRETFOUR);
MRETFOUR.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P5

clear infmt
clear endtime2

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 7, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 8, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
  endtime), :);

FIRSTTT         = five.TT1;
[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEA        = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 8, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 9, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
  endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEB        = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 9, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 10, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
  endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETFIVEC        = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 10, 'month');
starttime        = datestr(starttime);

```

```

endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 11, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETFIVED     = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 11, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETFIVEE     = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 13, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETFIVEF     = A(Y(X),:);

RETFIVE      =
    [RETFIVEA;RETFIVEB;RETFIVEC;RETFIVED;RETFIVEE;RETFIVEF];
MRETFIVE     = removevars(RETFIVE,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETFIVE     = table2timetable(MRETFIVE);
MRETFIVE     = retime(MRETFIVE,'monthly','mean');
MRETFIVE     = timetable2table(MRETFIVE);
MRETFIVE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P6

clear infmt
clear endtime2

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 7, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 8, 'month');
endtime      = datestr(endtime);

```

```

A          = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT   = six.TT1;
[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETSIXA   = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 9, 'month');
endtime   = datestr(endtime);
A          = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETSIXB   = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 9, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 10, 'month');
endtime   = datestr(endtime);
A          = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETSIXC   = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 10, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 11, 'month');
endtime   = datestr(endtime);
A          = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETSIXD   = A(Y(X),:);

starttime = datenum(starttime1);
starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime   = datenum(starttime1);
endtime   = addtodate(endtime, 12, 'month');
endtime   = datestr(endtime);
A          = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]     = ismember(FIRSTTT,A.PERMNO);
RETSIXE   = A(Y(X),:);

```

```

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 12, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 13, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETSIXF        = A(Y(X),:);

RETSFSIX       = [RETSIXA;RETSIXB;RETSIXC;RETSIXD;RETSIXE;RETSIXF];
MRETSIX        = removevars(RETSFSIX,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSIX        = table2timetable(MRETSIX);
MRETSIX        = retime(MRETSIX,'monthly','mean');
MRETSIX        = timetable2table(MRETSIX);
MRETSIX.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P7

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT        = seven.TT1;
[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETSIXA        = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]          = ismember(FIRSTTT,A.PERMNO);
RETB           = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);

```

```

endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 10, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETC         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 10, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 11, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETD         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 11, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETE         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 13, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETF         = A(Y(X),:);

RETFSEVEN    = [RETSIXA;RETB;RETC;RETD;RETE;RETF];
MRETSEVEN    = removevars(RETFSEVEN,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETSEVEN    = table2timetable(MRETSEVEN);
MRETSEVEN    = retime(MRETSEVEN,'monthly','mean');
MRETSEVEN    = timetable2table(MRETSEVEN);
MRETSEVEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P8

```

```

clear infmt
clear endtime2

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 7, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 8, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT       = eight.TT1;
[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETA          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 8, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 9, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETB          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 9, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 10, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETC          = A(Y(X),:);

starttime      = datenum(starttime1);
starttime      = addtodate(starttime, 10, 'month');
starttime      = datestr(starttime);
endtime        = datenum(starttime1);
endtime        = addtodate(endtime, 11, 'month');
endtime        = datestr(endtime);
A              = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]         = ismember(FIRSTTT,A.PERMNO);
RETD          = A(Y(X),:);

starttime      = datenum(starttime1);

```

```

starttime = addtodate(starttime, 11, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime);
endtime = addtodate(endtime, 12, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETE = A(Y(X),:);

```

```

starttime = datenum(starttime);
starttime = addtodate(starttime, 12, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime);
endtime = addtodate(endtime, 13, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETF = A(Y(X),:);

```

```

RETEIGHT = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETEIGHT = removevars(RETEIGHT,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETEIGHT = table2timetable(MRETEIGHT);
MRETEIGHT = retime(MRETEIGHT,'monthly','mean');
MRETEIGHT = timetable2table(MRETEIGHT);
MRETEIGHT.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

```

```

% FORMATION PERIOD P9

```

```

clear infmt
clear endtime2

```

```

starttime = datenum(starttime);
starttime = addtodate(starttime, 7, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime);
endtime = addtodate(endtime, 8, 'month');
endtime = datestr(endtime);
A = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

```

```

FIRSTTT = nine.TT1;
[X,Y] = ismember(FIRSTTT,A.PERMNO);
RETA = A(Y(X),:);

```

```

starttime = datenum(starttime);
starttime = addtodate(starttime, 8, 'month');
starttime = datestr(starttime);
endtime = datenum(starttime);
endtime = addtodate(endtime, 9, 'month');

```

```

endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETB            = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 9, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 10, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETC            = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 10, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 11, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETD            = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 11, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 12, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETE            = A(Y(X),:);

starttime        = datenum(starttime1);
starttime        = addtodate(starttime, 12, 'month');
starttime        = datestr(starttime);
endtime          = datenum(starttime1);
endtime          = addtodate(endtime, 13, 'month');
endtime          = datestr(endtime);
A                = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]           = ismember(FIRSTTT,A.PERMNO);
RETF            = A(Y(X),:);

```

```

RETFNINE      = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETNNINE    = removevars(RETFNINE,
{'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETNNINE    = table2timetable(MRETNNINE);
MRETNNINE    = retime(MRETNNINE,'monthly','mean');
MRETNNINE    = timetable2table(MRETNNINE);
MRETNNINE.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

% FORMATION PERIOD P10

clear infmt
clear endtime2

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 7, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 8, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

FIRSTTT     = ten.TT1;
[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETA        = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 8, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 9, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETB        = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 9, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 10, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]       = ismember(FIRSTTT,A.PERMNO);
RETC        = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 10, 'month');
starttime    = datestr(starttime);

```

```

endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 11, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETD         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 11, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 12, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETE         = A(Y(X),:);

starttime    = datenum(starttime1);
starttime    = addtodate(starttime, 12, 'month');
starttime    = datestr(starttime);
endtime      = datenum(starttime1);
endtime      = addtodate(endtime, 13, 'month');
endtime      = datestr(endtime);
A            = HOLD66(isbetween(HOLD66.date, starttime,
    endtime), :);

[X,Y]        = ismember(FIRSTTT,A.PERMNO);
RETF         = A(Y(X),:);

RETTEN       = [RETA;RETB;RETC;RETD;RETE;RETF];
MRETTEN      = removevars(RETTEN,
    {'PERMNO','SICCD','TICKER','COMNAM','NSDINX','PRC','SHROUT','VOL','RETX','MCAP','S
MRETTEN      = table2timetable(MRETTEN);
MRETTEN      = retime(MRETTEN,'monthly','mean');
MRETTEN      = timetable2table(MRETTEN);
MRETTEN.Properties.VariableNames = {'MONTH' 'AVGRETURN'};

MRETTWO      = MRETTWO.AVGRETURN;
MRETTWO      = array2table(MRETTWO);

MRETTTHREE   = MRETTTHREE.AVGRETURN;
MRETTTHREE   = array2table(MRETTTHREE);

MRETFOUR     = MRETFOUR.AVGRETURN;
MRETFOUR     = array2table(MRETFOUR);

MRETFIVE     = MRETFIVE.AVGRETURN;
MRETFIVE     = array2table(MRETFIVE);

```

```

MRETSIX          = MRETSIX.AVGRETURN;
MRETSIX          = array2table(MRETSIX);

MRETSEVEN        = MRETSEVEN.AVGRETURN;
MRETSEVEN        = array2table(MRETSEVEN);

MRETEIGHT        = MRETEIGHT.AVGRETURN;
MRETEIGHT        = array2table(MRETEIGHT);

MRETNINE         = MRETNINE.AVGRETURN;
MRETNINE         = array2table(MRETNINE);

MRETTEN          = MRETTEN.AVGRETURN;
MRETTEN          = array2table(MRETTEN);

MEANPORTSIX      = [MRETONONE MRETTWO MRETTTHREE MRETFOUR MRETFIVE MRETSIX
MRETSEVEN MRETEIGHT MRETNINE MRETTEN];
MEANPORTSIX.Properties.VariableNames =
    {'MONTH' 'P1' 'P2' 'P3' 'P4' 'P5' 'P6' 'P7' 'P8' 'P9' 'P10'};

TRADINGRET       = MEANPORTSIX.P1 - MEANPORTSIX.P10;
TRADINGRET       = array2table(TRADINGRET);

MEANPORTSIX      = [MEANPORTSIX TRADINGRET];
end

```

Warning: The assignment added rows to the table, but did not assign values to all of the table's existing variables. Those variables are extended with rows containing default values.

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CLEAR VARIABLES

```
clear A
clear eight
clear endtime
clear FIRSTTT
clear five
clear four
clear HOLD66
clear K
clear MEAN
clear MRETEIGHT
clear MRETFIVE
clear MRETFOUR
clear MRETNINE
clear MRETONE
clear MRETSEVEN
clear MRETSIX
clear MRETTEN
clear MRETTTHREE
clear MRETTWO
clear nine
clear one
clear RETA
clear RETB
clear RETC
clear RETD
clear RETE
clear RETEIGHT
clear RETF
clear RETFIVE
clear RETFIVEA
clear RETFIVEB
clear RETFIVEC
clear RETFIVED
clear RETFIVEE
clear RETFIVEF
clear RETFNINE
clear RETFOUR
```

```
clear RETFOURA
clear RETFOURB
clear RETFOURC
clear RETFOURD
clear RETFOURE
clear RETFOURF
clear RETFSEVEN
clear RETFSIX
clear RETHREEF
clear RETONE
clear RETONEA
clear RETONEB
clear RETONEC
clear RETONED
clear RETONEE
clear RETONEF
clear RETSIXA
clear RETSIXB
clear RETSIXC
clear RETSIXD
clear RETSIXE
clear RETSIXF
clear RETTEN
clear RETTHREE
clear RETTHREEA
clear RETTHREEB
clear RETTHREEC
clear RETTHREED
clear RETTHREEE
clear RETTWO
clear RETTWOA
clear RETTWOB
clear RETTWOC
clear RETTWOD
clear RETTWOE
clear RETTWOF
clear seven
clear six
clear starttime
clear starttime1
clear starttime2
clear ten
clear three
clear TRADINGRET
clear two
clear X
clear Y
```

Average

```
MONTHLYLOGMEAN =
  [MEANPORTONE ; MEANPORTTWO ; MEANPORTTHREE ; MEANPORTFOUR ; MEANPORTFIVE ; MEANPORTSIX] ;
MONTHLYLOGMEAN = table2timetable(MONTHLYLOGMEAN) ;
```

```

MONTHLYLOGMEAN = retime(MONTHLYLOGMEAN, 'monthly', 'mean');

ANNUALLOGMEAN  = retime(MONTHLYLOGMEAN, 'yearly', 'sum');

```

back to regular mean

```

MONTH          = MONTHLYLOGMEAN.MONTH;

MONTHLYMEAN    = table(MONTH, (exp(MONTHLYLOGMEAN.P1)-1),
    (exp(MONTHLYLOGMEAN.P2)-1), (exp(MONTHLYLOGMEAN.P3)-1),
    (exp(MONTHLYLOGMEAN.P4)-1), (exp(MONTHLYLOGMEAN.P5)-1),
    (exp(MONTHLYLOGMEAN.P6)-1), (exp(MONTHLYLOGMEAN.P7)-1),
    (exp(MONTHLYLOGMEAN.P8)-1), (exp(MONTHLYLOGMEAN.P9)-1),
    (exp(MONTHLYLOGMEAN.P10)-1), ((exp(MONTHLYLOGMEAN.P1)-1)-
    (exp(MONTHLYLOGMEAN.P10)-1)));
MONTHLYMEAN.Properties.VariableNames =
    {'MONTH' 'P1' 'P2' 'P3' 'P4' 'P5' 'P6' 'P7' 'P8' 'P9' 'P10' 'TRADINGRET'};
MONTHLYMEAN    = table2timetable(MONTHLYMEAN);

YEAR          = ANNUALLOGMEAN.MONTH;

ANNUALMEAN    = table(YEAR, (exp(ANNUALLOGMEAN.P1)-1),
    (exp(ANNUALLOGMEAN.P2)-1), (exp(ANNUALLOGMEAN.P3)-1),
    (exp(ANNUALLOGMEAN.P4)-1), (exp(ANNUALLOGMEAN.P5)-1),
    (exp(ANNUALLOGMEAN.P6)-1), (exp(ANNUALLOGMEAN.P7)-1),
    (exp(ANNUALLOGMEAN.P8)-1), (exp(ANNUALLOGMEAN.P9)-1),
    (exp(ANNUALLOGMEAN.P10)-1), ((exp(ANNUALLOGMEAN.P1)-1)-
    (exp(ANNUALLOGMEAN.P10)-1)));
ANNUALMEAN.Properties.VariableNames =
    {'YEAR' 'P1' 'P2' 'P3' 'P4' 'P5' 'P6' 'P7' 'P8' 'P9' 'P10' 'TRADINGRET'};
ANNUALMEAN    = table2timetable(ANNUALMEAN);

```

cleanup

```

clear MEANPORTONE
clear MEANPORTTWO
clear MEANPORTTHREE
clear MEANPORTFOUR
clear MEANPORTFIVE
clear MEANPORTSIX
clear MONTH
clear YEAR

```

Data import from previous codes

```

load('/Users/nicolasthorkildsen/Documents/Skole/MASTER THESIS/NEW
    DATA/GENERALMOMENTUM + CODES/MONTHLYMEAN.mat')
load('/Users/nicolasthorkildsen/Documents/Skole/MASTER THESIS/Data/
    BENCH.mat')

```

General Momentum - Descriptive Statistics

```
MON = timetable2table(MONTHLYMEAN);
RF = BENCH.RF/100;
MON.P1 = MON.P1-RF;
MON.P2 = MON.P2-RF;
MON.P3 = MON.P3-RF;
MON.P4 = MON.P4-RF;
MON.P5 = MON.P5-RF;
MON.P6 = MON.P6-RF;
MON.P7 = MON.P7-RF;
MON.P8 = MON.P8-RF;
MON.P9 = MON.P9-RF;
MON.P10 = MON.P10-RF;
MON.TRADINGRET = MON.P1-MON.P10;

MON(:,1) = [];
MKT = BENCH.Mktrf/100;
MKT = table(MKT);
MON = [MON MKT];
MONN = table2array(MON);
MONN(isnan(MONN))=0;
STATS = mean(MONN); % Mean
SIGNI = ttest(MONN); % Statistical Significance
STATS = [STATS;std(MONN)]; % Standard Deviation

P1 = fitlm(BENCH.Mktrf/100,MON.P1);
P2 = fitlm(BENCH.Mktrf/100,MON.P2);
P3 = fitlm(BENCH.Mktrf/100,MON.P3);
P4 = fitlm(BENCH.Mktrf/100,MON.P4);
P5 = fitlm(BENCH.Mktrf/100,MON.P5);
P6 = fitlm(BENCH.Mktrf/100,MON.P6);
P7 = fitlm(BENCH.Mktrf/100,MON.P7);
P8 = fitlm(BENCH.Mktrf/100,MON.P8);
P9 = fitlm(BENCH.Mktrf/100,MON.P9);
P10 = fitlm(BENCH.Mktrf/100,MON.P10);
PT = fitlm(BENCH.Mktrf/100,MON.TRADINGRET);
PM = fitlm(BENCH.Mktrf/100,BENCH.Mktrf/100);

P1A = P1.Coefficients.Estimate;
P1A(2,:) = [];
P2A = P2.Coefficients.Estimate;
P2A(2,:) = [];
P3A = P3.Coefficients.Estimate;
P3A(2,:) = [];
P4A = P4.Coefficients.Estimate;
P4A(2,:) = [];
P5A = P5.Coefficients.Estimate;
P5A(2,:) = [];
P6A = P6.Coefficients.Estimate;
P6A(2,:) = [];
P7A = P7.Coefficients.Estimate;
P7A(2,:) = [];
```

```

P8A = P8.Coefficients.Estimate;
P8A(2,:) = [];
P9A = P9.Coefficients.Estimate;
P9A(2,:) = [];
P10A = P10.Coefficients.Estimate;
P10A(2,:) = [];
PTA = PT.Coefficients.Estimate;
PTA(2,:) = [];
PMA = PM.Coefficients.Estimate;
PMA(2,:) = [];

ALPHA = [P1A P2A P3A P4A P5A P6A P7A P8A P9A P10A PTA PMA]; % Jensens
Alpha
STATS = [STATS;ALPHA];

P1AT = P1.Coefficients.tStat;
P1AT(2,:) = [];
P2AT = P2.Coefficients.tStat;
P2AT(2,:) = [];
P3AT = P3.Coefficients.tStat;
P3AT(2,:) = [];
P4AT = P4.Coefficients.tStat;
P4AT(2,:) = [];
P5AT = P5.Coefficients.tStat;
P5AT(2,:) = [];
P6AT = P6.Coefficients.tStat;
P6AT(2,:) = [];
P7AT = P7.Coefficients.tStat;
P7AT(2,:) = [];
P8AT = P8.Coefficients.tStat;
P8AT(2,:) = [];
P9AT = P9.Coefficients.tStat;
P9AT(2,:) = [];
P10AT = P10.Coefficients.tStat;
P10AT(2,:) = [];
PTAT = PT.Coefficients.tStat;
PTAT(2,:) = [];
PMAT = PM.Coefficients.tStat;
PMAT(2,:) = [];

ALPHATSTAT = [P1AT P2AT P3AT P4AT P5AT P6AT P7AT P8AT P9AT P10AT PTAT
PMAT]; % Statistical Significance - Jensens Alpha
STATS = [STATS;ALPHATSTAT];

P1B = P1.Coefficients.Estimate;
P1B(1,:) = [];
P2B = P2.Coefficients.Estimate;
P2B(1,:) = [];
P3B = P3.Coefficients.Estimate;
P3B(1,:) = [];
P4B = P4.Coefficients.Estimate;
P4B(1,:) = [];
P5B = P5.Coefficients.Estimate;
P5B(1,:) = [];

```

```

P6B = P6.Coefficients.Estimate;
P6B(1,:) = [];
P7B = P7.Coefficients.Estimate;
P7B(1,:) = [];
P8B = P8.Coefficients.Estimate;
P8B(1,:) = [];
P9B = P9.Coefficients.Estimate;
P9B(1,:) = [];
P10B = P10.Coefficients.Estimate;
P10B(1,:) = [];
PTB = PT.Coefficients.Estimate;
PTB(1,:) = [];
PMB = PM.Coefficients.Estimate;
PMB(1,:) = [];

BETA = [P1B P2B P3B P4B P5B P6B P7B P8B P9B P10B PTB PMB]; % CAPM Beta
STATS = [STATS;BETA];

P1BT = P1.Coefficients.tStat;
P1BT(1,:) = [];
P2BT = P2.Coefficients.tStat;
P2BT(1,:) = [];
P3BT = P3.Coefficients.tStat;
P3BT(1,:) = [];
P4BT = P4.Coefficients.tStat;
P4BT(1,:) = [];
P5BT = P5.Coefficients.tStat;
P5BT(1,:) = [];
P6BT = P6.Coefficients.tStat;
P6BT(1,:) = [];
P7BT = P7.Coefficients.tStat;
P7BT(1,:) = [];
P8BT = P8.Coefficients.tStat;
P8BT(1,:) = [];
P9BT = P9.Coefficients.tStat;
P9BT(1,:) = [];
P10BT = P10.Coefficients.tStat;
P10BT(1,:) = [];
PTBT = PT.Coefficients.tStat;
PTBT(1,:) = [];
PMBT = PM.Coefficients.tStat;
PMBT(1,:) = [];

BETATSTAT = [P1BT P2BT P3BT P4BT P5BT P6BT P7BT P8BT P9BT P10BT PTBT
PMBT]; % Statistical Significance - CAPM Beta
STATS = [STATS;BETATSTAT];

MEAN = array2table((mean(MONN)));
STD = array2table((std(MONN)));
SHARPE = [MEAN.Var1/STD.Var1 MEAN.Var2/STD.Var2 MEAN.Var3/STD.Var3
MEAN.Var4/STD.Var4 MEAN.Var5/STD.Var5 MEAN.Var6/STD.Var6 MEAN.Var7/
STD.Var7 MEAN.Var8/STD.Var8 MEAN.Var9/STD.Var9 MEAN.Var10/STD.Var10
MEAN.Var11/STD.Var11 MEAN.Var12/STD.Var12];
STATS = [STATS;SHARPE]; % Sharpe ratio

```

```

MEAN = array2table((mean(MONN)));
BETA = array2table(BETA);
TREYNOR = [MEAN.Var1/BETA.BETA1 MEAN.Var2/BETA.BETA2 MEAN.Var3/
BETA.BETA3 MEAN.Var4/BETA.BETA4 MEAN.Var5/BETA.BETA5 MEAN.Var6/
BETA.BETA6 MEAN.Var7/BETA.BETA7 MEAN.Var8/BETA.BETA8 MEAN.Var9/
BETA.BETA9 MEAN.Var10/BETA.BETA10 MEAN.Var11/BETA.BETA11 MEAN.Var12/
BETA.BETA12];
STATS = [STATS;TREYNOR]; % Treynor ratio

MMMM = ret2price(MONN);
[MaxDD, MaxDDIndex] = maxdrawdown(MMMM); % Maximum Drawdown
STATS = [STATS;MaxDD];

DDM = [18 18 23 23 23 23 23 23 23 117 16 18]; % Maximum Drawdown in
time
STATS = [STATS;DDM];

SKEW = skewness(MONN); % Skewnes
STATS = [STATS;SKEW];

KURT = kurtosis(MONN); % Kurtosis
STATS = [STATS;KURT];

[h,p,jbstat,critval] = jbtest(MONTHLYMEAN.P1,[],0.0001);
JBSTAT1 = jbstat;
JBP1 = p;
[h,p,jbstat,critval] = jbtest(MONTHLYMEAN.P2,[],0.0001);
JBSTAT2 = jbstat;
JBP2 = p;
[h,p,jbstat,critval] = jbtest(MONTHLYMEAN.P3,[],0.0001);
JBSTAT3 = jbstat;
JBP3 = p;
[h,p,jbstat,critval] = jbtest(MONTHLYMEAN.P4,[],0.0001);
JBSTAT4 = jbstat;
JBP4 = p;
[h,p,jbstat,critval] = jbtest(MONTHLYMEAN.P5,[],0.0001);
JBSTAT5 = jbstat;
JBP5 = p;
[h,p,jbstat,critval] = jbtest(MONTHLYMEAN.P6,[],0.0001);
JBSTAT6 = jbstat;
JBP6 = p;
[h,p,jbstat,critval] = jbtest(MONTHLYMEAN.P7,[],0.0001);
JBSTAT7 = jbstat;
JBP7 = p;
[h,p,jbstat,critval] = jbtest(MONTHLYMEAN.P8,[],0.0001);
JBSTAT8 = jbstat;
JBP8 = p;
[h,p,jbstat,critval] = jbtest(MONTHLYMEAN.P9,[],0.0001);
JBSTAT9 = jbstat;
JBP9 = p;
[h,p,jbstat,critval] = jbtest(MONTHLYMEAN.P10,[],0.0001);
JBSTAT10 = jbstat;
JBP10 = p;

```

```

[h,p,jbstat,critval] = jbtest(MONTHLYMEAN.TRADINGRET,[],0.0001);
JBSTATT = jbstat;
JBPT = p;
[h,p,jbstat,critval] = jbtest(MKT.MKT,[],0.0001);
JBSTATM = jbstat;
JBPM = p;

JBSTAT = [JBSTAT1 JBSTAT2 JBSTAT3 JBSTAT4 JBSTAT5 JBSTAT6 JBSTAT7
  JBSTAT8 JBSTAT9 JBSTAT10 JBSTATT JBSTATM]; % Jarque Bera
JBP = [JBP1 JBP2 JBP3 JBP4 JBP5 JBP6 JBP7 JBP8 JBP9 JBP10 JBPT
  JBPM]; % JB P-value

STATS = [STATS;JBSTAT;JBP];

STATS = array2table(STATS);
STATS.Properties.VariableNames =
  {'P1' 'P2' 'P3' 'P4' 'P5' 'P6' 'P7' 'P8' 'P9' 'P10' 'TRADINGRET' 'MARKET'};

STATS.Properties.RowNames =
  {'RETURN';'STDD';'ALPHA';'ATSTAT';'BETA';'BTSTAT';'SHARPE';'TREYNOR';'MDD';'MDDMO

```

General Momentum - Maximum Drawdown (data + plots)

```

MON = 1

for K = 2:497
  MONN = MON(K-1,:)*(1+MONTHLYMEAN.TRADINGRET(K,:));
  if MONN > 1
    MONN = 1
  end
  MON = [MON;MONN];
end

MON = MON-1

BMKT = BENCH.MktRF/100
MKT = 1

for K = 2:497
  MKTT = MKT(K-1,:)*(1+BMKT(K,:));
  if MKTT > 1
    MKTT = 1
  end
  MKT = [MKT;MKTT];
end

MKT = MKT-1

Drawdown = table(MONTHLYMEAN.MONTH,MON,MKT);
Drawdown.Properties.VariableNames = {'TIME' 'ZEROCOST' 'MARKET'};

```

```

DD = [Drawdown.ZEROCOST Drawdown.MARKET];

plot(Drawdown.TIME,Drawdown.ZEROCOST,'-
k',Drawdown.TIME,Drawdown.MARKET,'--k') % Drawdowns
hold on
legend('Zerocost','Market')
title('PANEL X')
ylabel('DD in %')
xlabel('Time')
hold off

MIN = 1

for K = 2:497
    MONN = MIN(K-1,:)*(1+MONTHLYMEAN.TRADINGRET(K,:));
    if MONN < 1
        MONN = 1
    end
    MIN = [MIN;MONN];
end

MIN = MIN-1

BMKT = BENCH.MktRF/100
MIT = 1

for K = 2:497
    MKTT = MIT(K-1,:)*(1+BMKT(K,:));
    if MKTT < 1
        MKTT = 1
    end
    MIT = [MIT;MKTT];
end

MIT = MIT-1

plot(Drawdown.TIME,MIT,'-k',Drawdown.TIME,MIN,'--k')
hold on
legend('Zerocost','Market')
title('PANEL X')
ylabel('Return in %')
xlabel('Time')
hold off

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BMKT =

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-0.0236
-0.0154
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-0.0717
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-0.0365
-0.0324
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-0.0187
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-0.0309
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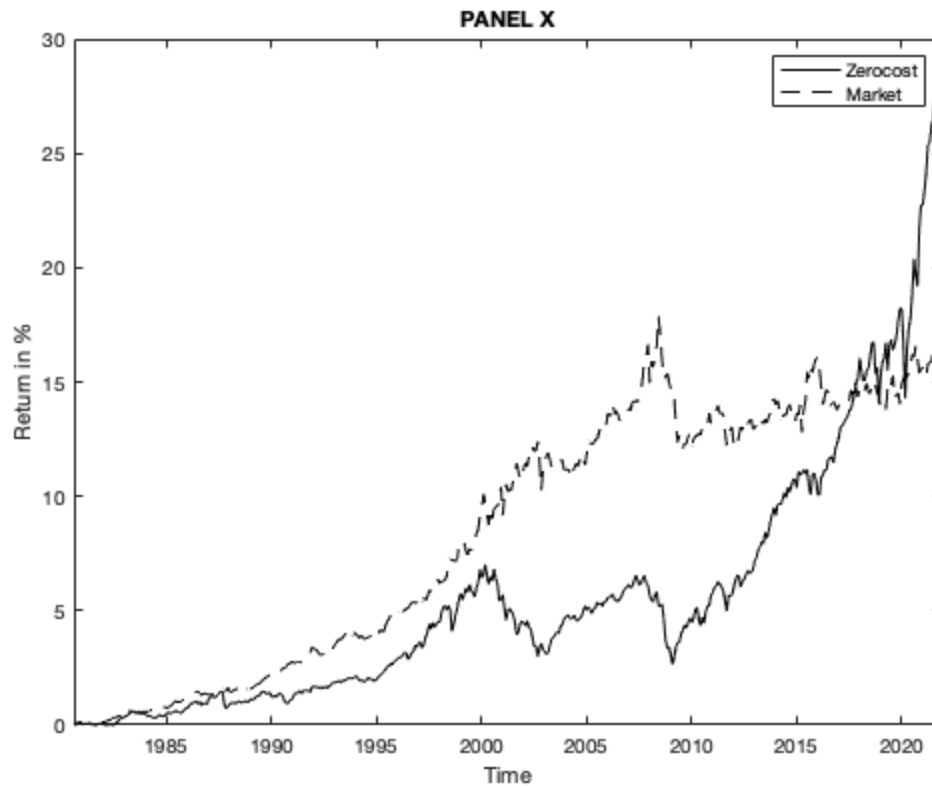
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General Momentum - Descriptive statistics - Market States

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BASIC = table2timetable(BASIC);

infmt = 'dd-MM-yyyy';
starttime = datetime('1-12-1980', 'InputFormat', infmt);
endtime = datetime('2-6-1982', 'InputFormat', infmt);
T1 = BASIC(isbetween(BASIC.Var1, starttime, endtime), :);

infmt = 'dd-MM-yyyy';
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T2 = BASIC(isbetween(BASIC.Var1, starttime, endtime), :);

infmt = 'dd-MM-yyyy';
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endtime = datetime('2-8-1987', 'InputFormat', infmt);
T3 = BASIC(isbetween(BASIC.Var1, starttime, endtime), :);

infmt = 'dd-MM-yyyy';
starttime = datetime('1-09-1987', 'InputFormat', infmt);

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endtime = datetime('2-11-1987', 'InputFormat', infmt);
T4 = BASIC(isbetween(BASIC.Var1, starttime, endtime), :);

infmt = 'dd-MM-yyyy';
starttime = datetime('1-12-1987', 'InputFormat', infmt);
endtime = datetime('2-8-1989', 'InputFormat', infmt);
T5 = BASIC(isbetween(BASIC.Var1, starttime, endtime), :);

infmt = 'dd-MM-yyyy';
starttime = datetime('1-09-1989', 'InputFormat', infmt);
endtime = datetime('2-10-1990', 'InputFormat', infmt);
T6 = BASIC(isbetween(BASIC.Var1, starttime, endtime), :);

infmt = 'dd-MM-yyyy';
starttime = datetime('1-11-1990', 'InputFormat', infmt);
endtime = datetime('2-5-1991', 'InputFormat', infmt);
T7 = BASIC(isbetween(BASIC.Var1, starttime, endtime), :);

infmt = 'dd-MM-yyyy';
starttime = datetime('1-06-1991', 'InputFormat', infmt);
endtime = datetime('2-03-2000', 'InputFormat', infmt);
T8 = BASIC(isbetween(BASIC.Var1, starttime, endtime), :);

infmt = 'dd-MM-yyyy';
starttime = datetime('1-4-2000', 'InputFormat', infmt);
endtime = datetime('2-9-2002', 'InputFormat', infmt);
T9 = BASIC(isbetween(BASIC.Var1, starttime, endtime), :);

infmt = 'dd-MM-yyyy';
starttime = datetime('1-10-2002', 'InputFormat', infmt);
endtime = datetime('2-5-2007', 'InputFormat', infmt);
T10 = BASIC(isbetween(BASIC.Var1, starttime, endtime), :);

infmt = 'dd-MM-yyyy';
starttime = datetime('1-6-2007', 'InputFormat', infmt);
endtime = datetime('2-2-2009', 'InputFormat', infmt);
T11 = BASIC(isbetween(BASIC.Var1, starttime, endtime), :);

infmt = 'dd-MM-yyyy';
starttime = datetime('1-3-2009', 'InputFormat', infmt);
endtime = datetime('2-12-2012', 'InputFormat', infmt);
T12 = BASIC(isbetween(BASIC.Var1, starttime, endtime), :);

infmt = 'dd-MM-yyyy';
starttime = datetime('1-1-2013', 'InputFormat', infmt);
endtime = datetime('2-12-2019', 'InputFormat', infmt);
T13 = BASIC(isbetween(BASIC.Var1, starttime, endtime), :);

infmt = 'dd-MM-yyyy';
starttime = datetime('1-1-2020', 'InputFormat', infmt);
endtime = datetime('2-3-2020', 'InputFormat', infmt);
T14 = BASIC(isbetween(BASIC.Var1, starttime, endtime), :);

infmt = 'dd-MM-yyyy';

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starttime = datetime('1-4-2020', 'InputFormat', infmt);
endtime = datetime('2-6-2020', 'InputFormat', infmt);
T15 = BASIC(isbetween(BASIC.Var1, starttime, endtime), :);

infmt = 'dd-MM-yyyy';
starttime = datetime('1-7-2020', 'InputFormat', infmt);
endtime = datetime('2-12-2021', 'InputFormat', infmt);
T16 = BASIC(isbetween(BASIC.Var1, starttime, endtime), :);

P1 = timetable2table(T1)
P1(:,1) = [];
P2 = timetable2table(T2)
P2(:,1) = [];
P3 = timetable2table(T3)
P3(:,1) = [];
P4 = timetable2table(T4)
P4(:,1) = [];
P5 = timetable2table(T5)
P5(:,1) = [];
P6 = timetable2table(T6)
P6(:,1) = [];
P7 = timetable2table(T7)
P7(:,1) = [];
P8 = timetable2table(T8)
P8(:,1) = [];
P9 = timetable2table(T9)
P9(:,1) = [];
P10 = timetable2table(T10)
P10(:,1) = [];
P11 = timetable2table(T11)
P11(:,1) = [];
P12 = timetable2table(T12)
P12(:,1) = [];
P13 = timetable2table(T13)
P13(:,1) = [];
P14 = timetable2table(T14)
P14(:,1) = [];
P15 = timetable2table(T15)
P15(:,1) = [];
P16 = timetable2table(T16)
P16(:,1) = [];

STATS = [mean(P1.Var2) mean(P1.Var3) mean(P2.Var2) mean(P2.Var3)
mean(P3.Var2) mean(P3.Var3) mean(P4.Var2) mean(P4.Var3)
mean(P5.Var2) mean(P5.Var3) mean(P6.Var2) mean(P6.Var3) mean(P7.Var2)
mean(P7.Var3) mean(P8.Var2) mean(P8.Var3) mean(P9.Var2) mean(P9.Var3)
mean(P10.Var2) mean(P10.Var3) mean(P11.Var2) mean(P11.Var3)
mean(P12.Var2) mean(P12.Var3) mean(P13.Var2) mean(P13.Var3)
mean(P14.Var2) mean(P14.Var3) mean(P15.Var2) mean(P15.Var3)
mean(P16.Var2) mean(P16.Var3);std(P1.Var2) std(P1.Var3) std(P2.Var2)
std(P2.Var3) std(P3.Var2) std(P3.Var3) std(P4.Var2) std(P4.Var3)
std(P5.Var2) std(P5.Var3) std(P6.Var2) std(P6.Var3) std(P7.Var2)
std(P7.Var3) std(P8.Var2) std(P8.Var3) std(P9.Var2) std(P9.Var3)

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std(P10.Var2) std(P10.Var3) std(P11.Var2) std(P11.Var3) std(P12.Var2)
std(P12.Var3) std(P13.Var2) std(P13.Var3) std(P14.Var2) std(P14.Var3)
std(P15.Var2) std(P15.Var3) std(P16.Var2) std(P16.Var3)];

R1 = fitlm(T1.Var3,T1.Var2);
R2 = fitlm(T1.Var3,T1.Var3);
R3 = fitlm(T2.Var3,T2.Var2);
R4 = fitlm(T2.Var3,T2.Var3);
R5 = fitlm(T3.Var3,T3.Var2);
R6 = fitlm(T3.Var3,T3.Var3);
R7 = fitlm(T4.Var3,T4.Var2);
R8 = fitlm(T4.Var3,T4.Var3);
R9 = fitlm(T5.Var3,T5.Var2);
R10 = fitlm(T5.Var3,T5.Var3);
R11 = fitlm(T6.Var3,T6.Var2);
R12 = fitlm(T6.Var3,T6.Var3);
R13 = fitlm(T7.Var3,T7.Var2);
R14 = fitlm(T7.Var3,T7.Var3);
R15 = fitlm(T8.Var3,T8.Var2);
R16 = fitlm(T8.Var3,T8.Var3);
R17 = fitlm(T9.Var3,T9.Var2);
R18 = fitlm(T9.Var3,T9.Var3);
R19 = fitlm(T10.Var3,T10.Var2);
R20 = fitlm(T10.Var3,T10.Var3);
R21 = fitlm(T11.Var3,T11.Var2);
R22 = fitlm(T11.Var3,T11.Var3);
R23 = fitlm(T12.Var3,T12.Var2);
R24 = fitlm(T12.Var3,T12.Var3);
R25 = fitlm(T13.Var3,T13.Var2);
R26 = fitlm(T13.Var3,T13.Var3);
R27 = fitlm(T14.Var3,T14.Var2);
R28 = fitlm(T14.Var3,T14.Var3);
R29 = fitlm(T15.Var3,T15.Var2);
R30 = fitlm(T15.Var3,T15.Var3);
R31 = fitlm(T16.Var3,T16.Var2);
R32 = fitlm(T16.Var3,T16.Var3);

R1A = R1.Coefficients.Estimate;
R1A(2,:) = [];
R2A = R2.Coefficients.Estimate;
R2A(2,:) = [];
R3A = R3.Coefficients.Estimate;
R3A(2,:) = [];
R4A = R4.Coefficients.Estimate;
R4A(2,:) = [];
R5A = R5.Coefficients.Estimate;
R5A(2,:) = [];
R6A = R6.Coefficients.Estimate;
R6A(2,:) = [];
R7A = R7.Coefficients.Estimate;
R7A(2,:) = [];
R8A = R8.Coefficients.Estimate;
R8A(2,:) = [];
R9A = R9.Coefficients.Estimate;

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R9A(2,:) = [];
R10A = R10.Coefficients.Estimate;
R10A(2,:) = [];
R11A = R11.Coefficients.Estimate;
R11A(2,:) = [];
R12A = R12.Coefficients.Estimate;
R12A(2,:) = [];
R13A = R13.Coefficients.Estimate;
R13A(2,:) = [];
R14A = R14.Coefficients.Estimate;
R14A(2,:) = [];
R15A = R15.Coefficients.Estimate;
R15A(2,:) = [];
R16A = R16.Coefficients.Estimate;
R16A(2,:) = [];
R17A = R17.Coefficients.Estimate;
R17A(2,:) = [];
R18A = R18.Coefficients.Estimate;
R18A(2,:) = [];
R19A = R19.Coefficients.Estimate;
R19A(2,:) = [];
R20A = R20.Coefficients.Estimate;
R20A(2,:) = [];
R21A = R21.Coefficients.Estimate;
R21A(2,:) = [];
R22A = R22.Coefficients.Estimate;
R22A(2,:) = [];
R23A = R23.Coefficients.Estimate;
R23A(2,:) = [];
R24A = R24.Coefficients.Estimate;
R24A(2,:) = [];
R25A = R25.Coefficients.Estimate;
R25A(2,:) = [];
R26A = R26.Coefficients.Estimate;
R26A(2,:) = [];
R27A = R27.Coefficients.Estimate;
R27A(2,:) = [];
R28A = R28.Coefficients.Estimate;
R28A(2,:) = [];
R29A = R29.Coefficients.Estimate;
R29A(2,:) = [];
R30A = R30.Coefficients.Estimate;
R30A(2,:) = [];
R31A = R31.Coefficients.Estimate;
R31A(2,:) = [];
R32A = R32.Coefficients.Estimate;
R32A(2,:) = [];

ALPHA = [R1A R2A R3A R4A R5A R6A R7A R8A R9A R10A R11A R12A R13A R14A
R15A R16A R17A R18A R19A R20A R21A R22A R23A R24A R25A R26A R27A R28A
R29A R30A R31A R32A];
STATS = [STATS;ALPHA];

R1A = R1.Coefficients.tStat;

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```
R1A(2,:) = [];  
R2A = R2.Coefficients.tStat;  
R2A(2,:) = [];  
R3A = R3.Coefficients.tStat;  
R3A(2,:) = [];  
R4A = R4.Coefficients.tStat;  
R4A(2,:) = [];  
R5A = R5.Coefficients.tStat;  
R5A(2,:) = [];  
R6A = R6.Coefficients.tStat;  
R6A(2,:) = [];  
R7A = R7.Coefficients.tStat;  
R7A(2,:) = [];  
R8A = R8.Coefficients.tStat;  
R8A(2,:) = [];  
R9A = R9.Coefficients.tStat;  
R9A(2,:) = [];  
R10A = R10.Coefficients.tStat;  
R10A(2,:) = [];  
R11A = R11.Coefficients.tStat;  
R11A(2,:) = [];  
R12A = R12.Coefficients.tStat;  
R12A(2,:) = [];  
R13A = R13.Coefficients.tStat;  
R13A(2,:) = [];  
R14A = R14.Coefficients.tStat;  
R14A(2,:) = [];  
R15A = R15.Coefficients.tStat;  
R15A(2,:) = [];  
R16A = R16.Coefficients.tStat;  
R16A(2,:) = [];  
R17A = R17.Coefficients.tStat;  
R17A(2,:) = [];  
R18A = R18.Coefficients.tStat;  
R18A(2,:) = [];  
R19A = R19.Coefficients.tStat;  
R19A(2,:) = [];  
R20A = R20.Coefficients.tStat;  
R20A(2,:) = [];  
R21A = R21.Coefficients.tStat;  
R21A(2,:) = [];  
R22A = R22.Coefficients.tStat;  
R22A(2,:) = [];  
R23A = R23.Coefficients.tStat;  
R23A(2,:) = [];  
R24A = R24.Coefficients.tStat;  
R24A(2,:) = [];  
R25A = R25.Coefficients.tStat;  
R25A(2,:) = [];  
R26A = R26.Coefficients.tStat;  
R26A(2,:) = [];  
R27A = R27.Coefficients.tStat;  
R27A(2,:) = [];  
R28A = R28.Coefficients.tStat;
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R28A(2,:) = [];
R29A = R29.Coefficients.tStat;
R29A(2,:) = [];
R30A = R30.Coefficients.tStat;
R30A(2,:) = [];
R31A = R31.Coefficients.tStat;
R31A(2,:) = [];
R32A = R32.Coefficients.tStat;
R32A(2,:) = [];

ALPHAT = [R1A R2A R3A R4A R5A R6A R7A R8A R9A R10A R11A R12A R13A R14A
R15A R16A R17A R18A R19A R20A R21A R22A R23A R24A R25A R26A R27A R28A
R29A R30A R31A R32A];
STATS = [STATS;ALPHAT];

R1A = R1.Coefficients.Estimate;
R1A(1,:) = [];
R2A = R2.Coefficients.Estimate;
R2A(1,:) = [];
R3A = R3.Coefficients.Estimate;
R3A(1,:) = [];
R4A = R4.Coefficients.Estimate;
R4A(1,:) = [];
R5A = R5.Coefficients.Estimate;
R5A(1,:) = [];
R6A = R6.Coefficients.Estimate;
R6A(1,:) = [];
R7A = R7.Coefficients.Estimate;
R7A(1,:) = [];
R8A = R8.Coefficients.Estimate;
R8A(1,:) = [];
R9A = R9.Coefficients.Estimate;
R9A(1,:) = [];
R10A = R10.Coefficients.Estimate;
R10A(1,:) = [];
R11A = R11.Coefficients.Estimate;
R11A(1,:) = [];
R12A = R12.Coefficients.Estimate;
R12A(1,:) = [];
R13A = R13.Coefficients.Estimate;
R13A(1,:) = [];
R14A = R14.Coefficients.Estimate;
R14A(1,:) = [];
R15A = R15.Coefficients.Estimate;
R15A(1,:) = [];
R16A = R16.Coefficients.Estimate;
R16A(1,:) = [];
R17A = R17.Coefficients.Estimate;
R17A(1,:) = [];
R18A = R18.Coefficients.Estimate;
R18A(1,:) = [];
R19A = R19.Coefficients.Estimate;
R19A(1,:) = [];
R20A = R20.Coefficients.Estimate;

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R20A(1,:) = [];
R21A = R21.Coefficients.Estimate;
R21A(1,:) = [];
R22A = R22.Coefficients.Estimate;
R22A(1,:) = [];
R23A = R23.Coefficients.Estimate;
R23A(1,:) = [];
R24A = R24.Coefficients.Estimate;
R24A(1,:) = [];
R25A = R25.Coefficients.Estimate;
R25A(1,:) = [];
R26A = R26.Coefficients.Estimate;
R26A(1,:) = [];
R27A = R27.Coefficients.Estimate;
R27A(1,:) = [];
R28A = R28.Coefficients.Estimate;
R28A(1,:) = [];
R29A = R29.Coefficients.Estimate;
R29A(1,:) = [];
R30A = R30.Coefficients.Estimate;
R30A(1,:) = [];
R31A = R31.Coefficients.Estimate;
R31A(1,:) = [];
R32A = R32.Coefficients.Estimate;
R32A(1,:) = [];

BETA = [R1A R2A R3A R4A R5A R6A R7A R8A R9A R10A R11A R12A R13A R14A
        R15A R16A R17A R18A R19A R20A R21A R22A R23A R24A R25A R26A R27A R28A
        R29A R30A R31A R32A];
STATS = [STATS;BETA];

R1A = R1.Coefficients.tStat;
R1A(1,:) = [];
R2A = R2.Coefficients.tStat;
R2A(1,:) = [];
R3A = R3.Coefficients.tStat;
R3A(1,:) = [];
R4A = R4.Coefficients.tStat;
R4A(1,:) = [];
R5A = R5.Coefficients.tStat;
R5A(1,:) = [];
R6A = R6.Coefficients.tStat;
R6A(1,:) = [];
R7A = R7.Coefficients.tStat;
R7A(1,:) = [];
R8A = R8.Coefficients.tStat;
R8A(1,:) = [];
R9A = R9.Coefficients.tStat;
R9A(1,:) = [];
R10A = R10.Coefficients.tStat;
R10A(1,:) = [];
R11A = R11.Coefficients.tStat;
R11A(1,:) = [];
R12A = R12.Coefficients.tStat;

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R12A(1,:) = [];
R13A = R13.Coefficients.tStat;
R13A(1,:) = [];
R14A = R14.Coefficients.tStat;
R14A(1,:) = [];
R15A = R15.Coefficients.tStat;
R15A(1,:) = [];
R16A = R16.Coefficients.tStat;
R16A(1,:) = [];
R17A = R17.Coefficients.tStat;
R17A(1,:) = [];
R18A = R18.Coefficients.tStat;
R18A(1,:) = [];
R19A = R19.Coefficients.tStat;
R19A(1,:) = [];
R20A = R20.Coefficients.tStat;
R20A(1,:) = [];
R21A = R21.Coefficients.tStat;
R21A(1,:) = [];
R22A = R22.Coefficients.tStat;
R22A(1,:) = [];
R23A = R23.Coefficients.tStat;
R23A(1,:) = [];
R24A = R24.Coefficients.tStat;
R24A(1,:) = [];
R25A = R25.Coefficients.tStat;
R25A(1,:) = [];
R26A = R26.Coefficients.tStat;
R26A(1,:) = [];
R27A = R27.Coefficients.tStat;
R27A(1,:) = [];
R28A = R28.Coefficients.tStat;
R28A(1,:) = [];
R29A = R29.Coefficients.tStat;
R29A(1,:) = [];
R30A = R30.Coefficients.tStat;
R30A(1,:) = [];
R31A = R31.Coefficients.tStat;
R31A(1,:) = [];
R32A = R32.Coefficients.tStat;
R32A(1,:) = [];

BETAT = [R1A R2A R3A R4A R5A R6A R7A R8A R9A R10A R11A R12A R13A R14A
R15A R16A R17A R18A R19A R20A R21A R22A R23A R24A R25A R26A R27A R28A
R29A R30A R31A R32A];
STATS = [STATS;BETAT];

SHARPE = [(mean(P1.Var2)/std(P1.Var2)) (mean(P1.Var3)/std(P1.Var3))
(mean(P2.Var2)/std(P2.Var2)) (mean(P2.Var3)/std(P2.Var3))
(mean(P3.Var2)/std(P3.Var2)) (mean(P3.Var3)/std(P3.Var3))
(mean(P4.Var2)/std(P4.Var2)) (mean(P4.Var3)/std(P4.Var3))
(mean(P5.Var2)/std(P5.Var2)) (mean(P5.Var3)/std(P5.Var3))
(mean(P6.Var2)/std(P6.Var2)) (mean(P6.Var3)/std(P6.Var3))
(mean(P7.Var2)/std(P7.Var2)) (mean(P7.Var3)/std(P7.Var3))

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(mean(P8.Var2)/std(P8.Var2)) (mean(P8.Var3)/std(P8.Var3))
(mean(P9.Var2)/std(P9.Var2)) (mean(P9.Var3)/std(P9.Var3))
(mean(P10.Var2)/std(P10.Var2)) (mean(P10.Var3)/std(P10.Var3))
(mean(P11.Var2)/std(P11.Var2)) (mean(P11.Var3)/std(P11.Var3))
(mean(P12.Var2)/std(P12.Var2)) (mean(P12.Var3)/std(P12.Var3))
(mean(P13.Var2)/std(P13.Var2)) (mean(P13.Var3)/std(P13.Var3))
(mean(P14.Var2)/std(P14.Var2)) (mean(P14.Var3)/std(P14.Var3))
(mean(P15.Var2)/std(P15.Var2)) (mean(P15.Var3)/std(P15.Var3))
(mean(P16.Var2)/std(P16.Var2)) (mean(P16.Var3)/std(P16.Var3));
STATS = [STATS;SHARPE];

BETA = array2table(BETA);
TREYNOR = [(mean(P1.Var2)/BETA.BETA1) (mean(P1.Var3)/BETA.BETA2)
(mean(P2.Var2)/BETA.BETA3) (mean(P2.Var3)/BETA.BETA4) (mean(P3.Var2)/
BETA.BETA5) (mean(P3.Var3)/BETA.BETA6) (mean(P4.Var2)/BETA.BETA7)
(mean(P4.Var3)/BETA.BETA8) (mean(P5.Var2)/BETA.BETA9) (mean(P5.Var3)/
BETA.BETA10) (mean(P6.Var2)/BETA.BETA11) (mean(P6.Var3)/BETA.BETA12)
(mean(P7.Var2)/BETA.BETA13) (mean(P7.Var3)/BETA.BETA14)
(mean(P8.Var2)/BETA.BETA15) (mean(P8.Var3)/BETA.BETA16)
(mean(P9.Var2)/BETA.BETA17) (mean(P9.Var3)/BETA.BETA18)
(mean(P10.Var2)/BETA.BETA19) (mean(P10.Var3)/BETA.BETA20)
(mean(P11.Var2)/BETA.BETA21) (mean(P11.Var3)/BETA.BETA22)
(mean(P12.Var2)/BETA.BETA23) (mean(P12.Var3)/BETA.BETA24)
(mean(P13.Var2)/BETA.BETA25) (mean(P13.Var3)/BETA.BETA26)
(mean(P14.Var2)/BETA.BETA27) (mean(P14.Var3)/BETA.BETA28)
(mean(P15.Var2)/BETA.BETA29) (mean(P15.Var3)/BETA.BETA30)
(mean(P16.Var2)/BETA.BETA31) (mean(P16.Var3)/BETA.BETA32)];
STATS = [STATS;TREYNOR];

SKEW = [skewness(P1.Var2) skewness(P1.Var3) skewness(P2.Var2)
skewness(P2.Var3) skewness(P3.Var2) skewness(P3.Var3)
skewness(P4.Var2) skewness(P4.Var3) skewness(P5.Var2)
skewness(P5.Var3) skewness(P6.Var2) skewness(P6.Var3)
skewness(P7.Var2) skewness(P7.Var3) skewness(P8.Var2)
skewness(P8.Var3) skewness(P9.Var2) skewness(P9.Var3)
skewness(P10.Var2) skewness(P10.Var3) skewness(P11.Var2)
skewness(P11.Var3) skewness(P12.Var2) skewness(P12.Var3)
skewness(P13.Var2) skewness(P13.Var3) skewness(P14.Var2)
skewness(P14.Var3) skewness(P15.Var2) skewness(P15.Var3)
skewness(P16.Var2) skewness(P16.Var3)];
STATS = [STATS;SKEW];

KURT = [kurtosis(P1.Var2) kurtosis(P1.Var3) kurtosis(P2.Var2)
kurtosis(P2.Var3) kurtosis(P3.Var2) kurtosis(P3.Var3)
kurtosis(P4.Var2) kurtosis(P4.Var3) kurtosis(P5.Var2)
kurtosis(P5.Var3) kurtosis(P6.Var2) kurtosis(P6.Var3)
kurtosis(P7.Var2) kurtosis(P7.Var3) kurtosis(P8.Var2)
kurtosis(P8.Var3) kurtosis(P9.Var2) kurtosis(P9.Var3)
kurtosis(P10.Var2) kurtosis(P10.Var3) kurtosis(P11.Var2)
kurtosis(P11.Var3) kurtosis(P12.Var2) kurtosis(P12.Var3)
kurtosis(P13.Var2) kurtosis(P13.Var3) kurtosis(P14.Var2)
kurtosis(P14.Var3) kurtosis(P15.Var2) kurtosis(P15.Var3)
kurtosis(P16.Var2) kurtosis(P16.Var3)];
STATS = [STATS;KURT];

```

```

STATS = array2table(STATS);
STATS.Properties.VariableNames =
    {'ZC1' 'MKT1' 'ZC2' 'MKT2' 'ZC3' 'MKT3' 'ZC4' 'MKT4' 'ZC5' 'MKT5' 'ZC6' 'MKT6' 'Z
STATS.Properties.RowNames =
    {'RETURN'; 'STDD'; 'ALPHA'; 'ATSTAT'; 'BETA'; 'BTSTAT'; 'SHARPE'; 'TREYNOR'; 'SKEW'; 'KURT

Down = [T1;T4;T6;T9;T11];
DOWN = [mean(Down.Var2);std(Down.Var2)]

Recovery = [T2;T5;T7;T10;T12];
RECOVERY = [mean(Recovery.Var2);std(Recovery.Var2)]

Steady = [T3;T8;T13];
STEADY = [mean(Steady.Var2);std(Steady.Var2)]

```

P1 =

19×3 table

Var1	Var2	Var3
01-Dec-1980	-0.026365	-0.0452
01-Jan-1981	-0.055778	-0.0504
01-Feb-1981	-0.0050939	0.0057
01-Mar-1981	0.016067	0.0356
01-Apr-1981	0.0007484	-0.0211
01-May-1981	0.023855	0.0011
01-Jun-1981	-0.027969	-0.0236
01-Jul-1981	-0.0046115	-0.0154
01-Aug-1981	-0.021465	-0.0704
01-Sep-1981	0.057186	-0.0717
01-Oct-1981	0.026842	0.0492
01-Nov-1981	-0.0067264	0.0336
01-Dec-1981	0.016244	-0.0365
01-Jan-1982	0.0054032	-0.0324
01-Feb-1982	0.033334	-0.0586
01-Mar-1982	0.016664	-0.0187
01-Apr-1982	0.021254	0.0327
01-May-1982	0.01466	-0.0399
01-Jun-1982	0.05331	-0.0309

P2 =

9×3 table

Var1	Var2	Var3
01-Jul-1982	0.036928	-0.0319
01-Aug-1982	-0.026297	0.1114

01-Sep-1982	0.06406	0.0129
01-Oct-1982	-0.0072786	0.113
01-Nov-1982	0.068574	0.0467
01-Dec-1982	0.0048393	0.0055
01-Jan-1983	-0.041881	0.036
01-Feb-1983	0.071715	0.0259
01-Mar-1983	0.039551	0.0282

P3 =

53x3 table

Var1	Var2	Var3
01-Apr-1983	0.027641	0.0667
01-May-1983	-0.028745	0.0052
01-Jun-1983	0.019112	0.0307
01-Jul-1983	-0.023636	-0.0407
01-Aug-1983	-0.024375	-0.005
01-Sep-1983	0.035639	0.0091
01-Oct-1983	-0.01384	-0.0344
01-Nov-1983	0.0046275	0.0216
01-Dec-1983	0.014586	-0.0178
01-Jan-1984	-0.025301	-0.0192
01-Feb-1984	0.016733	-0.0482
01-Mar-1984	0.024929	0.0063
01-Apr-1984	0.013982	-0.0051
01-May-1984	0.014688	-0.0597
01-Jun-1984	0.011405	0.0182
01-Jul-1984	0.031808	-0.0274
01-Aug-1984	-0.033502	0.1028
01-Sep-1984	0.026984	-0.008
01-Oct-1984	0.022061	-0.0084
01-Nov-1984	0.0079436	-0.0176
01-Dec-1984	0.0054762	0.0184
01-Jan-1985	-0.037529	0.0799
01-Feb-1985	0.035664	0.0122
01-Mar-1985	0.022079	-0.0084
01-Apr-1985	0.03319	-0.0096
01-May-1985	0.05138	0.0509
01-Jun-1985	0.039346	0.0127
01-Jul-1985	-0.02807	-0.0074
01-Aug-1985	0.0051915	-0.0102
01-Sep-1985	0.00022409	-0.0454
01-Oct-1985	0.036833	0.0402
01-Nov-1985	0.009901	0.0648
01-Dec-1985	-0.00094061	0.0388
01-Jan-1986	0.047935	0.0065
01-Feb-1986	0.018466	0.0713
01-Mar-1986	0.012913	0.0488
01-Apr-1986	0.018581	-0.0131
01-May-1986	0.014576	0.0462

01-Jun-1986	0.049827	0.0103
01-Jul-1986	0.0011252	-0.0645
01-Aug-1986	-0.028482	0.0607
01-Sep-1986	-0.045392	-0.086
01-Oct-1986	0.0431	0.0466
01-Nov-1986	-0.0068246	0.0117
01-Dec-1986	-0.012572	-0.0327
01-Jan-1987	-0.005709	0.1247
01-Feb-1987	-0.0079142	0.0439
01-Mar-1987	0.019751	0.0164
01-Apr-1987	0.037213	-0.0211
01-May-1987	0.0055927	0.0011
01-Jun-1987	-0.0057818	0.0394
01-Jul-1987	0.025148	0.0385
01-Aug-1987	0.01405	0.0352

P4 =

3x3 table

Var1	Var2	Var3
-----	-----	-----
01-Sep-1987	0.018051	-0.0259
01-Oct-1987	-0.037789	-0.2324
01-Nov-1987	0.00037991	-0.0777

P5 =

21x3 table

Var1	Var2	Var3
-----	-----	-----
01-Dec-1987	0.059444	0.0681
01-Jan-1988	-0.071943	0.0421
01-Feb-1988	0.0088877	0.0475
01-Mar-1988	0.015167	-0.0227
01-Apr-1988	0.021386	0.0056
01-May-1988	-0.00026775	-0.0029
01-Jun-1988	0.013061	0.0479
01-Jul-1988	-0.0030212	-0.0125
01-Aug-1988	-0.01098	-0.0331
01-Sep-1988	0.0072213	0.033
01-Oct-1988	-0.0069497	0.0115
01-Nov-1988	0.0020909	-0.0229
01-Dec-1988	0.0090873	0.0149
01-Jan-1989	0.0033099	0.061
01-Feb-1989	0.0070791	-0.0225
01-Mar-1989	0.027849	0.0157
01-Apr-1989	0.027367	0.0433
01-May-1989	0.006729	0.0335

01-Jun-1989	0.010723	-0.0135
01-Jul-1989	0.034762	0.072
01-Aug-1989	0.016839	0.0144

P6 =

14x3 table

Var1	Var2	Var3
-----	-----	-----
01-Sep-1989	0.031308	-0.0076
01-Oct-1989	0.012518	-0.0367
01-Nov-1989	0.023058	0.0103
01-Dec-1989	0.0071327	0.0116
01-Jan-1990	-0.032996	-0.0785
01-Feb-1990	-0.00040083	0.0111
01-Mar-1990	0.0055255	0.0183
01-Apr-1990	0.018263	-0.0336
01-May-1990	0.046911	0.0842
01-Jun-1990	0.018165	-0.0109
01-Jul-1990	0.03035	-0.019
01-Aug-1990	0.0087762	-0.1015
01-Sep-1990	0.014672	-0.0612
01-Oct-1990	0.030672	-0.0192

P7 =

7x3 table

Var1	Var2	Var3
-----	-----	-----
01-Nov-1990	0.0073556	0.0635
01-Dec-1990	0.02057	0.0246
01-Jan-1991	0.0026227	0.0469
01-Feb-1991	-0.018851	0.0719
01-Mar-1991	0.017345	0.0265
01-Apr-1991	-0.0019711	-0.0028
01-May-1991	0.0081294	0.0365

P8 =

106x3 table

Var1	Var2	Var3
-----	-----	-----
01-Jun-1991	-0.015851	-0.0494
01-Jul-1991	0.047559	0.0424
01-Aug-1991	0.028408	0.0232

01-Sep-1991	0.013726	-0.0159
01-Oct-1991	0.021442	0.0129
01-Nov-1991	0.0031915	-0.0419
01-Dec-1991	0.063054	0.1084
01-Jan-1992	-0.020998	-0.0059
01-Feb-1992	-0.0017349	0.0109
01-Mar-1992	-0.017332	-0.0266
01-Apr-1992	-0.031222	0.0107
01-May-1992	-0.0080475	0.003
01-Jun-1992	-0.0045168	-0.0234
01-Jul-1992	0.023626	0.0377
01-Aug-1992	-0.0032462	-0.0238
01-Sep-1992	0.032221	0.0119
01-Oct-1992	0.00489	0.0102
01-Nov-1992	-0.027829	0.0413
01-Dec-1992	0.043728	0.0153
01-Jan-1993	0.03573	0.0093
01-Feb-1993	0.017152	0.0012
01-Mar-1993	0.032109	0.023
01-Apr-1993	0.00037046	-0.0305
01-May-1993	0.0035294	0.0289
01-Jun-1993	0.024942	0.0031
01-Jul-1993	0.020585	-0.0034
01-Aug-1993	0.02128	0.0371
01-Sep-1993	0.022101	-0.0012
01-Oct-1993	-0.017494	0.0141
01-Nov-1993	-0.038277	-0.0189
01-Dec-1993	0.025148	0.0165
01-Jan-1994	-0.011128	0.0287
01-Feb-1994	-0.0086247	-0.0255
01-Mar-1994	-0.02765	-0.0478
01-Apr-1994	0.023994	0.0068
01-May-1994	-0.016003	0.0058
01-Jun-1994	-0.019994	-0.0303
01-Jul-1994	0.01567	0.0282
01-Aug-1994	0.001745	0.0401
01-Sep-1994	0.0074605	-0.0231
01-Oct-1994	0.02076	0.0134
01-Nov-1994	-0.0026794	-0.0404
01-Dec-1994	0.037026	0.0086
01-Jan-1995	-0.024813	0.018
01-Feb-1995	0.005145	0.0363
01-Mar-1995	0.025382	0.0219
01-Apr-1995	-0.0067505	0.0211
01-May-1995	-0.0080868	0.029
01-Jun-1995	0.052874	0.0272
01-Jul-1995	0.037434	0.0372
01-Aug-1995	0.016751	0.0055
01-Sep-1995	0.034722	0.0335
01-Oct-1995	0.031769	-0.0152
01-Nov-1995	-0.011219	0.0396
01-Dec-1995	0.0053763	0.0103
01-Jan-1996	-0.012177	0.0226
01-Feb-1996	0.01558	0.0133

01-Mar-1996	-0.0071	0.0073
01-Apr-1996	0.0058741	0.0206
01-May-1996	8.9862e-05	0.0236
01-Jun-1996	0.018238	-0.0114
01-Jul-1996	0.00073235	-0.0597
01-Aug-1996	0.021631	0.0277
01-Sep-1996	0.019389	0.0501
01-Oct-1996	0.0067349	0.0086
01-Nov-1996	-0.015818	0.0625
01-Dec-1996	0.019912	-0.017
01-Jan-1997	-0.013246	0.0499
01-Feb-1997	-0.010726	-0.0049
01-Mar-1997	0.019386	-0.0503
01-Apr-1997	0.027196	0.0404
01-May-1997	-0.018783	0.0674
01-Jun-1997	0.026439	0.041
01-Jul-1997	0.042538	0.0733
01-Aug-1997	-0.006776	-0.0415
01-Sep-1997	0.0012179	0.0535
01-Oct-1997	0.0081491	-0.038
01-Nov-1997	0.025493	0.0298
01-Dec-1997	0.0408	0.0132
01-Jan-1998	-0.026547	0.0015
01-Feb-1998	0.013491	0.0704
01-Mar-1998	0.0024715	0.0476
01-Apr-1998	0.004565	0.0073
01-May-1998	0.02354	-0.0307
01-Jun-1998	0.066629	0.0318
01-Jul-1998	0.032163	-0.0246
01-Aug-1998	-0.0099274	-0.1608
01-Sep-1998	0.0071684	0.0615
01-Oct-1998	-0.011476	0.0713
01-Nov-1998	0.014959	0.061
01-Dec-1998	0.070257	0.0616
01-Jan-1999	-0.0078188	0.035
01-Feb-1999	0.018964	-0.0408
01-Mar-1999	0.0095802	0.0345
01-Apr-1999	-0.04831	0.0433
01-May-1999	-0.018535	-0.0246
01-Jun-1999	0.032238	0.0477
01-Jul-1999	-0.0072131	-0.0349
01-Aug-1999	0.015274	-0.0138
01-Sep-1999	0.028191	-0.0279
01-Oct-1999	0.038642	0.0612
01-Nov-1999	0.018722	0.0337
01-Dec-1999	0.069004	0.0772
01-Jan-2000	0.023716	-0.0474
01-Feb-2000	0.06281	0.0245
01-Mar-2000	-0.036967	0.052

P9 =

30x3 table

Var1	Var2	Var3
01-Apr-2000	-0.043612	-0.064
01-May-2000	-0.047723	-0.0442
01-Jun-2000	0.072929	0.0464
01-Jul-2000	-0.043111	-0.0251
01-Aug-2000	0.04718	0.0703
01-Sep-2000	0.006999	-0.0545
01-Oct-2000	0.0033346	-0.0276
01-Nov-2000	0.024649	-0.1072
01-Dec-2000	0.053459	0.0119
01-Jan-2001	-0.10964	0.0313
01-Feb-2001	0.087346	-0.1005
01-Mar-2001	0.042309	-0.0726
01-Apr-2001	-0.028219	0.0794
01-May-2001	0.013112	0.0072
01-Jun-2001	-0.006964	-0.0194
01-Jul-2001	0.038479	-0.0213
01-Aug-2001	0.020269	-0.0646
01-Sep-2001	0.043293	-0.0925
01-Oct-2001	-0.030624	0.0246
01-Nov-2001	-0.030029	0.0754
01-Dec-2001	0.00091966	0.016
01-Jan-2002	0.045188	-0.0144
01-Feb-2002	0.016945	-0.0229
01-Mar-2002	-0.011492	0.0424
01-Apr-2002	0.033537	-0.052
01-May-2002	0.014611	-0.0138
01-Jun-2002	0.023209	-0.0721
01-Jul-2002	-0.019119	-0.0818
01-Aug-2002	0.0022791	0.005
01-Sep-2002	0.031766	-0.1035

P10 =

56x3 table

Var1	Var2	Var3
01-Oct-2002	-0.059902	0.0784
01-Nov-2002	-0.10581	0.0596
01-Dec-2002	0.079505	-0.0576
01-Jan-2003	0.027888	-0.0257
01-Feb-2003	0.023165	-0.0188
01-Mar-2003	0.0093802	0.0109
01-Apr-2003	-0.026205	0.0822
01-May-2003	-0.024636	0.0605
01-Jun-2003	-0.0041198	0.0142
01-Jul-2003	-0.0029449	0.0235
01-Aug-2003	0.0014408	0.0234

01-Sep-2003	0.012334	-0.0124
01-Oct-2003	0.016821	0.0608
01-Nov-2003	0.0027855	0.0135
01-Dec-2003	-0.033272	0.0429
01-Jan-2004	0.00083436	0.0215
01-Feb-2004	-0.00058348	0.014
01-Mar-2004	-0.0020185	-0.0132
01-Apr-2004	-0.027601	-0.0183
01-May-2004	0.021559	0.0117
01-Jun-2004	0.016058	0.0186
01-Jul-2004	0.014677	-0.0406
01-Aug-2004	-0.0096899	0.0008
01-Sep-2004	0.025012	0.016
01-Oct-2004	-0.011871	0.0143
01-Nov-2004	0.014844	0.0454
01-Dec-2004	-0.023601	0.0343
01-Jan-2005	0.040626	-0.0276
01-Feb-2005	0.04366	0.0189
01-Mar-2005	-0.0091668	-0.0197
01-Apr-2005	-0.00021725	-0.0261
01-May-2005	0.0011098	0.0365
01-Jun-2005	0.014614	0.0057
01-Jul-2005	-0.0012967	0.0392
01-Aug-2005	0.022037	-0.0122
01-Sep-2005	0.024505	0.0049
01-Oct-2005	0.0016109	-0.0202
01-Nov-2005	-0.0054023	0.0361
01-Dec-2005	-0.0010484	-0.0025
01-Jan-2006	0.040178	0.0304
01-Feb-2006	-0.0095057	-0.003
01-Mar-2006	0.018928	0.0146
01-Apr-2006	0.019296	0.0073
01-May-2006	-0.030346	-0.0357
01-Jun-2006	0.010485	-0.0035
01-Jul-2006	-0.013348	-0.0078
01-Aug-2006	-0.016836	0.0203
01-Sep-2006	-0.0022274	0.0184
01-Oct-2006	0.0085208	0.0323
01-Nov-2006	0.0017449	0.0171
01-Dec-2006	0.010415	0.0087
01-Jan-2007	0.019587	0.014
01-Feb-2007	-0.0065209	-0.0196
01-Mar-2007	0.023534	0.0068
01-Apr-2007	0.0029698	0.0349
01-May-2007	0.00063291	0.0324

$P_{11} =$

21x3 table

Var1	Var2	Var3
_____	_____	_____

01-Jun-2007	-0.002007	-0.0196
01-Jul-2007	0.02421	-0.0373
01-Aug-2007	0.0036864	0.0092
01-Sep-2007	0.043051	0.0322
01-Oct-2007	0.049851	0.018
01-Nov-2007	0.0039567	-0.0483
01-Dec-2007	0.032267	-0.0087
01-Jan-2008	-0.096288	-0.0636
01-Feb-2008	0.060638	-0.0309
01-Mar-2008	-0.015974	-0.0093
01-Apr-2008	0.025634	0.046
01-May-2008	0.028543	0.0186
01-Jun-2008	0.075237	-0.0844
01-Jul-2008	-0.039552	-0.0077
01-Aug-2008	-0.063087	0.0153
01-Sep-2008	-0.047467	-0.0924
01-Oct-2008	0.0029367	-0.1723
01-Nov-2008	0.0083027	-0.0786
01-Dec-2008	-0.022697	0.0174
01-Jan-2009	-0.021144	-0.0812
01-Feb-2009	0.00019299	-0.101

P12 =

46x3 table

Var1	Var2	Var3
01-Mar-2009	-0.020119	0.0895
01-Apr-2009	-0.079316	0.1018
01-May-2009	-0.054407	0.0521
01-Jun-2009	0.023081	0.0043
01-Jul-2009	-0.011119	0.0772
01-Aug-2009	-0.02992	0.0333
01-Sep-2009	0.016462	0.0408
01-Oct-2009	-0.0028796	-0.0259
01-Nov-2009	0.028346	0.0556
01-Dec-2009	0.00088496	0.0275
01-Jan-2010	-0.032045	-0.0336
01-Feb-2010	0.018848	0.034
01-Mar-2010	0.01134	0.0631
01-Apr-2010	-0.0010061	0.02
01-May-2010	0.011068	-0.0789
01-Jun-2010	-0.0080774	-0.0557
01-Jul-2010	0.024346	0.0693
01-Aug-2010	-0.0051363	-0.0477
01-Sep-2010	0.012965	0.0954
01-Oct-2010	-0.00070341	0.0388
01-Nov-2010	0.038976	0.006
01-Dec-2010	-0.029228	0.0682
01-Jan-2011	-1.9454e-05	0.0199
01-Feb-2011	0.014406	0.0349

01-Mar-2011	0.02269	0.0046
01-Apr-2011	0.015849	0.029
01-May-2011	-0.023618	-0.0127
01-Jun-2011	0.00082949	-0.0175
01-Jul-2011	-0.0030305	-0.0235
01-Aug-2011	-0.050315	-0.0599
01-Sep-2011	-0.046122	-0.0759
01-Oct-2011	0.036722	0.1135
01-Nov-2011	0.013827	-0.0028
01-Dec-2011	0.01001	0.0074
01-Jan-2012	-0.061004	0.0505
01-Feb-2012	-0.0063928	0.0442
01-Mar-2012	0.0083507	0.0311
01-Apr-2012	0.036041	-0.0085
01-May-2012	0.025908	-0.0619
01-Jun-2012	-0.010202	0.0389
01-Jul-2012	0.026731	0.0079
01-Aug-2012	0.0066709	0.0255
01-Sep-2012	-0.012957	0.0273
01-Oct-2012	0.010895	-0.0176
01-Nov-2012	0.0021153	0.0078
01-Dec-2012	-0.029865	0.0118

P13 =

84x3 table

Var1	Var2	Var3
01-Jan-2013	0.0035933	0.0557
01-Feb-2013	0.011789	0.0129
01-Mar-2013	0.019139	0.0403
01-Apr-2013	0.0030258	0.0155
01-May-2013	-0.011122	0.028
01-Jun-2013	-0.0094926	-0.012
01-Jul-2013	0.014983	0.0565
01-Aug-2013	-0.01121	-0.0271
01-Sep-2013	0.021541	0.0377
01-Oct-2013	0.0077824	0.0418
01-Nov-2013	0.036812	0.0313
01-Dec-2013	0.006622	0.0281
01-Jan-2014	-0.017998	-0.0332
01-Feb-2014	0.012255	0.0465
01-Mar-2014	-0.021741	0.0043
01-Apr-2014	-0.031466	-0.0019
01-May-2014	0.0066463	0.0206
01-Jun-2014	0.0088148	0.0261
01-Jul-2014	-0.0046525	-0.0204
01-Aug-2014	0.024921	0.0424
01-Sep-2014	0.0071737	-0.0197
01-Oct-2014	-0.025036	0.0252
01-Nov-2014	-0.0033455	0.0255

01-Dec-2014	-0.025557	-0.0006
01-Jan-2015	0.029637	-0.0311
01-Feb-2015	-0.0051168	0.0613
01-Mar-2015	0.030542	-0.0112
01-Apr-2015	-0.080735	0.0059
01-May-2015	0.070433	0.0136
01-Jun-2015	0.028004	-0.0153
01-Jul-2015	0.082941	0.0154
01-Aug-2015	-0.0162	-0.0604
01-Sep-2015	0.031751	-0.0307
01-Oct-2015	-0.016256	0.0775
01-Nov-2015	0.022098	0.0056
01-Dec-2015	0.01565	-0.0217
01-Jan-2016	0.0021815	-0.0577
01-Feb-2016	-0.029872	-0.0007
01-Mar-2016	-0.047377	0.0696
01-Apr-2016	-0.048286	0.0091
01-May-2016	0.022291	0.0178
01-Jun-2016	0.020636	-0.0005
01-Jul-2016	-0.0068364	0.0395
01-Aug-2016	-0.037317	0.0049
01-Sep-2016	0.0036408	0.0025
01-Oct-2016	0.006674	-0.0202
01-Nov-2016	-0.0087846	0.0486
01-Dec-2016	-0.01529	0.0181
01-Jan-2017	0.01611	0.0194
01-Feb-2017	-0.0050049	0.0357
01-Mar-2017	0.0028467	0.0017
01-Apr-2017	0.0033062	0.0109
01-May-2017	0.00031082	0.0106
01-Jun-2017	-0.0050079	0.0078
01-Jul-2017	0.016695	0.0187
01-Aug-2017	0.028482	0.0016
01-Sep-2017	-0.013857	0.0251
01-Oct-2017	0.041335	0.0225
01-Nov-2017	-0.026901	0.0312
01-Dec-2017	-0.017516	0.0106
01-Jan-2018	0.026993	0.0558
01-Feb-2018	0.0097783	-0.0365
01-Mar-2018	-0.0039794	-0.0235
01-Apr-2018	-0.013463	0.0029
01-May-2018	0.01867	0.0265
01-Jun-2018	-0.023459	0.0048
01-Jul-2018	-0.004323	0.0319
01-Aug-2018	0.029021	0.0344
01-Sep-2018	0.0068795	0.0006
01-Oct-2018	-0.01169	-0.0768
01-Nov-2018	-0.023804	0.0169
01-Dec-2018	-0.0037764	-0.0955
01-Jan-2019	-0.043419	0.0841
01-Feb-2019	0.0025095	0.034
01-Mar-2019	0.0086972	0.011
01-Apr-2019	-0.0090637	0.0397
01-May-2019	0.065583	-0.0694

01-Jun-2019	-0.0097041	0.0693
01-Jul-2019	0.019981	0.0119
01-Aug-2019	0.022467	-0.0258
01-Sep-2019	-0.061966	0.0143
01-Oct-2019	0.010969	0.0207
01-Nov-2019	0.0045837	0.0387
01-Dec-2019	-0.030698	0.0277

P14 =

3x3 table

Var1	Var2	Var3
-----	-----	-----
01-Jan-2020	0.059798	-0.001
01-Feb-2020	0.014148	-0.0813
01-Mar-2020	0.0070195	-0.1338

P15 =

3x3 table

Var1	Var2	Var3
-----	-----	-----
01-Apr-2020	-0.0054686	0.1365
01-May-2020	0.018315	0.0558
01-Jun-2020	0.010477	0.0246

P16 =

18x3 table

Var1	Var2	Var3
-----	-----	-----
01-Jul-2020	0.032618	0.0577
01-Aug-2020	-0.0060257	0.0763
01-Sep-2020	0.028379	-0.0363
01-Oct-2020	-0.030947	-0.021
01-Nov-2020	-0.037707	0.1247
01-Dec-2020	0.010835	0.0463
01-Jan-2021	0.0040522	-0.0003
01-Feb-2021	-0.011544	0.0278
01-Mar-2021	-0.01196	0.0308
01-Apr-2021	0.034072	0.0493
01-May-2021	0.0033961	0.0029
01-Jun-2021	0.001198	0.0275
01-Jul-2021	0.033721	0.0127
01-Aug-2021	0.0081199	0.0291

01-Sep-2021	0.038921	-0.0437
01-Oct-2021	0.037157	0.0665
01-Nov-2021	0.045769	-0.0155
01-Dec-2021	0.063819	0.031

DOWN =

0.0073
0.0351

RECOVERY =

0.0034
0.0274

STEADY =

0.0069
0.0253

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