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Housekeeping

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

Content

```
% 1. Daily to monthly spot and fwd for both USD and GBP
% 2. Analysis in the USD perspective
% 3. Analysis in the GBP perspective
% 4. Figures
```

1. Daily to monthly spot and fwd for both USD and GBP

```
DailySpotopts = detectImportOptions('Data','sheet','Spot USD - Daily');
DailySpot = readtable('Data.xlsx', DailySpotopts);
DailySpot.Dates = datetime(DailySpot.Dates, "InputFormat", "uuuu-MM-dd");
DailySpot = table2timetable(DailySpot);
```

```

Fwdopts      = detectImportOptions('Data', 'sheet', 'FWD USD - Daily');
Fwd          = readtable('Data.xlsx', Fwdopts);
Fwd.Dates    = datetime(Fwd.Dates, "InputFormat", "uuuu-MM-dd");
Fwd          = table2timetable(Fwd);
Fwd.EUR1M    = str2double(Fwd.EUR1M);
Fwd.ILS1M    = str2double(Fwd.ILS1M);

GBPSpotopts = detectImportOptions('Data', 'sheet', 'Spot GBP - Daily');
GBPSpot     = readtable('Data.xlsx', GBPSpotopts);
GBPSpot.Dates = datetime(GBPSpot.Dates, "InputFormat", "uuuu-MM-dd");
GBPSpot     = table2timetable(GBPSpot);
GBPFwdopts  = detectImportOptions('Data', 'sheet', 'FWD GBP - Daily');
GBPFwd      = readtable('Data.xlsx', GBPFwdopts);
GBPFwd.Dates = datetime(GBPFwd.Dates, "InputFormat", "uuuu-MM-dd");
GBPFwd     = table2timetable(GBPFwd);
GBPFwd.EUR1M = str2double(GBPFwd.EUR1M);
GBPFwd.ILS1M = str2double(GBPFwd.ILS1M);

MonthlySpotUSD = convert2monthly(DailySpot, 'Aggregation', 'lastvalue');
MonthlyFwdUSD = convert2monthly(Fwd, 'Aggregation', 'lastvalue');
MonthlySpotGBP = convert2monthly(GBPSpot, 'Aggregation', 'lastvalue');
MonthlyFwdGBP = convert2monthly(GBPFwd, 'Aggregation', 'lastvalue');

```

2. USD perspective

Load monthly returns for substrategies from work in excel

Economic Activity index

```

USDRetEA6opts           = detectImportOptions('Calculations-
Dollar.xlsx', 'sheet', 'Ret EA6', 'range', 'A:V');
USDRetEA6                = readtable('Calculations-
Dollar.xlsx', USDRetEA6opts);
USDRetEA6.TIME            = datetime(USDRetEA6.TIME, 'InputFormat', 'yyyy-
MM');
USDRetEA6                = table2timetable(USDRetEA6);
USDRetEA6.ATS              = str2double(USDRetEA6.ATS);
USDRetEA6.BEF              = str2double(USDRetEA6.BEF);
USDRetEA6.DKK              = str2double(USDRetEA6.DKK);
USDRetEA6.FIM              = str2double(USDRetEA6.FIM);
USDRetEA6.FRF              = str2double(USDRetEA6.FRF);
USDRetEA6.IEP              = str2double(USDRetEA6.IEP);
USDRetEA6.ITALY             = str2double(USDRetEA6.ITALY);
USDRetEA6.NLG              = str2double(USDRetEA6.NLG);
USDRetEA6.PTE              = str2double(USDRetEA6.PTE);
USDRetEA6.ESP              = str2double(USDRetEA6.ESP);
USDRetEA6.USD              = str2double(USDRetEA6.USD);
USDRetEA6(398:end,:)        = [];

```

```

USDRetEA12opts          = detectImportOptions('Calculations-
Dollar.xlsx', 'sheet', 'Ret EA12', 'range', 'A:V');
USDRetEA12                = readtable('Calculations-
Dollar.xlsx', USDRetEA12opts);
USDRetEA12.TIME           = datetime(USDRetEA12.TIME, 'InputFormat', 'yyyy-
MM');
USDRetEA12                = table2timetable(USDRetEA12);
USDRetEA12.ATS             = str2double(USDRetEA12.ATS);
USDRetEA12.BEF             = str2double(USDRetEA12.BEF);
USDRetEA12.DKK             = str2double(USDRetEA12.DKK);
USDRetEA12.FIM             = str2double(USDRetEA12.FIM);
USDRetEA12.FRFR            = str2double(USDRetEA12.FRFR);
USDRetEA12.IEP              = str2double(USDRetEA12.IEP);
USDRetEA12.ITAL             = str2double(USDRetEA12.ITAL);
USDRetEA12.NLG              = str2double(USDRetEA12.NLG);
USDRetEA12.PTE              = str2double(USDRetEA12.PTE);
USDRetEA12.ESP              = str2double(USDRetEA12.ESP);
USDRetEA12.USD              = str2double(USDRetEA12.USD);
USDRetEA12(398:end,:)       = [];

USDRetEA18opts          = detectImportOptions('Calculations-
Dollar.xlsx', 'sheet', 'Ret EA18', 'range', 'A:V');
USDRetEA18                = readtable('Calculations-
Dollar.xlsx', USDRetEA18opts);
USDRetEA18.TIME           = datetime(USDRetEA18.TIME, 'InputFormat', 'yyyy-
MM');
USDRetEA18                = table2timetable(USDRetEA18);
USDRetEA18.ATS             = str2double(USDRetEA18.ATS);
USDRetEA18.BEF             = str2double(USDRetEA18.BEF);
USDRetEA18.DKK             = str2double(USDRetEA18.DKK);
USDRetEA18.FIM             = str2double(USDRetEA18.FIM);
USDRetEA18.FRFR            = str2double(USDRetEA18.FRFR);
USDRetEA18.IEP              = str2double(USDRetEA18.IEP);
USDRetEA18.ITAL             = str2double(USDRetEA18.ITAL);
USDRetEA18.NLG              = str2double(USDRetEA18.NLG);
USDRetEA18.PTE              = str2double(USDRetEA18.PTE);
USDRetEA18.ESP              = str2double(USDRetEA18.ESP);
USDRetEA18.USD              = str2double(USDRetEA18.USD);
USDRetEA18(398:end,:)       = [];

USDRetEA24opts          = detectImportOptions('Calculations-
Dollar.xlsx', 'sheet', 'Ret EA24', 'range', 'A:V');
USDRetEA24                = readtable('Calculations-
Dollar.xlsx', USDRetEA24opts);
USDRetEA24.TIME           = datetime(USDRetEA24.TIME, 'InputFormat', 'yyyy-
MM');
USDRetEA24                = table2timetable(USDRetEA24);
USDRetEA24.ATS             = str2double(USDRetEA24.ATS);
USDRetEA24.BEF             = str2double(USDRetEA24.BEF);
USDRetEA24.DKK             = str2double(USDRetEA24.DKK);
USDRetEA24.FIM             = str2double(USDRetEA24.FIM);
USDRetEA24.FRFR            = str2double(USDRetEA24.FRFR);
USDRetEA24.IEP              = str2double(USDRetEA24.IEP);
USDRetEA24.ITAL             = str2double(USDRetEA24.ITAL);

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```

USDRetEA24.NLG           = str2double(USDRetEA24.NLG);
USDRetEA24.PTE           = str2double(USDRetEA24.PTE);
USDRetEA24.ESP           = str2double(USDRetEA24.ESP);
USDRetEA24.USD           = str2double(USDRetEA24.USD);
USDRetEA24(398:end,:)    = [];

USDRetEA30opts          = detectImportOptions('Calculations-
Dollar.xlsx','sheet','Ret EA30','range','A:V');
USDRetEA30               = readable('Calculations-
Dollar.xlsx',USDRetEA30opts);
USDRetEA30.TIME          = datetime(USDRetEA30.TIME,'InputFormat','yyyy-
MM');

USDRetEA30               = table2timetable(USDRetEA30);
USDRetEA30.ATS           = str2double(USDRetEA30.ATS);
USDRetEA30.BEF           = str2double(USDRetEA30.BEF);
USDRetEA30.DKK           = str2double(USDRetEA30.DKK);
USDRetEA30.FIM           = str2double(USDRetEA30.FIM);
USDRetEA30.FRFR          = str2double(USDRetEA30.FRFR);
USDRetEA30.IEP           = str2double(USDRetEA30.IEP);
USDRetEA30.ITAL          = str2double(USDRetEA30.ITAL);
USDRetEA30.NLG           = str2double(USDRetEA30.NLG);
USDRetEA30.PTE           = str2double(USDRetEA30.PTE);
USDRetEA30.ESP           = str2double(USDRetEA30.ESP);
USDRetEA30.USD           = str2double(USDRetEA30.USD);
USDRetEA30(398:end,:)    = [];

USDRetEA36opts          = detectImportOptions('Calculations-
Dollar.xlsx','sheet','Ret EA36','range','A:V');
USDRetEA36               = readable('Calculations-
Dollar.xlsx',USDRetEA36opts);
USDRetEA36.TIME          = datetime(USDRetEA36.TIME,'InputFormat','yyyy-
MM');

USDRetEA36               = table2timetable(USDRetEA36);
USDRetEA36.ATS           = str2double(USDRetEA36.ATS);
USDRetEA36.BEF           = str2double(USDRetEA36.BEF);
USDRetEA36.DKK           = str2double(USDRetEA36.DKK);
USDRetEA36.FIM           = str2double(USDRetEA36.FIM);
USDRetEA36.FRFR          = str2double(USDRetEA36.FRFR);
USDRetEA36.IEP           = str2double(USDRetEA36.IEP);
USDRetEA36.ITAL          = str2double(USDRetEA36.ITAL);
USDRetEA36.NLG           = str2double(USDRetEA36.NLG);
USDRetEA36.PTE           = str2double(USDRetEA36.PTE);
USDRetEA36.ESP           = str2double(USDRetEA36.ESP);
USDRetEA36.USD           = str2double(USDRetEA36.USD);
USDRetEA36(398:end,:)    = [];

USDRetEA42opts          = detectImportOptions('Calculations-
Dollar.xlsx','sheet','Ret EA42','range','A:V');
USDRetEA42               = readable('Calculations-
Dollar.xlsx',USDRetEA42opts);
USDRetEA42.TIME          = datetime(USDRetEA42.TIME,'InputFormat','yyyy-
MM');

USDRetEA42               = table2timetable(USDRetEA42);
USDRetEA42.ATS           = str2double(USDRetEA42.ATS);
USDRetEA42.BEF           = str2double(USDRetEA42.BEF);

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```

USDRetEA42.DKK          = str2double(USDRetEA42.DKK);
USDRetEA42.FIM          = str2double(USDRetEA42.FIM);
USDRetEA42.FR₣          = str2double(USDRetEA42.FR₣);
USDRetEA42.IEP          = str2double(USDRetEA42.IEP);
USDRetEA42.İTL          = str2double(USDRetEA42.İTL);
USDRetEA42.NLG          = str2double(USDRetEA42.NLG);
USDRetEA42.PTE          = str2double(USDRetEA42.PTE);
USDRetEA42.ESP          = str2double(USDRetEA42.ESP);
USDRetEA42.USD          = str2double(USDRetEA42.USD);
USDRetEA42(398:end,:)   = [];

USDRetEA48opts          = detectImportOptions('Calculations-
Dollar.xlsx','sheet','Ret EA48','range','A:V');
USDRetEA48               = readtable('Calculations-
Dollar.xlsx',USDRetEA48opts);
USDRetEA48.TIME         = datetime(USDRetEA48.TIME,'InputFormat','yyyy-
MM');
USDRetEA48               = table2timetable(USDRetEA48);
USDRetEA48.ATS          = str2double(USDRetEA48.ATS);
USDRetEA48.BEF          = str2double(USDRetEA48.BEF);
USDRetEA48.DKK          = str2double(USDRetEA48.DKK);
USDRetEA48.FIM          = str2double(USDRetEA48.FIM);
USDRetEA48.FR₣          = str2double(USDRetEA48.FR₣);
USDRetEA48.IEP          = str2double(USDRetEA48.IEP);
USDRetEA48.İTL          = str2double(USDRetEA48.İTL);
USDRetEA48.NLG          = str2double(USDRetEA48.NLG);
USDRetEA48.PTE          = str2double(USDRetEA48.PTE);
USDRetEA48.ESP          = str2double(USDRetEA48.ESP);
USDRetEA48.USD          = str2double(USDRetEA48.USD);
USDRetEA48(398:end,:)   = [];

USDRetEA54opts          = detectImportOptions('Calculations-
Dollar.xlsx','sheet','Ret EA54','range','A:V');
USDRetEA54               = readtable('Calculations-
Dollar.xlsx',USDRetEA54opts);
USDRetEA54.TIME         = datetime(USDRetEA54.TIME,'InputFormat','yyyy-
MM');
USDRetEA54               = table2timetable(USDRetEA54);
USDRetEA54.ATS          = str2double(USDRetEA54.ATS);
USDRetEA54.BEF          = str2double(USDRetEA54.BEF);
USDRetEA54.DKK          = str2double(USDRetEA54.DKK);
USDRetEA54.FIM          = str2double(USDRetEA54.FIM);
USDRetEA54.FR₣          = str2double(USDRetEA54.FR₣);
USDRetEA54.IEP          = str2double(USDRetEA54.IEP);
USDRetEA54.İTL          = str2double(USDRetEA54.İTL);
USDRetEA54.NLG          = str2double(USDRetEA54.NLG);
USDRetEA54.PTE          = str2double(USDRetEA54.PTE);
USDRetEA54.ESP          = str2double(USDRetEA54.ESP);
USDRetEA54.USD          = str2double(USDRetEA54.USD);
USDRetEA54(398:end,:)   = [];

USDRetEA60opts          = detectImportOptions('Calculations-
Dollar.xlsx','sheet','Ret EA60','range','A:V');
USDRetEA60               = readtable('Calculations-
Dollar.xlsx',USDRetEA60opts);

```

```

USDRetEA60.TIME = datetime(USDRetEA60.TIME, 'InputFormat', 'yyyy-MM');

USDRetEA60.ATS = table2timetable(USDRetEA60);
USDRetEA60.BEF = str2double(USDRetEA60.ATS);
USDRetEA60.DKK = str2double(USDRetEA60.BEF);
USDRetEA60.FIM = str2double(USDRetEA60.DKK);
USDRetEA60.FR = str2double(USDRetEA60.FIM);
USDRetEA60.IEP = str2double(USDRetEA60.FR);
USDRetEA60.ITL = str2double(USDRetEA60.IEP);
USDRetEA60.NLG = str2double(USDRetEA60.ITL);
USDRetEA60.PTE = str2double(USDRetEA60.NLG);
USDRetEA60.ESP = str2double(USDRetEA60.PTE);
USDRetEA60.USD = str2double(USDRetEA60.ESP);
USDRetEA60(398:end,:) = [];

```

Inflation index

```

USDRetInf6opts = detectImportOptions('Calculations-Dollar.xlsx', 'sheet', 'Ret_Inf6', 'range', 'A:V');
USDRetInf6 = readtable('Calculations-Dollar.xlsx', USDRetInf6opts);
USDRetInf6.TIME = datetime(USDRetInf6.TIME, 'InputFormat', 'yyyy-MM');

USDRetInf6.ATS = table2timetable(USDRetInf6);
USDRetInf6.BEF = str2double(USDRetInf6.ATS);
USDRetInf6.DKK = str2double(USDRetInf6.BEF);
USDRetInf6.FIM = str2double(USDRetInf6.DKK);
USDRetInf6.FR = str2double(USDRetInf6.FIM);
USDRetInf6.IEP = str2double(USDRetInf6.FR);
USDRetInf6.ITL = str2double(USDRetInf6.IEP);
USDRetInf6.NLG = str2double(USDRetInf6.ITL);
USDRetInf6.PTE = str2double(USDRetInf6.NLG);
USDRetInf6.ESP = str2double(USDRetInf6.PTE);
USDRetInf6.USD = str2double(USDRetInf6.ESP);
USDRetInf6(398:end,:) = [];

USDRetInf12opts = detectImportOptions('Calculations-Dollar.xlsx', 'sheet', 'Ret_Inf12', 'range', 'A:V');
USDRetInf12 = readtable('Calculations-Dollar.xlsx', USDRetInf12opts);
USDRetInf12.TIME =
    datetime(USDRetInf12.TIME, 'InputFormat', 'yyyy-MM');
USDRetInf12.ATS = table2timetable(USDRetInf12);
USDRetInf12.ATS = str2double(USDRetInf12.ATS);
USDRetInf12.BEF = str2double(USDRetInf12.ATS);
USDRetInf12.DKK = str2double(USDRetInf12.BEF);
USDRetInf12.FIM = str2double(USDRetInf12.DKK);
USDRetInf12.FR = str2double(USDRetInf12.FIM);
USDRetInf12.IEP = str2double(USDRetInf12.FR);
USDRetInf12.ITL = str2double(USDRetInf12.IEP);
USDRetInf12.NLG = str2double(USDRetInf12.ITL);

```

```

USDRetInf12.PTE          = str2double(USDRetInf12.PTE);
USDRetInf12.ESP          = str2double(USDRetInf12.ESP);
USDRetInf12.USD          = str2double(USDRetInf12.USD);
USDRetInf12(398:end,:)   = [];

USDRetInf18opts          = detectImportOptions('Calculations-
Dollar.xlsx','sheet','Ret_Inf18','range','A:V');
USDRetInf18               = readtable('Calculations-
Dollar.xlsx',USDRetInf18opts);
USDRetInf18.TIME         =
    datetime(USDRetInf18.TIME,'InputFormat','yyyy-MM');
USDRetInf18.ATS          = table2timetable(USDRetInf18);
USDRetInf18.BEF          = str2double(USDRetInf18.BEF);
USDRetInf18.DKK          = str2double(USDRetInf18.DKK);
USDRetInf18.FIM          = str2double(USDRetInf18.FIM);
USDRetInf18.FRF          = str2double(USDRetInf18.FRF);
USDRetInf18.IEP          = str2double(USDRetInf18.IEP);
USDRetInf18.ITAL          = str2double(USDRetInf18.ITAL);
USDRetInf18.NLG          = str2double(USDRetInf18.NLG);
USDRetInf18.PTE          = str2double(USDRetInf18.PTE);
USDRetInf18.ESP          = str2double(USDRetInf18.ESP);
USDRetInf18.USD          = str2double(USDRetInf18.USD);
USDRetInf18(398:end,:)   = [];

USDRetInf24opts          = detectImportOptions('Calculations-
Dollar.xlsx','sheet','Ret_Inf24','range','A:V');
USDRetInf24               = readtable('Calculations-
Dollar.xlsx',USDRetInf24opts);
USDRetInf24.TIME         =
    datetime(USDRetInf24.TIME,'InputFormat','yyyy-MM');
USDRetInf24.ATS          = table2timetable(USDRetInf24);
USDRetInf24.BEF          = str2double(USDRetInf24.BEF);
USDRetInf24.DKK          = str2double(USDRetInf24.DKK);
USDRetInf24.FIM          = str2double(USDRetInf24.FIM);
USDRetInf24.FRF          = str2double(USDRetInf24.FRF);
USDRetInf24.IEP          = str2double(USDRetInf24.IEP);
USDRetInf24.ITAL          = str2double(USDRetInf24.ITAL);
USDRetInf24.NLG          = str2double(USDRetInf24.NLG);
USDRetInf24.PTE          = str2double(USDRetInf24.PTE);
USDRetInf24.ESP          = str2double(USDRetInf24.ESP);
USDRetInf24.USD          = str2double(USDRetInf24.USD);
USDRetInf24(398:end,:)   = [];

USDRetInf30opts          = detectImportOptions('Calculations-
Dollar.xlsx','sheet','Ret_Inf30','range','A:V');
USDRetInf30               = readtable('Calculations-
Dollar.xlsx',USDRetInf30opts);
USDRetInf30.TIME         =
    datetime(USDRetInf30.TIME,'InputFormat','yyyy-MM');
USDRetInf30.ATS          = table2timetable(USDRetInf30);
USDRetInf30.BEF          = str2double(USDRetInf30.BEF);

```

```

USDRetInf30.DKK = str2double(USDRetInf30.DKK);
USDRetInf30.FIM = str2double(USDRetInf30.FIM);
USDRetInf30.FRF = str2double(USDRetInf30.FRF);
USDRetInf30.IEP = str2double(USDRetInf30.IEP);
USDRetInf30.ITAL = str2double(USDRetInf30.ITAL);
USDRetInf30.NLG = str2double(USDRetInf30.NLG);
USDRetInf30.PTE = str2double(USDRetInf30.PTE);
USDRetInf30.ESP = str2double(USDRetInf30.ESP);
USDRetInf30.USD = str2double(USDRetInf30.USD);
USDRetInf30(398:end,:) = [];

USDRetInf36opts = detectImportOptions('Calculations-Dollar.xlsx','sheet','Ret_Inf36','range','A:V');
USDRetInf36 = readtable('Calculations-Dollar.xlsx',USDRetInf36opts);

USDRetInf36.TIME =
    datetime(USDRetInf36.TIME,'InputFormat','yyyy-MM');

USDRetInf36.ATS = table2timetable(USDRetInf36);
USDRetInf36.BEF = str2double(USDRetInf36.BEF);
USDRetInf36.DKK = str2double(USDRetInf36.DKK);
USDRetInf36.FIM = str2double(USDRetInf36.FIM);
USDRetInf36.FRF = str2double(USDRetInf36.FRF);
USDRetInf36.IEP = str2double(USDRetInf36.IEP);
USDRetInf36.ITAL = str2double(USDRetInf36.ITAL);
USDRetInf36.NLG = str2double(USDRetInf36.NLG);
USDRetInf36.PTE = str2double(USDRetInf36.PTE);
USDRetInf36.ESP = str2double(USDRetInf36.ESP);
USDRetInf36.USD = str2double(USDRetInf36.USD);
USDRetInf36(398:end,:) = [];

USDRetInf42opts = detectImportOptions('Calculations-Dollar.xlsx','sheet','Ret_Inf42','range','A:V');
USDRetInf42 = readtable('Calculations-Dollar.xlsx',USDRetInf42opts);

USDRetInf42.TIME =
    datetime(USDRetInf42.TIME,'InputFormat','yyyy-MM');

USDRetInf42.ATS = table2timetable(USDRetInf42);
USDRetInf42.BEF = str2double(USDRetInf42.BEF);
USDRetInf42.DKK = str2double(USDRetInf42.DKK);
USDRetInf42.FIM = str2double(USDRetInf42.FIM);
USDRetInf42.FRF = str2double(USDRetInf42.FRF);
USDRetInf42.IEP = str2double(USDRetInf42.IEP);
USDRetInf42.ITAL = str2double(USDRetInf42.ITAL);
USDRetInf42.NLG = str2double(USDRetInf42.NLG);
USDRetInf42.PTE = str2double(USDRetInf42.PTE);
USDRetInf42.ESP = str2double(USDRetInf42.ESP);
USDRetInf42.USD = str2double(USDRetInf42.USD);
USDRetInf42(398:end,:) = [];

USDRetInf48opts = detectImportOptions('Calculations-Dollar.xlsx','sheet','Ret_Inf48','range','A:V');
USDRetInf48 = readtable('Calculations-Dollar.xlsx',USDRetInf48opts);

```

```

USDRetInf48.TIME
    =
    datetime(USDRetInf48.TIME, 'InputFormat', 'yyyy-MM');
USDRetInf48
    =
    table2timetable(USDRetInf48);
USDRetInf48.ATS
    =
    str2double(USDRetInf48.ATS);
USDRetInf48.BEF
    =
    str2double(USDRetInf48.BEF);
USDRetInf48.DKK
    =
    str2double(USDRetInf48.DKK);
USDRetInf48.FIM
    =
    str2double(USDRetInf48.FIM);
USDRetInf48.FRFR
    =
    str2double(USDRetInf48.FRFR);
USDRetInf48.IEP
    =
    str2double(USDRetInf48.IEP);
USDRetInf48.ITALY
    =
    str2double(USDRetInf48.ITALY);
USDRetInf48.NLG
    =
    str2double(USDRetInf48.NLG);
USDRetInf48.PTE
    =
    str2double(USDRetInf48.PTE);
USDRetInf48.ESP
    =
    str2double(USDRetInf48.ESP);
USDRetInf48.USD
    =
    str2double(USDRetInf48.USD);
USDRetInf48(398:end,:)
    =
    [];

USDRetInf54opts
    =
    detectImportOptions('Calculations-
Dollar.xlsx', 'sheet', 'Ret_Inf54', 'range', 'A:V');
USDRetInf54
    =
    readtable('Calculations-
Dollar.xlsx', USDRetInf54opts);
USDRetInf54.TIME
    =
    datetime(USDRetInf54.TIME, 'InputFormat', 'yyyy-MM');
USDRetInf54
    =
    table2timetable(USDRetInf54);
USDRetInf54.ATS
    =
    str2double(USDRetInf54.ATS);
USDRetInf54.BEF
    =
    str2double(USDRetInf54.BEF);
USDRetInf54.DKK
    =
    str2double(USDRetInf54.DKK);
USDRetInf54.FIM
    =
    str2double(USDRetInf54.FIM);
USDRetInf54.FRFR
    =
    str2double(USDRetInf54.FRFR);
USDRetInf54.IEP
    =
    str2double(USDRetInf54.IEP);
USDRetInf54.ITALY
    =
    str2double(USDRetInf54.ITALY);
USDRetInf54.NLG
    =
    str2double(USDRetInf54.NLG);
USDRetInf54.PTE
    =
    str2double(USDRetInf54.PTE);
USDRetInf54.ESP
    =
    str2double(USDRetInf54.ESP);
USDRetInf54.USD
    =
    str2double(USDRetInf54.USD);
USDRetInf54(398:end,:)
    =
    [];

USDRetInf60opts
    =
    detectImportOptions('Calculations-
Dollar.xlsx', 'sheet', 'Ret_Inf60', 'range', 'A:V');
USDRetInf60
    =
    readtable('Calculations-
Dollar.xlsx', USDRetInf60opts);
USDRetInf60.TIME
    =
    datetime(USDRetInf60.TIME, 'InputFormat', 'yyyy-MM');
USDRetInf60
    =
    table2timetable(USDRetInf60);
USDRetInf60.ATS
    =
    str2double(USDRetInf60.ATS);
USDRetInf60.BEF
    =
    str2double(USDRetInf60.BEF);
USDRetInf60.DKK
    =
    str2double(USDRetInf60.DKK);
USDRetInf60.FIM
    =
    str2double(USDRetInf60.FIM);
USDRetInf60.FRFR
    =
    str2double(USDRetInf60.FRFR);
USDRetInf60.IEP
    =
    str2double(USDRetInf60.IEP);
USDRetInf60.ITALY
    =
    str2double(USDRetInf60.ITALY);
USDRetInf60.NLG
    =
    str2double(USDRetInf60.NLG);
USDRetInf60.PTE
    =
    str2double(USDRetInf60.PTE);
USDRetInf60.ESP
    =
    str2double(USDRetInf60.ESP);
USDRetInf60.USD
    =
    str2double(USDRetInf60.USD);

```

```
USDRetInf60(398:end,:) = [ ];
```

Average monthly returns for sub-strategies for Economic Activity index

```
USDSumReteA = table();
USDSumReteA.TIME = USDRetEA6.TIME;
USDSumReteA = table2timetable(USDSumReteA);
USDSumReteA.EA6 = sum(USDRetEA6{:,:21},2,'omitnan');
USDSumReteA.EA12 = sum(USDRetEA12{:,:21},2,'omitnan');
USDSumReteA.EA18 = sum(USDRetEA18{:,:21},2,'omitnan');
USDSumReteA.EA24 = sum(USDRetEA24{:,:21},2,'omitnan');
USDSumReteA.EA30 = sum(USDRetEA30{:,:21},2,'omitnan');
USDSumReteA.EA36 = sum(USDRetEA36{:,:21},2,'omitnan');
USDSumReteA.EA42 = sum(USDRetEA42{:,:21},2,'omitnan');
USDSumReteA.EA48 = sum(USDRetEA48{:,:21},2,'omitnan');
USDSumReteA.EA54 = sum(USDRetEA54{:,:21},2,'omitnan');
USDSumReteA.EA60 = sum(USDRetEA60{:,:21},2,'omitnan');

USDSqSumReteA = table();
USDSqSumReteA.EA6 = USDSumReteA.EA6.^2;
USDSqSumReteA.EA12 = USDSumReteA.EA12.^2;
USDSqSumReteA.EA18 = USDSumReteA.EA18.^2;
USDSqSumReteA.EA24 = USDSumReteA.EA24.^2;
USDSqSumReteA.EA30 = USDSumReteA.EA30.^2;
USDSqSumReteA.EA36 = USDSumReteA.EA36.^2;
USDSqSumReteA.EA42 = USDSumReteA.EA42.^2;
USDSqSumReteA.EA48 = USDSumReteA.EA48.^2;
USDSqSumReteA.EA54 = USDSumReteA.EA54.^2;
USDSqSumReteA.EA60 = USDSumReteA.EA60.^2;

USDAvgReteA = table();
USDAvgReteA.EA6 = 100 * 12 * mean(USDSumReteA.EA6);
USDAvgReteA.EA12 = 100 * 12 * mean(USDSumReteA.EA12);
USDAvgReteA.EA18 = 100 * 12 * mean(USDSumReteA.EA18);
USDAvgReteA.EA24 = 100 * 12 * mean(USDSumReteA.EA24);
USDAvgReteA.EA30 = 100 * 12 * mean(USDSumReteA.EA30);
USDAvgReteA.EA36 = 100 * 12 * mean(USDSumReteA.EA36);
USDAvgReteA.EA42 = 100 * 12 * mean(USDSumReteA.EA42);
USDAvgReteA.EA48 = 100 * 12 * mean(USDSumReteA.EA48);
USDAvgReteA.EA54 = 100 * 12 * mean(USDSumReteA.EA54);
USDAvgReteA.EA60 = 100 * 12 * mean(USDSumReteA.EA60);

USDSqAvgReteA = table();
USDSqAvgReteA.EA6 = 100 * sqrt(12) * sqrt(mean(USDSqSumReteA.EA6));
USDSqAvgReteA.EA12 = 100 * sqrt(12) * sqrt(mean(USDSqSumReteA.EA12));
USDSqAvgReteA.EA18 = 100 * sqrt(12) * sqrt(mean(USDSqSumReteA.EA18));
USDSqAvgReteA.EA24 = 100 * sqrt(12) * sqrt(mean(USDSqSumReteA.EA24));
USDSqAvgReteA.EA30 = 100 * sqrt(12) * sqrt(mean(USDSqSumReteA.EA30));
USDSqAvgReteA.EA36 = 100 * sqrt(12) * sqrt(mean(USDSqSumReteA.EA36));
USDSqAvgReteA.EA42 = 100 * sqrt(12) * sqrt(mean(USDSqSumReteA.EA42));
USDSqAvgReteA.EA48 = 100 * sqrt(12) * sqrt(mean(USDSqSumReteA.EA48));
```

```
USDSqAvgRetEA.EA54 = 100 * sqrt(12) * sqrt(mean(USDSqSumRetEA.EA54));
USDSqAvgRetEA.EA60 = 100 * sqrt(12) * sqrt(mean(USDSqSumRetEA.EA60));
```

Calculations Substrategies Economic Activity index

```
lambda = 0.94;

USDWeightsEA = array2table(zeros(1,10));
USDWeightsEA.Properties.VariableNames =
{'EA6','EA12','EA18','EA24','EA30','EA36','EA42','EA48','EA54','EA60'};
for j = 1 : 10
    USDWeightsEA{1,j} = (1-lambda);
end

for t = 2 : 397
    for j = 1 : 10
        USDWeightsEA{t,j} = USDWeightsEA{t-1,j} * lambda;
    end
end
USDWeightsEA = flip(USDWeightsEA);

USDEWMAEA = array2table(zeros(397,10));
USDEWMAEA.Properties.VariableNames =
{'EA6','EA12','EA18','EA24','EA30','EA36','EA42','EA48','EA54','EA60'};

for t = 1 : 397
    for j = 1 : 10
        USDEWMAEA{t,j} = USDSqSumRetEA{t,j} * USDWeightsEA{t,j};
    end
end

USDSumEWMAEA = array2table(zeros(1,10));
USDSumEWMAEA.Properties.VariableNames =
{'EA6','EA12','EA18','EA24','EA30','EA36','EA42','EA48','EA54','EA60'};

for j = 1 : 10
    USDSumEWMAEA{1,j} = sum(USDEWMAEA{:,j});
end
```

Annualized SharpeRatio + skewness + kurtosis + AR(1) Substrategies Economic Activity index

```
USDSREA = array2table(zeros(1,10));
USDSREA.Properties.VariableNames =
{'EA6','EA12','EA18','EA24','EA30','EA36','EA42','EA48','EA54','EA60'};

for j = 1 : 10
    USDSREA{1,j} = USDAvgRetEA{1,j}/USDSqAvgRetEA{1,j};
end
```

```

% Skewness
USDSkewnessEA = array2table(zeros(1,10));
USDSkewnessEA.Properties.VariableNames =
{ 'EA6', 'EA12', 'EA18', 'EA24', 'EA30', 'EA36', 'EA42', 'EA48', 'EA54', 'EA60' };

for j = 1 : 10
    USDSkewnessEA{1,j} = skewness(USDSumRetEA{: ,j});
end

% Excess Kurtosis
USDKurtosisEA = array2table(zeros(1,10));
USDKurtosisEA.Properties.VariableNames =
{ 'EA6', 'EA12', 'EA18', 'EA24', 'EA30', 'EA36', 'EA42', 'EA48', 'EA54', 'EA60' };

for j = 1 : 10
    USDKurtosisEA{1,j} = kurtosis(USDSumRetEA{: ,j})-3;
end

% AR(1)
USDarmasubstrEA = array2table(zeros(1,10));
USDarmasubstrEA.Properties.VariableNames =
{ 'EA6', 'EA12', 'EA18', 'EA24', 'EA30', 'EA36', 'EA42', 'EA48', 'EA54', 'EA60' };
p = 1;
USDarmaInf6 = estimate(arima(p,0,0), USDSumRetEA.EA6, 'Display', 'off');
USDarmaEA12 = estimate(arima(p,0,0), USDSumRetEA.EA12, 'Display', 'off');
USDarmaEA18 = estimate(arima(p,0,0), USDSumRetEA.EA18, 'Display', 'off');
USDarmaEA24 = estimate(arima(p,0,0), USDSumRetEA.EA24, 'Display', 'off');
USDarmaEA30 = estimate(arima(p,0,0), USDSumRetEA.EA30, 'Display', 'off');
USDarmaEA36 = estimate(arima(p,0,0), USDSumRetEA.EA36, 'Display', 'off');
USDarmaEA42 = estimate(arima(p,0,0), USDSumRetEA.EA42, 'Display', 'off');
USDarmaEA48 = estimate(arima(p,0,0), USDSumRetEA.EA48, 'Display', 'off');
USDarmaEA54 = estimate(arima(p,0,0), USDSumRetEA.EA54, 'Display', 'off');
USDarmaEA60 = estimate(arima(p,0,0), USDSumRetEA.EA60, 'Display', 'off');

USDarmasubstrEA.EA6 = USDarmaInf6.AR;
USDarmasubstrEA.EA12 = USDarmaEA12.AR;
USDarmasubstrEA.EA18 = USDarmaEA18.AR;
USDarmasubstrEA.EA24 = USDarmaEA24.AR;
USDarmasubstrEA.EA30 = USDarmaEA30.AR;
USDarmasubstrEA.EA36 = USDarmaEA36.AR;
USDarmasubstrEA.EA42 = USDarmaEA42.AR;
USDarmasubstrEA.EA48 = USDarmaEA48.AR;
USDarmasubstrEA.EA54 = USDarmaEA54.AR;
USDarmasubstrEA.EA60 = USDarmaEA60.AR;

```

Calculation Sub-Combo Economic Activity

```

% Weights for Sub-combo
USDEWMAEI = array2table(zeros(1,10));
USDEWMAEI.Properties.VariableNames =
{ 'EA6', 'EA12', 'EA18', 'EA24', 'EA30', 'EA36', 'EA42', 'EA48', 'EA54', 'EA60' };

for j = 1 : 10

```

```

USDEWMAEI{1,j} = 1/sqrt(USDSumEWMAEA{1,j});
end

SubCwEA = array2table(zeros(1,10));
SubCwEA.Properties.VariableNames =
{'EA6','EA12','EA18','EA24','EA30','EA36','EA42','EA48','EA54','EA60'};

for j = 1 : 10
    SubCwEA{1,j} = USDEWMAEI{1,j}/sum(USDEWMAEI{1,:},2);
end

% Find Sub - Combo EA returns in Excel and Load Sub - Combo EA returns
% later.

```

Average monthly returns for sub-strategies for Inflation index

```

USDSumRetInf = table();
USDSumRetInf.TIME = USDRetEA6.TIME;
USDSumRetInf = table2timetable(USDSumRetInf);
USDSumRetInf.Inf6 = sum(USDRetInf6{:,1:21},2,'omitnan');
USDSumRetInf.Inf12 = sum(USDRetInf12{:,1:21},2,'omitnan');
USDSumRetInf.Inf18 = sum(USDRetInf18{:,1:21},2,'omitnan');
USDSumRetInf.Inf24 = sum(USDRetInf24{:,1:21},2,'omitnan');
USDSumRetInf.Inf30 = sum(USDRetInf30{:,1:21},2,'omitnan');
USDSumRetInf.Inf36 = sum(USDRetInf36{:,1:21},2,'omitnan');
USDSumRetInf.Inf42 = sum(USDRetInf42{:,1:21},2,'omitnan');
USDSumRetInf.Inf48 = sum(USDRetInf48{:,1:21},2,'omitnan');
USDSumRetInf.Inf54 = sum(USDRetInf54{:,1:21},2,'omitnan');
USDSumRetInf.Inf60 = sum(USDRetInf60{:,1:21},2,'omitnan');

USDSqSumRetInf = table();
USDSqSumRetInf.Inf6 = USDSumRetInf.Inf6.^2;
USDSqSumRetInf.Inf12 = USDSumRetInf.Inf12.^2;
USDSqSumRetInf.Inf18 = USDSumRetInf.Inf18.^2;
USDSqSumRetInf.Inf24 = USDSumRetInf.Inf24.^2;
USDSqSumRetInf.Inf30 = USDSumRetInf.Inf30.^2;
USDSqSumRetInf.Inf36 = USDSumRetInf.Inf36.^2;
USDSqSumRetInf.Inf42 = USDSumRetInf.Inf42.^2;
USDSqSumRetInf.Inf48 = USDSumRetInf.Inf48.^2;
USDSqSumRetInf.Inf54 = USDSumRetInf.Inf54.^2;
USDSqSumRetInf.Inf60 = USDSumRetInf.Inf60.^2;

USDAvgRetInf = table();
USDAvgRetInf.Inf6 = 100 * 12 * mean(USDSumRetInf.Inf6);
USDAvgRetInf.Inf12 = 100 * 12 * mean(USDSumRetInf.Inf12);
USDAvgRetInf.Inf18 = 100 * 12 * mean(USDSumRetInf.Inf18);
USDAvgRetInf.Inf24 = 100 * 12 * mean(USDSumRetInf.Inf24);
USDAvgRetInf.Inf30 = 100 * 12 * mean(USDSumRetInf.Inf30);
USDAvgRetInf.Inf36 = 100 * 12 * mean(USDSumRetInf.Inf36);
USDAvgRetInf.Inf42 = 100 * 12 * mean(USDSumRetInf.Inf42);
USDAvgRetInf.Inf48 = 100 * 12 * mean(USDSumRetInf.Inf48);

```

```

USDAvgRetInf.Inf54 = 100 * 12 * mean(USDSumRetInf.Inf54);
USDAvgRetInf.Inf60 = 100 * 12 * mean(USDSumRetInf.Inf60);

USDSqAvgRetInf = table();
USDSqAvgRetInf.Inf6 = 100 * sqrt(12) * sqrt(mean(USDSqSumRetInf.Inf6));
USDSqAvgRetInf.Inf12 = 100 * sqrt(12) * sqrt(mean(USDSqSumRetInf.Inf12));
USDSqAvgRetInf.Inf18 = 100 * sqrt(12) * sqrt(mean(USDSqSumRetInf.Inf18));
USDSqAvgRetInf.Inf24 = 100 * sqrt(12) * sqrt(mean(USDSqSumRetInf.Inf24));
USDSqAvgRetInf.Inf30 = 100 * sqrt(12) * sqrt(mean(USDSqSumRetInf.Inf30));
USDSqAvgRetInf.Inf36 = 100 * sqrt(12) * sqrt(mean(USDSqSumRetInf.Inf36));
USDSqAvgRetInf.Inf42 = 100 * sqrt(12) * sqrt(mean(USDSqSumRetInf.Inf42));
USDSqAvgRetInf.Inf48 = 100 * sqrt(12) * sqrt(mean(USDSqSumRetInf.Inf48));
USDSqAvgRetInf.Inf54 = 100 * sqrt(12) * sqrt(mean(USDSqSumRetInf.Inf54));
USDSqAvgRetInf.Inf60 = 100 * sqrt(12) * sqrt(mean(USDSqSumRetInf.Inf60));

USDWeightsInf = array2table(zeros(1,10));
USDWeightsInf.Properties.VariableNames =
{'Inf6','Inf12','Inf18','Inf24','Inf30','Inf36','Inf42','Inf48','Inf54','Inf60'};
for j = 1 : 10
    USDWeightsInf{1,j} = (1-lambda);
end

for t = 2 : 397
    for j = 1 : 10
        USDWeightsInf{t,j} = USDWeightsInf{t-1,j} * lambda;
    end
end
USDWeightsInf = flip(USDWeightsInf);

USDEWMAInf = array2table(zeros(397,10));
USDEWMAInf.Properties.VariableNames =
{'Inf6','Inf12','Inf18','Inf24','Inf30','Inf36','Inf42','Inf48','Inf54','Inf60'};

for t = 1 : 397
    for j = 1 : 10
        USDEWMAInf{t,j} = USDSqSumRetInf{t,j} * USDWeightsInf{t,j};
    end
end

USDSumEWMAInf = array2table(zeros(1,10));
USDSumEWMAInf.Properties.VariableNames =
{'Inf6','Inf12','Inf18','Inf24','Inf30','Inf36','Inf42','Inf48','Inf54','Inf60'};

for j = 1 : 10
    USDSumEWMAInf{1,j} = sum(USDEWMAInf{:,j});
end

```

Annualized SharpeRatio + skewness + kurtosis + AR(1) Substrategies Inflation index

```
USDSRInf = array2table(zeros(1,10));
USDSRInf.Properties.VariableNames =
{'Inf6','Inf12','Inf18','Inf24','Inf30','Inf36','Inf42','Inf48','Inf54','Inf60'};

for j = 1 : 10
    USDSRInf{1,j} = USDAvgRetInf{1,j}/USDSqAvgRetInf{1,j};
end

% Skewness
USDSkewnessInf = array2table(zeros(1,10));
USDSkewnessInf.Properties.VariableNames =
{'Inf6','Inf12','Inf18','Inf24','Inf30','Inf36','Inf42','Inf48','Inf54','Inf60'};

for j = 1 : 10
    USDSkewnessInf{1,j} = skewness(USDSumRetInf{:,j});
end

% Excess Kurtosis
USDKurtosisInf = array2table(zeros(1,10));
USDKurtosisInf.Properties.VariableNames =
{'Inf6','Inf12','Inf18','Inf24','Inf30','Inf36','Inf42','Inf48','Inf54','Inf60'};

for j = 1 : 10
    USDKurtosisInf{1,j} = kurtosis(USDSumRetInf{:,j})-3;
end

% AR(1)
USDarmasubstrInf = array2table(zeros(1,10));
USDarmasubstrInf.Properties.VariableNames =
{'Inf6','Inf12','Inf18','Inf24','Inf30','Inf36','Inf42','Inf48','Inf54','Inf60'};
p = 1;
USDarmaInf6 = estimate(arima(p,0,0), USDSumRetInf.Inf6, 'Display', 'off');
USDarmaInf12 = estimate(arima(p,0,0), USDSumRetInf.Inf12, 'Display', 'off');
USDarmaInf18 = estimate(arima(p,0,0), USDSumRetInf.Inf18, 'Display', 'off');
USDarmaInf24 = estimate(arima(p,0,0), USDSumRetInf.Inf24, 'Display', 'off');
USDarmaInf30 = estimate(arima(p,0,0), USDSumRetInf.Inf30, 'Display', 'off');
USDarmaInf36 = estimate(arima(p,0,0), USDSumRetInf.Inf36, 'Display', 'off');
USDarmaInf42 = estimate(arima(p,0,0), USDSumRetInf.Inf42, 'Display', 'off');
USDarmaInf48 = estimate(arima(p,0,0), USDSumRetInf.Inf48, 'Display', 'off');
USDarmaInf54 = estimate(arima(p,0,0), USDSumRetInf.Inf54, 'Display', 'off');
USDarmaInf60 = estimate(arima(p,0,0), USDSumRetInf.Inf60, 'Display', 'off');

USDarmasubstrInf.Inf6 = USDarmaInf6.AR;
USDarmasubstrInf.Inf12 = USDarmaInf12.AR;
USDarmasubstrInf.Inf18 = USDarmaInf18.AR;
USDarmasubstrInf.Inf24 = USDarmaInf24.AR;
USDarmasubstrInf.Inf30 = USDarmaInf30.AR;
USDarmasubstrInf.Inf36 = USDarmaInf36.AR;
```

```

USDarmaSubstrInf.Inf42 = USDarmaInf42.AR;
USDarmaSubstrInf.Inf48 = USDarmaInf48.AR;
USDarmaSubstrInf.Inf54 = USDarmaInf54.AR;
USDarmaSubstrInf.Inf60 = USDarmaInf60.AR;

```

Calculation Sub-Combo Inflation

```

% Weights for Sub-combo
USDEWMAInfl = array2table(zeros(1,10));
USDEWMAInfl.Properties.VariableNames =
{'Inf6','Inf12','Inf18','Inf24','Inf30','Inf36','Inf42','Inf48','Inf54','Inf60'};

for j = 1 : 10
    USDEWMAInfl{1,j} = 1/sqrt(USDSumEWMAInfl{1,j});
end

SubCwInfl = array2table(zeros(1,10));
SubCwInfl.Properties.VariableNames =
{'Inf6','Inf12','Inf18','Inf24','Inf30','Inf36','Inf42','Inf48','Inf54','Inf60'};

for j = 1 : 10
    SubCwInfl{1,j} = USDEWMAInfl{1,j}/sum(USDEWMAInfl{1,:},2);
end

% Find Sub - Combo EA returns in Excel and Load Sub - Combo EA returns
% later.

```

SUB COMBO ECONOMIC ACTIVITY

Load Sub - Combo EA returns from Excel.

```

USDRetEASubopts          = detectImportOptions('Calculations-
Dollar.xlsx','sheet','Ret EAsub','range','A:V');
USDRetEASub               = readtable('Calculations-
Dollar.xlsx',USDRetEASubopts);
USDRetEASub.TIME          =
    datetime(USDRetEASub.TIME,'InputFormat','yyyy-MM');
USDRetEASub               = table2timetable(USDRetEASub);
USDRetEASub.ATS            = str2double(USDRetEASub.ATS);
USDRetEASub.BEF            = str2double(USDRetEASub.BEF);
USDRetEASub.DKK            = str2double(USDRetEASub.DKK);
USDRetEASub.FIM            = str2double(USDRetEASub.FIM);
USDRetEASub.FRF            = str2double(USDRetEASub.FRF);
USDRetEASub.IEP            = str2double(USDRetEASub.IEP);
USDRetEASub.ITALIA          = str2double(USDRetEASub.ITALIA);
USDRetEASub.NLG            = str2double(USDRetEASub.NLG);
USDRetEASub.PTE            = str2double(USDRetEASub.PTE);
USDRetEASub.ESP            = str2double(USDRetEASub.ESP);
USDRetEASub.USD            = str2double(USDRetEASub.USD);
USDRetEASub(398:end,:)      = [];

USDEASubsum   = array2table(zeros(397,1));

```

```

USDEASubsum = sum(USDRetEASub{:,1:21},2,'omitnan');
USDSqEASubsum = USDEASubsum.^2;

USDAvgEASubsum = 100 * 12 * mean(USDEASubsum);
USDAvgSqEASubsum = 100 * sqrt(12) * sqrt(mean(USDSqEASubsum));

```

Sharpe Ratio Sub - Combo ECONOMIC ACTIVITY

```

USDSREASubC = USDAvgEASubsum/USDAvgSqEASubsum;

USDSkewnessEASubC = skewness(USDEASubsum);
USDKurtosisEASubC = kurtosis(USDEASubsum)-3;

USDarmaSCEA = estimate(arima(p,0,0), USDEASubsum, 'Display', 'off' );

```

SUB COMBO INFLATION

Load Sub - Combo INF returns from Excel.

```

USDRetInfSubopts = detectImportOptions('Calculations-Dollar.xlsx','sheet','Ret_Infsub','range','A:V');
USDRetInfSub = readtable('Calculations-Dollar.xlsx',USDRetInfSubopts);
USDRetInfSub.TIME =
    datetime(USDRetInfSub.TIME,'InputFormat','yyyy-MM');
USDRetInfSub =
    table2timetable(USDRetInfSub);
USDRetInfSub.ATS =
    str2double(USDRetInfSub.ATS);
USDRetInfSub.BEF =
    str2double(USDRetInfSub.BEF);
USDRetInfSub.DKK =
    str2double(USDRetInfSub.DKK);
USDRetInfSub.FIM =
    str2double(USDRetInfSub.FIM);
USDRetInfSub.FRF =
    str2double(USDRetInfSub.FRF);
USDRetInfSub.IEP =
    str2double(USDRetInfSub.IEP);
USDRetInfSub.ITALY =
    str2double(USDRetInfSub.ITALY);
USDRetInfSub.NLG =
    str2double(USDRetInfSub.NLG);
USDRetInfSub.PTE =
    str2double(USDRetInfSub.PTE);
USDRetInfSub.ESP =
    str2double(USDRetInfSub.ESP);
USDRetInfSub.USD =
    str2double(USDRetInfSub.USD);
USDRetInfSub(398:end,:) =
    [];

USDInfSubsum = array2table(zeros(397,1));
USDInfSubsum = sum(USDRetInfSub{:,1:21},2,'omitnan');
USDSqInfSubsum = USDInfSubsum.^2;

USDAvgInfSubsum = 100 * 12 * mean(USDInfSubsum);
USDAvgSqInfSubsum = 100 * sqrt(12) * sqrt(mean(USDSqInfSubsum));

```

Sharpe Ratio Sub - Combo Inflation

```

USDSRInfSubC = USDAvgInfSubsum/USDAvgSqInfSubsum;

```

```

USDSkewnessInfSubC = skewness(USDInfSubsum);
USDKurtosisInfSubC = kurtosis(USDInfSubsum)-3;

USDarmaSCInf = estimate(arima(p,0,0), USDInfSubsum, 'Display', 'off' );

```

COMBO strategy

Load Combo returns from Excel.

```

USDRetComboopts = detectImportOptions('Calculations-
Dollar.xlsx','sheet','Ret Combo','range','A:V');
USDRetCombo = readtable('Calculations-
Dollar.xlsx',USDRetComboopts);
USDRetCombo.TIME =
    datetime(USDRetCombo.TIME,'InputFormat','yyyy-MM');
USDRetCombo = table2timetable(USDRetCombo);
USDRetCombo.ATS =
    str2double(USDRetCombo.ATS);
USDRetCombo.BEF =
    str2double(USDRetCombo.BEF);
USDRetCombo.DKK =
    str2double(USDRetCombo.DKK);
USDRetCombo.FIM =
    str2double(USDRetCombo.FIM);
USDRetCombo.FRF =
    str2double(USDRetCombo.FRF);
USDRetCombo.IEP =
    str2double(USDRetCombo.IEP);
USDRetCombo.ITL =
    str2double(USDRetCombo.ITL);
USDRetCombo.NLG =
    str2double(USDRetCombo.NLG);
USDRetCombo.PTE =
    str2double(USDRetCombo.PTE);
USDRetCombo.ESP =
    str2double(USDRetCombo.ESP);
USDRetCombo.USD =
    str2double(USDRetCombo.USD);
USDRetCombo(398:end,:) =
    [];

USDCombosum = array2table(zeros(397,1));
USDCombosum = sum(USDRetCombo{:,:21},2,'omitnan');
USDSqCombosum = USDCombosum.^2;

USDAvgCombosum =
    100 * 12 * mean(USDCombosum);
USDAvgSqCombosum =
    100 * sqrt(12) * sqrt(mean(USDSqCombosum));

```

Sharpe Ratio Combo ECONOMIC ACTIVITY

```

USDSRCombo = USDAvgCombosum/USDAvgSqCombosum;

USDSkewnessCombo = skewness(USDCombosum);
USDKurtosisCombo = kurtosis(USDCombosum)-3;

USDarmaCombo = estimate(arima(p,0,0), USDCombosum, 'Display', 'off' );

```

CARRY strategy

Load CARRY returns from Excel.

```
USDRetCarryopts          = detectImportOptions('Calculations-
Dollar.xlsx','sheet','Ret Carry','range','A:V');
USDRetCarry              = readtable('Calculations-
Dollar.xlsx',USDRetCarryopts);
USDRetCarry.TIME         =
    datetime(USDRetCarry.TIME,'InputFormat','yyyy-MM');
USDRetCarry               = table2timetable(USDRetCarry);
USDRetCarry.ATS           = str2double(USDRetCarry.ATS);
USDRetCarry.BEF           = str2double(USDRetCarry.BEF);
USDRetCarry.FIM           = str2double(USDRetCarry.FIM);
USDRetCarry.FRF           = str2double(USDRetCarry.FRF);
USDRetCarry.IEP           = str2double(USDRetCarry.IEP);
USDRetCarry.ITAL          = str2double(USDRetCarry.ITAL);
USDRetCarry.JPY           = str2double(USDRetCarry.JPY);
USDRetCarry.NLG           = str2double(USDRetCarry.NLG);
USDRetCarry.PTE           = str2double(USDRetCarry.PTE);
USDRetCarry.ESP           = str2double(USDRetCarry.ESP);
USDRetCarry.USD           = str2double(USDRetCarry.USD);
USDRetCarry(398:end,:)     = [];

USDCarrysum   = array2table(zeros(397,1));
USDCarrysum   = sum(USDRetCarry{:,1:21},2,'omitnan');
USDSqCarrysum = USDCarrysum.^2;

USDAvgCarrysum      = 100 * 12 * mean(USDCarrysum,'omitnan');
USDAvgSqCarrysum    = 100 * sqrt(12) * sqrt(mean(USDSqCarrysum,'omitnan'));
```

Sharpe Ratio CARRY

```
USDSRCarry = USDAvgCarrysum/USDAvgSqCarrysum;

USDSkewnessCarry = skewness(USDCarrysum);
USDKurtosisCarry = kurtosis(USDCarrysum)-3;

USDarmaCarry = estimate(arima(p,0,0), USDCarrysum, 'Display', 'off' );
```

Panel regressions USD

Load data for panel regressions

```
USDRegEAopts          = detectImportOptions('Calculations-
Dollar.xlsx', 'Sheet', 'Reg EA');
USDRegEA               = readtable('Calculations-Dollar.xlsx', USDRegEAopts);
USDRegEA.TIME          =
    datetime(USDRegEA.TIME,'InputFormat','yyyy-MM');
USDRegEA.TIME          = dateshift(USDRegEA.TIME, 'end', 'month');
```

```

USDRegInfopts          = detectImportOptions('Calculations-
Dollar.xlsx', 'Sheet', 'Reg Inf');
USDRegInf              = readtable('Calculations-Dollar.xlsx',
USDRegInfopts);
USDRegInf.TIME         = datetime(USDRegInf.TIME, 'InputFormat', 'yyyy-MM');
USDRegInf.TIME         = dateshift(USDRegInf.TIME, 'end', 'month');

USDRegComboopts        = detectImportOptions('Calculations-
Dollar.xlsx', 'Sheet', 'Reg Combo');
USDRegCombo             = readtable('Calculations-Dollar.xlsx',
USDRegComboopts);
USDRegCombo.TIME        = datetime(USDRegCombo.TIME, 'InputFormat', 'yyyy-
MM');
USDRegCombo.TIME        = dateshift(USDRegCombo.TIME, 'end', 'month');

USDRegCarryopts         = detectImportOptions('Calculations-
Dollar.xlsx', 'Sheet', 'Reg Carry');
USDRegCarry              = readtable('Calculations-Dollar.xlsx',
USDRegCarryopts);
USDRegCarry.TIME         = datetime(USDRegCarry.TIME, 'InputFormat', 'yyyy-
MM');
USDRegCarry.TIME         = dateshift(USDRegCarry.TIME, 'end', 'month');

```

USD Panel Regression Economic Activity sub combo

```

% focus on the time series dimension
USDRegEA.y_cat = categorical(USDRegEA.TIME);
USDEAmonths_cat = categories(USDRegEA.y_cat);
USDT_EA = length(USDEAmonths_cat);

% focus on the cross sectional dimension
USDRegEA.c_cat = categorical(USDRegEA.Currency);
USDEAcountries_cat = categories(USDRegEA.c_cat);
USDN_EA = length(USDEAcountries_cat);

% Estimate regression with country fixed effects and time fixed effects
USDregM_EA = fitlm(USDRegEA, 'y ~ x + c_cat + y_cat');

% Entity fixed
USDregEF_EA = fitlm(USDRegEA, 'y ~ x + c_cat');

% Time fixed
USDregTF_EA = fitlm(USDRegEA, 'y ~ x + y_cat');

```

USD Panel Regression Inf sub combo

```

% focus on the time series dimension
USDRegInf.y_cat = categorical(USDRegInf.TIME);
USDInfmonths_cat = categories(USDRegInf.y_cat);

```

```

USDT_Inf = length(USDInfmonths_cat);

% focus on the cross sectional dimension
USDRegInf.c_cat = categorical(USDRegInf.Currency);
USDInfcountries_cat = categories(USDRegInf.c_cat);
USDN_Inf = length(USDInfcountries_cat);

% Estimate regression with country fixed effects and time fixed effects
USDregM_Inf = fitlm(USDRegInf, 'y ~ x + c_cat + y_cat');

% Entity fixed
USDregEF_Inf = fitlm(USDRegInf, 'y ~ x + c_cat');

% Time fixed
USDregTF_Inf = fitlm(USDRegInf, 'y ~ x + y_cat');

```

USD Panel Regression Combo

```

% focus on the time series dimension
USDRegCombo.y_cat = categorical(USDRegCombo.TIME);
USDCombomonths_cat = categories(USDRegCombo.y_cat);
USDT_Combo = length(USDCombomonths_cat);

% focus on the cross sectional dimension
USDRegCombo.c_cat = categorical(USDRegCombo.Currency);
USDCombocountries_cat = categories(USDRegCombo.c_cat);
USDN_Combo = length(USDCombocountries_cat);

%Estimate regression with country fixed effects and time fixed effects
USDregM_Combo = fitlm(USDRegCombo, 'y ~ x + c_cat + y_cat');

% Entity fixed
USDregEF_Combo = fitlm(USDRegCombo, 'y ~ x + c_cat');

% Time fixed
USDregTF_Combo = fitlm(USDRegCombo, 'y ~ x + y_cat');

```

USD Panel Regression Carry

```

% focus on the time series dimension
USDRegCarry.y_cat = categorical(USDRegCarry.TIME);
USDCarrymonths_cat = categories(USDRegCarry.y_cat);
USDT_Carry = length(USDCarrymonths_cat);

% focus on the cross sectional dimension
USDRegCarry.c_cat = categorical(USDRegCarry.Currency);
USDCarrycountries_cat = categories(USDRegCarry.c_cat);
USDN_Carry = length(USDCarrycountries_cat);

%Estimate regression with country fixed effects and time fixed effects
USDregM_Carry = fitlm(USDRegCarry, 'y ~ x + c_cat + y_cat');

```

```
% Entity fixed
USDregEF_Carry = fitlm(USDRegCarry, 'y ~ x + c_cat');

% Time fixed
USDregTF_Carry = fitlm(USDRegCarry, 'y ~ x + y_cat');
```

3. GBP Perspective

Load monthly returns for substrategies from work in excel

Economic Activity index

```
GBPRetEA6opts = detectImportOptions('Calculations-
GBP.xlsx', 'sheet', 'Ret EA6', 'range', 'A:V');
GBPRetEA6 = readtable('Calculations-
GBP.xlsx', GBPRetEA6opts);
GBPRetEA6.TIME = datetime(GBPRetEA6.TIME, 'InputFormat', 'yyyy-
MM');
GBPRetEA6 = table2timetable(GBPRetEA6);
GBPRetEA6.ATS = str2double(GBPRetEA6.ATS);
GBPRetEA6.BEF = str2double(GBPRetEA6.BEF);
GBPRetEA6.DKK = str2double(GBPRetEA6.DKK);
GBPRetEA6.FIM = str2double(GBPRetEA6.FIM);
GBPRetEA6.FRF = str2double(GBPRetEA6.FRF);
GBPRetEA6.IEP = str2double(GBPRetEA6.IEP);
GBPRetEA6.ITL = str2double(GBPRetEA6.ITL);
GBPRetEA6.NLG = str2double(GBPRetEA6.NLG);
GBPRetEA6.PTE = str2double(GBPRetEA6.PTE);
GBPRetEA6.ESP = str2double(GBPRetEA6.ESP);
GBPRetEA6.GBP = str2double(GBPRetEA6.GBP);
GBPRetEA6(398:end,:) = [];

GBPRetEA12opts = detectImportOptions('Calculations-
GBP.xlsx', 'sheet', 'Ret EA12', 'range', 'A:V');
GBPRetEA12 = readtable('Calculations-
GBP.xlsx', GBPRetEA12opts);
GBPRetEA12.TIME = datetime(GBPRetEA12.TIME, 'InputFormat', 'yyyy-
MM');
GBPRetEA12 = table2timetable(GBPRetEA12);
GBPRetEA12.ATS = str2double(GBPRetEA12.ATS);
GBPRetEA12.BEF = str2double(GBPRetEA12.BEF);
GBPRetEA12.DKK = str2double(GBPRetEA12.DKK);
GBPRetEA12.FIM = str2double(GBPRetEA12.FIM);
GBPRetEA12.FRF = str2double(GBPRetEA12.FRF);
GBPRetEA12.IEP = str2double(GBPRetEA12.IEP);
GBPRetEA12.ITL = str2double(GBPRetEA12.ITL);
GBPRetEA12.NLG = str2double(GBPRetEA12.NLG);
GBPRetEA12.PTE = str2double(GBPRetEA12.PTE);
```

```

GBPRetEA12.ESP           = str2double(GBPRetEA12.ESP);
GBPRetEA12.GBP           = str2double(GBPRetEA12.GBP);
GBPRetEA12(398:end,:)    = [];

GBPRetEA18opts          = detectImportOptions('Calculations-
GBP.xlsx','sheet','Ret EA18','range','A:V');
GBPRetEA18               = readtable('Calculations-
GBP.xlsx',GBPRetEA18opts);
GBPRetEA18.TIME          = datetime(GBPRetEA18.TIME,'InputFormat','yyyy-
MM');

GBPRetEA18
GBPRetEA18.ATS           = str2double(GBPRetEA18.ATS);
GBPRetEA18.BEF           = str2double(GBPRetEA18.BEF);
GBPRetEA18.DKK           = str2double(GBPRetEA18.DKK);
GBPRetEA18.FIM           = str2double(GBPRetEA18.FIM);
GBPRetEA18.FRF           = str2double(GBPRetEA18.FRF);
GBPRetEA18.IEP           = str2double(GBPRetEA18.IEP);
GBPRetEA18.ITAL          = str2double(GBPRetEA18.ITAL);
GBPRetEA18.NLG           = str2double(GBPRetEA18.NLG);
GBPRetEA18.PTE           = str2double(GBPRetEA18.PTE);
GBPRetEA18.ESP           = str2double(GBPRetEA18.ESP);
GBPRetEA18.GBP           = str2double(GBPRetEA18.GBP);
GBPRetEA18(398:end,:)    = [];

GBPRetEA24opts          = detectImportOptions('Calculations-
GBP.xlsx','sheet','Ret EA24','range','A:V');
GBPRetEA24               = readtable('Calculations-
GBP.xlsx',GBPRetEA24opts);
GBPRetEA24.TIME          = datetime(GBPRetEA24.TIME,'InputFormat','yyyy-
MM');

GBPRetEA24
GBPRetEA24.ATS           = str2double(GBPRetEA24.ATS);
GBPRetEA24.BEF           = str2double(GBPRetEA24.BEF);
GBPRetEA24.DKK           = str2double(GBPRetEA24.DKK);
GBPRetEA24.FIM           = str2double(GBPRetEA24.FIM);
GBPRetEA24.FRF           = str2double(GBPRetEA24.FRF);
GBPRetEA24.IEP           = str2double(GBPRetEA24.IEP);
GBPRetEA24.ITAL          = str2double(GBPRetEA24.ITAL);
GBPRetEA24.NLG           = str2double(GBPRetEA24.NLG);
GBPRetEA24.PTE           = str2double(GBPRetEA24.PTE);
GBPRetEA24.ESP           = str2double(GBPRetEA24.ESP);
GBPRetEA24.GBP           = str2double(GBPRetEA24.GBP);
GBPRetEA24(398:end,:)    = [];

GBPRetEA30opts          = detectImportOptions('Calculations-
GBP.xlsx','sheet','Ret EA30','range','A:V');
GBPRetEA30               = readtable('Calculations-
GBP.xlsx',GBPRetEA30opts);
GBPRetEA30.TIME          = datetime(GBPRetEA30.TIME,'InputFormat','yyyy-
MM');

GBPRetEA30
GBPRetEA30.ATS           = str2double(GBPRetEA30.ATS);
GBPRetEA30.BEF           = str2double(GBPRetEA30.BEF);
GBPRetEA30.DKK           = str2double(GBPRetEA30.DKK);

```

```

GBPRetEA30.FIM          = str2double(GBPRetEA30.FIM);
GBPRetEA30.FRF          = str2double(GBPRetEA30.FRF);
GBPRetEA30.IEP          = str2double(GBPRetEA30.IEP);
GBPRetEA30.ITL          = str2double(GBPRetEA30.ITL);
GBPRetEA30.NLG          = str2double(GBPRetEA30.NLG);
GBPRetEA30.PTE          = str2double(GBPRetEA30.PTE);
GBPRetEA30.ESP          = str2double(GBPRetEA30.ESP);
GBPRetEA30.GBP          = str2double(GBPRetEA30.GBP);
GBPRetEA30(398:end,:)   = [];

GBPRetEA36opts          = detectImportOptions('Calculations-
GBP.xlsx','sheet','Ret EA36','range','A:V');
GBPRetEA36               = readable('Calculations-
GBP.xlsx',GBPRetEA36opts);
GBPRetEA36.TIME         = datetime(GBPRetEA36.TIME,'InputFormat','yyyy-
MM');
GBPRetEA36               = table2timetable(GBPRetEA36);
GBPRetEA36.ATS          = str2double(GBPRetEA36.ATS);
GBPRetEA36.BEF          = str2double(GBPRetEA36.BEF);
GBPRetEA36.DKK          = str2double(GBPRetEA36.DKK);
GBPRetEA36.FIM          = str2double(GBPRetEA36.FIM);
GBPRetEA36.FRF          = str2double(GBPRetEA36.FRF);
GBPRetEA36.IEP          = str2double(GBPRetEA36.IEP);
GBPRetEA36.ITL          = str2double(GBPRetEA36.ITL);
GBPRetEA36.NLG          = str2double(GBPRetEA36.NLG);
GBPRetEA36.PTE          = str2double(GBPRetEA36.PTE);
GBPRetEA36.ESP          = str2double(GBPRetEA36.ESP);
GBPRetEA36.GBP          = str2double(GBPRetEA36.GBP);
GBPRetEA36(398:end,:)   = [];

GBPRetEA42opts          = detectImportOptions('Calculations-
GBP.xlsx','sheet','Ret EA42','range','A:V');
GBPRetEA42               = readable('Calculations-
GBP.xlsx',GBPRetEA42opts);
GBPRetEA42.TIME         = datetime(GBPRetEA42.TIME,'InputFormat','yyyy-
MM');
GBPRetEA42               = table2timetable(GBPRetEA42);
GBPRetEA42.ATS          = str2double(GBPRetEA42.ATS);
GBPRetEA42.BEF          = str2double(GBPRetEA42.BEF);
GBPRetEA42.DKK          = str2double(GBPRetEA42.DKK);
GBPRetEA42.FIM          = str2double(GBPRetEA42.FIM);
GBPRetEA42.FRF          = str2double(GBPRetEA42.FRF);
GBPRetEA42.IEP          = str2double(GBPRetEA42.IEP);
GBPRetEA42.ITL          = str2double(GBPRetEA42.ITL);
GBPRetEA42.NLG          = str2double(GBPRetEA42.NLG);
GBPRetEA42.PTE          = str2double(GBPRetEA42.PTE);
GBPRetEA42.ESP          = str2double(GBPRetEA42.ESP);
GBPRetEA42.GBP          = str2double(GBPRetEA42.GBP);
GBPRetEA42(398:end,:)   = [];

GBPRetEA48opts          = detectImportOptions('Calculations-
GBP.xlsx','sheet','Ret EA48','range','A:V');
GBPRetEA48               = readable('Calculations-
GBP.xlsx',GBPRetEA48opts);

```

```

GBPRetEA48.TIME = datetime(GBPRetEA48.TIME, 'InputFormat', 'yyyy-MM');

GBPRetEA48.ATS = str2double(GBPRetEA48.ATS);
GBPRetEA48.BEF = str2double(GBPRetEA48.BEF);
GBPRetEA48.DKK = str2double(GBPRetEA48.DKK);
GBPRetEA48.FIM = str2double(GBPRetEA48.FIM);
GBPRetEA48.FR = str2double(GBPRetEA48.FR);
GBPRetEA48.IEP = str2double(GBPRetEA48.IEP);
GBPRetEA48.ITAL = str2double(GBPRetEA48.ITAL);
GBPRetEA48.NLG = str2double(GBPRetEA48.NLG);
GBPRetEA48.PTE = str2double(GBPRetEA48.PTE);
GBPRetEA48.ESP = str2double(GBPRetEA48.ESP);
GBPRetEA48.GBP = str2double(GBPRetEA48.GBP);
GBPRetEA48(398:end,:) = [];

GBPRetEA54opts = detectImportOptions('Calculations-GBP.xlsx', 'sheet', 'Ret EA54', 'range', 'A:V');
GBPRetEA54 = readtable('Calculations-GBP.xlsx', GBPRetEA54opts);

GBPRetEA54.TIME = datetime(GBPRetEA54.TIME, 'InputFormat', 'yyyy-MM');

GBPRetEA54.ATS = str2double(GBPRetEA54.ATS);
GBPRetEA54.BEF = str2double(GBPRetEA54.BEF);
GBPRetEA54.DKK = str2double(GBPRetEA54.DKK);
GBPRetEA54.FIM = str2double(GBPRetEA54.FIM);
GBPRetEA54.FR = str2double(GBPRetEA54.FR);
GBPRetEA54.IEP = str2double(GBPRetEA54.IEP);
GBPRetEA54.ITAL = str2double(GBPRetEA54.ITAL);
GBPRetEA54.NLG = str2double(GBPRetEA54.NLG);
GBPRetEA54.PTE = str2double(GBPRetEA54.PTE);
GBPRetEA54.ESP = str2double(GBPRetEA54.ESP);
GBPRetEA54.GBP = str2double(GBPRetEA54.GBP);
GBPRetEA54(398:end,:) = [];

GBPRetEA60opts = detectImportOptions('Calculations-GBP.xlsx', 'sheet', 'Ret EA60', 'range', 'A:V');
GBPRetEA60 = readtable('Calculations-GBP.xlsx', GBPRetEA60opts);

GBPRetEA60.TIME = datetime(GBPRetEA60.TIME, 'InputFormat', 'yyyy-MM');

GBPRetEA60.ATS = str2double(GBPRetEA60.ATS);
GBPRetEA60.BEF = str2double(GBPRetEA60.BEF);
GBPRetEA60.DKK = str2double(GBPRetEA60.DKK);
GBPRetEA60.FIM = str2double(GBPRetEA60.FIM);
GBPRetEA60.FR = str2double(GBPRetEA60.FR);
GBPRetEA60.IEP = str2double(GBPRetEA60.IEP);
GBPRetEA60.ITAL = str2double(GBPRetEA60.ITAL);
GBPRetEA60.NLG = str2double(GBPRetEA60.NLG);
GBPRetEA60.PTE = str2double(GBPRetEA60.PTE);
GBPRetEA60.ESP = str2double(GBPRetEA60.ESP);
GBPRetEA60.GBP = str2double(GBPRetEA60.GBP);

```

```
GBPRetEA60(398:end,:) = [];
```

Inflation index

```
GBPRetInf6opts = detectImportOptions('Calculations-
GBP.xlsx','sheet','Ret_Inf6','range','A:V');
GBPRetInf6 = readtable('Calculations-
GBP.xlsx',GBPRetInf6opts);
GBPRetInf6.TIME = datetime(GBPRetInf6.TIME,'InputFormat','yyyy-
MM');
GBPRetInf6 = table2timetable(GBPRetInf6);
GBPRetInf6.ATS = str2double(GBPRetInf6.ATS);
GBPRetInf6.BEF = str2double(GBPRetInf6.BEF);
GBPRetInf6.DKK = str2double(GBPRetInf6.DKK);
GBPRetInf6.FIM = str2double(GBPRetInf6.FIM);
GBPRetInf6.FRF = str2double(GBPRetInf6.FRF);
GBPRetInf6.IEP = str2double(GBPRetInf6.IEP);
GBPRetInf6.ITL = str2double(GBPRetInf6.ITL);
GBPRetInf6.NLG = str2double(GBPRetInf6.NLG);
GBPRetInf6.PTE = str2double(GBPRetInf6.PTE);
GBPRetInf6.ESP = str2double(GBPRetInf6.ESP);
GBPRetInf6.GBP = str2double(GBPRetInf6.GBP);
GBPRetInf6(398:end,:) = [];

GBPRetInf12opts = detectImportOptions('Calculations-
GBP.xlsx','sheet','Ret_Inf12','range','A:V');
GBPRetInf12 = readtable('Calculations-
GBP.xlsx',GBPRetInf12opts);
GBPRetInf12.TIME =
datetime(GBPRetInf12.TIME,'InputFormat','yyyy-MM');
GBPRetInf12 = table2timetable(GBPRetInf12);
GBPRetInf12.ATS = str2double(GBPRetInf12.ATS);
GBPRetInf12.BEF = str2double(GBPRetInf12.BEF);
GBPRetInf12.DKK = str2double(GBPRetInf12.DKK);
GBPRetInf12.FIM = str2double(GBPRetInf12.FIM);
GBPRetInf12.FRF = str2double(GBPRetInf12.FRF);
GBPRetInf12.IEP = str2double(GBPRetInf12.IEP);
GBPRetInf12.ITL = str2double(GBPRetInf12.ITL);
GBPRetInf12.NLG = str2double(GBPRetInf12.NLG);
GBPRetInf12.PTE = str2double(GBPRetInf12.PTE);
GBPRetInf12.ESP = str2double(GBPRetInf12.ESP);
GBPRetInf12.GBP = str2double(GBPRetInf12.GBP);
GBPRetInf12(398:end,:) = [];

GBPRetInf18opts = detectImportOptions('Calculations-
GBP.xlsx','sheet','Ret_Inf18','range','A:V');
GBPRetInf18 = readtable('Calculations-
GBP.xlsx',GBPRetInf18opts);
GBPRetInf18.TIME =
datetime(GBPRetInf18.TIME,'InputFormat','yyyy-MM');
GBPRetInf18 = table2timetable(GBPRetInf18);
GBPRetInf18.ATS = str2double(GBPRetInf18.ATS);
GBPRetInf18.BEF = str2double(GBPRetInf18.BEF);
GBPRetInf18.DKK = str2double(GBPRetInf18.DKK);
```

```

GBPRetInf18.FIM          = str2double(GBPRetInf18.FIM);
GBPRetInf18.FRF          = str2double(GBPRetInf18.FRF);
GBPRetInf18.IEP          = str2double(GBPRetInf18.IEP);
GBPRetInf18.ITL          = str2double(GBPRetInf18.ITL);
GBPRetInf18.NLG          = str2double(GBPRetInf18.NLG);
GBPRetInf18.PTE          = str2double(GBPRetInf18.PTE);
GBPRetInf18.ESP          = str2double(GBPRetInf18.ESP);
GBPRetInf18.GBP          = str2double(GBPRetInf18.GBP);
GBPRetInf18(398:end,:)   = [];

GBPRetInf24opts          = detectImportOptions('Calculations-
GBP.xlsx','sheet','Ret_Inf24','range','A:V');
GBPRetInf24               = readtable('Calculations-
GBP.xlsx',GBPRetInf24opts);
GBPRetInf24.TIME         =
    datetime(GBPRetInf24.TIME,'InputFormat','yyyy-MM');
GBPRetInf24
GBPRetInf24.ATS          = table2timetable(GBPRetInf24);
GBPRetInf24.BEF          = str2double(GBPRetInf24.BEF);
GBPRetInf24.DKK          = str2double(GBPRetInf24.DKK);
GBPRetInf24.FIM          = str2double(GBPRetInf24.FIM);
GBPRetInf24.FRF          = str2double(GBPRetInf24.FRF);
GBPRetInf24.IEP          = str2double(GBPRetInf24.IEP);
GBPRetInf24.ITL          = str2double(GBPRetInf24.ITL);
GBPRetInf24.NLG          = str2double(GBPRetInf24.NLG);
GBPRetInf24.PTE          = str2double(GBPRetInf24.PTE);
GBPRetInf24.ESP          = str2double(GBPRetInf24.ESP);
GBPRetInf24.GBP          = str2double(GBPRetInf24.GBP);
GBPRetInf24(398:end,:)   = [];

GBPRetInf30opts          = detectImportOptions('Calculations-
GBP.xlsx','sheet','Ret_Inf30','range','A:V');
GBPRetInf30               = readtable('Calculations-
GBP.xlsx',GBPRetInf30opts);
GBPRetInf30.TIME         =
    datetime(GBPRetInf30.TIME,'InputFormat','yyyy-MM');
GBPRetInf30
GBPRetInf30.ATS          = table2timetable(GBPRetInf30);
GBPRetInf30.BEF          = str2double(GBPRetInf30.BEF);
GBPRetInf30.DKK          = str2double(GBPRetInf30.DKK);
GBPRetInf30.FIM          = str2double(GBPRetInf30.FIM);
GBPRetInf30.FRF          = str2double(GBPRetInf30.FRF);
GBPRetInf30.IEP          = str2double(GBPRetInf30.IEP);
GBPRetInf30.ITL          = str2double(GBPRetInf30.ITL);
GBPRetInf30.NLG          = str2double(GBPRetInf30.NLG);
GBPRetInf30.PTE          = str2double(GBPRetInf30.PTE);
GBPRetInf30.ESP          = str2double(GBPRetInf30.ESP);
GBPRetInf30.GBP          = str2double(GBPRetInf30.GBP);
GBPRetInf30(398:end,:)   = [];

GBPRetInf36opts          = detectImportOptions('Calculations-
GBP.xlsx','sheet','Ret_Inf36','range','A:V');
GBPRetInf36               = readtable('Calculations-
GBP.xlsx',GBPRetInf36opts);

```

```

GBPRetInf36.TIME
    =
    datetime(GBPRetInf36.TIME, 'InputFormat', 'yyyy-MM');
GBPRetInf36
    =
    table2timetable(GBPRetInf36);
GBPRetInf36.ATS
    =
    str2double(GBPRetInf36.ATS);
GBPRetInf36.BEF
    =
    str2double(GBPRetInf36.BEF);
GBPRetInf36.DKK
    =
    str2double(GBPRetInf36.DKK);
GBPRetInf36.FIM
    =
    str2double(GBPRetInf36.FIM);
GBPRetInf36.FRF
    =
    str2double(GBPRetInf36.FRF);
GBPRetInf36.IEP
    =
    str2double(GBPRetInf36.IEP);
GBPRetInf36.ITALY
    =
    str2double(GBPRetInf36.ITALY);
GBPRetInf36.NLG
    =
    str2double(GBPRetInf36.NLG);
GBPRetInf36.PTE
    =
    str2double(GBPRetInf36.PTE);
GBPRetInf36.ESP
    =
    str2double(GBPRetInf36.ESP);
GBPRetInf36.GBP
    =
    str2double(GBPRetInf36.GBP);
GBPRetInf36(398:end,:)
    =
    [];

GBPRetInf42opts
    =
    detectImportOptions('Calculations-
    GBP.xlsx', 'sheet', 'Ret_Inf42', 'range', 'A:V');
GBPRetInf42
    =
    readtable('Calculations-
    GBP.xlsx', GBPRetInf42opts);
GBPRetInf42.TIME
    =
    datetime(GBPRetInf42.TIME, 'InputFormat', 'yyyy-MM');
GBPRetInf42
    =
    table2timetable(GBPRetInf42);
GBPRetInf42.ATS
    =
    str2double(GBPRetInf42.ATS);
GBPRetInf42.BEF
    =
    str2double(GBPRetInf42.BEF);
GBPRetInf42.DKK
    =
    str2double(GBPRetInf42.DKK);
GBPRetInf42.FIM
    =
    str2double(GBPRetInf42.FIM);
GBPRetInf42.FRF
    =
    str2double(GBPRetInf42.FRF);
GBPRetInf42.IEP
    =
    str2double(GBPRetInf42.IEP);
GBPRetInf42.ITALY
    =
    str2double(GBPRetInf42.ITALY);
GBPRetInf42.NLG
    =
    str2double(GBPRetInf42.NLG);
GBPRetInf42.PTE
    =
    str2double(GBPRetInf42.PTE);
GBPRetInf42.ESP
    =
    str2double(GBPRetInf42.ESP);
GBPRetInf42.GBP
    =
    str2double(GBPRetInf42.GBP);
GBPRetInf42(398:end,:)
    =
    [];

GBPRetInf48opts
    =
    detectImportOptions('Calculations-
    GBP.xlsx', 'sheet', 'Ret_Inf48', 'range', 'A:V');
GBPRetInf48
    =
    readtable('Calculations-
    GBP.xlsx', GBPRetInf48opts);
GBPRetInf48.TIME
    =
    datetime(GBPRetInf48.TIME, 'InputFormat', 'yyyy-MM');
GBPRetInf48
    =
    table2timetable(GBPRetInf48);
GBPRetInf48.ATS
    =
    str2double(GBPRetInf48.ATS);
GBPRetInf48.BEF
    =
    str2double(GBPRetInf48.BEF);
GBPRetInf48.DKK
    =
    str2double(GBPRetInf48.DKK);
GBPRetInf48.FIM
    =
    str2double(GBPRetInf48.FIM);
GBPRetInf48.FRF
    =
    str2double(GBPRetInf48.FRF);
GBPRetInf48.IEP
    =
    str2double(GBPRetInf48.IEP);
GBPRetInf48.ITALY
    =
    str2double(GBPRetInf48.ITALY);
GBPRetInf48.NLG
    =
    str2double(GBPRetInf48.NLG);
GBPRetInf48.PTE
    =
    str2double(GBPRetInf48.PTE);
GBPRetInf48.ESP
    =
    str2double(GBPRetInf48.ESP);
GBPRetInf48.GBP
    =
    str2double(GBPRetInf48.GBP);

```

```

GBPRetInf48(398:end,:) = [];

GBPRetInf54opts = detectImportOptions('Calculations-
GBP.xlsx','sheet','Ret_Inf54','range','A:V');
GBPRetInf54 = readtable('Calculations-
GBP.xlsx',GBPRetInf54opts);
GBPRetInf54.TIME =
    datetime(GBPRetInf54.TIME,'InputFormat','yyyy-MM');
GBPRetInf54 =
    table2timetable(GBPRetInf54);
GBPRetInf54.ATS =
    str2double(GBPRetInf54.ATS);
GBPRetInf54.BEF =
    str2double(GBPRetInf54.BEF);
GBPRetInf54.DKK =
    str2double(GBPRetInf54.DKK);
GBPRetInf54.FIM =
    str2double(GBPRetInf54.FIM);
GBPRetInf54.FRF =
    str2double(GBPRetInf54.FRF);
GBPRetInf54.IEP =
    str2double(GBPRetInf54.IEP);
GBPRetInf54.ITALY =
    str2double(GBPRetInf54.ITALY);
GBPRetInf54.NLG =
    str2double(GBPRetInf54.NLG);
GBPRetInf54.PTE =
    str2double(GBPRetInf54.PTE);
GBPRetInf54.ESP =
    str2double(GBPRetInf54.ESP);
GBPRetInf54.GBP =
    str2double(GBPRetInf54.GBP);
GBPRetInf54(398:end,:) = [];

GBPRetInf60opts = detectImportOptions('Calculations-
GBP.xlsx','sheet','Ret_Inf60','range','A:V');
GBPRetInf60 = readtable('Calculations-
GBP.xlsx',GBPRetInf60opts);
GBPRetInf60.TIME =
    datetime(GBPRetInf60.TIME,'InputFormat','yyyy-MM');
GBPRetInf60 =
    table2timetable(GBPRetInf60);
GBPRetInf60.ATS =
    str2double(GBPRetInf60.ATS);
GBPRetInf60.BEF =
    str2double(GBPRetInf60.BEF);
GBPRetInf60.DKK =
    str2double(GBPRetInf60.DKK);
GBPRetInf60.FIM =
    str2double(GBPRetInf60.FIM);
GBPRetInf60.FRF =
    str2double(GBPRetInf60.FRF);
GBPRetInf60.IEP =
    str2double(GBPRetInf60.IEP);
GBPRetInf60.ITALY =
    str2double(GBPRetInf60.ITALY);
GBPRetInf60.NLG =
    str2double(GBPRetInf60.NLG);
GBPRetInf60.PTE =
    str2double(GBPRetInf60.PTE);
GBPRetInf60.ESP =
    str2double(GBPRetInf60.ESP);
GBPRetInf60.GBP =
    str2double(GBPRetInf60.GBP);
GBPRetInf60(398:end,:) = [];

```

Average monthly returns for sub-strategies for Economic Activity index

```

GBPSumRetea = table();
GBPSumRetea.TIME = GBPRetEA6.TIME;
GBPSumRetea = table2timetable(GBPSumRetea);
GBPSumRetea.EA6 = sum(GBPRetEA6{:,1:21},2,'omitnan');
GBPSumRetea.EA12 = sum(GBPRetEA12{:,1:21},2,'omitnan');
GBPSumRetea.EA18 = sum(GBPRetEA18{:,1:21},2,'omitnan');
GBPSumRetea.EA24 = sum(GBPRetEA24{:,1:21},2,'omitnan');

```

```

GBPSumRetEA.EA30 = sum(GBPRetEA30{:,1:21},2,'omitnan');
GBPSumRetEA.EA36 = sum(GBPRetEA36{:,1:21},2,'omitnan');
GBPSumRetEA.EA42 = sum(GBPRetEA42{:,1:21},2,'omitnan');
GBPSumRetEA.EA48 = sum(GBPRetEA48{:,1:21},2,'omitnan');
GBPSumRetEA.EA54 = sum(GBPRetEA54{:,1:21},2,'omitnan');
GBPSumRetEA.EA60 = sum(GBPRetEA60{:,1:21},2,'omitnan');

GBPSqSumRetEA = table();
GBPSqSumRetEA.EA6 = GBPSumRetEA.EA6.^2;
GBPSqSumRetEA.EA12 = GBPSumRetEA.EA12.^2;
GBPSqSumRetEA.EA18 = GBPSumRetEA.EA18.^2;
GBPSqSumRetEA.EA24 = GBPSumRetEA.EA24.^2;
GBPSqSumRetEA.EA30 = GBPSumRetEA.EA30.^2;
GBPSqSumRetEA.EA36 = GBPSumRetEA.EA36.^2;
GBPSqSumRetEA.EA42 = GBPSumRetEA.EA42.^2;
GBPSqSumRetEA.EA48 = GBPSumRetEA.EA48.^2;
GBPSqSumRetEA.EA54 = GBPSumRetEA.EA54.^2;
GBPSqSumRetEA.EA60 = GBPSumRetEA.EA60.^2;

GBPAvgRetEA = table();
GBPAvgRetEA.EA6 = 100 * 12 * mean(GBPSumRetEA.EA6);
GBPAvgRetEA.EA12 = 100 * 12 * mean(GBPSumRetEA.EA12);
GBPAvgRetEA.EA18 = 100 * 12 * mean(GBPSumRetEA.EA18);
GBPAvgRetEA.EA24 = 100 * 12 * mean(GBPSumRetEA.EA24);
GBPAvgRetEA.EA30 = 100 * 12 * mean(GBPSumRetEA.EA30);
GBPAvgRetEA.EA36 = 100 * 12 * mean(GBPSumRetEA.EA36);
GBPAvgRetEA.EA42 = 100 * 12 * mean(GBPSumRetEA.EA42);
GBPAvgRetEA.EA48 = 100 * 12 * mean(GBPSumRetEA.EA48);
GBPAvgRetEA.EA54 = 100 * 12 * mean(GBPSumRetEA.EA54);
GBPAvgRetEA.EA60 = 100 * 12 * mean(GBPSumRetEA.EA60);

GBPSqAvgRetEA = table();
GBPSqAvgRetEA.EA6 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetEA.EA6));
GBPSqAvgRetEA.EA12 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetEA.EA12));
GBPSqAvgRetEA.EA18 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetEA.EA18));
GBPSqAvgRetEA.EA24 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetEA.EA24));
GBPSqAvgRetEA.EA30 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetEA.EA30));
GBPSqAvgRetEA.EA36 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetEA.EA36));
GBPSqAvgRetEA.EA42 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetEA.EA42));
GBPSqAvgRetEA.EA48 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetEA.EA48));
GBPSqAvgRetEA.EA54 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetEA.EA54));
GBPSqAvgRetEA.EA60 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetEA.EA60));

```

Calculations Substrategies Economic Activity index

```

lambda = 0.94;

GBPWeightsEA = array2table(zeros(1,10));
GBPWeightsEA.Properties.VariableNames =
{'EA6','EA12','EA18','EA24','EA30','EA36','EA42','EA48','EA54','EA60'};
for j = 1 : 10

```

```

    GBPWeightsEA{1,j} = (1-lambda);
end

for t = 2 : 397
    for j = 1 : 10
        GBPWeightsEA{t,j} = GBPWeightsEA{t-1,j} * lambda;
    end
end
GBPWeightsEA = flip(GBPWeightsEA);

GBPEWMAEA = array2table(zeros(397,10));
GBPEWMAEA.Properties.VariableNames =
{'EA6','EA12','EA18','EA24','EA30','EA36','EA42','EA48','EA54','EA60'};

for t = 1 : 397
    for j = 1 : 10
        GBPEWMAEA{t,j} = GBPSqSumRetEA{t,j} * GBPWeightsEA{t,j};
    end
end

GBPSumEWMAEA = array2table(zeros(1,10));
GBPSumEWMAEA.Properties.VariableNames =
{'EA6','EA12','EA18','EA24','EA30','EA36','EA42','EA48','EA54','EA60'};

for j = 1 : 10
    GBPSumEWMAEA{1,j} = sum(GBPEWMAEA{:,j});
end

```

Annualized SharpeRatio + skewness + kurtosis + AR(1) Substrategies Economic Activity index

```

GBPSREA = array2table(zeros(1,10));
GBPSREA.Properties.VariableNames =
{'EA6','EA12','EA18','EA24','EA30','EA36','EA42','EA48','EA54','EA60'};

for j = 1 : 10
    GBPSREA{1,j} = GBPAvgRetEA{1,j}/GBPSqAvgRetEA{1,j};
end

% Skewness
GBPSkewnessEA = array2table(zeros(1,10));
GBPSkewnessEA.Properties.VariableNames =
{'EA6','EA12','EA18','EA24','EA30','EA36','EA42','EA48','EA54','EA60'};

for j = 1 : 10
    GBPSkewnessEA{1,j} = skewness(GBPSumRetEA{:,j});
end

% Excess Kurtosis
GBPKurtosisEA = array2table(zeros(1,10));
GBPKurtosisEA.Properties.VariableNames =
{'EA6','EA12','EA18','EA24','EA30','EA36','EA42','EA48','EA54','EA60'};

```

```

for j = 1 : 10
    GBP KurtosisEA{1,j} = kurtosis(GBPSumRetEA{:,j})-3;
end

% AR(1)
GPParmaSubstrEA = array2table(zeros(1,10));
GPParmaSubstrEA.Properties.VariableNames =
{'EA6','EA12','EA18','EA24','EA30','EA36','EA42','EA48','EA54','EA60'};
p = 1;
GPParmaInf6 = estimate(arima(p,0,0), GBPSumRetEA.EA6, 'Display', 'off');
GPParmaEA12 = estimate(arima(p,0,0), GBPSumRetEA.EA12, 'Display', 'off');
GPParmaEA18 = estimate(arima(p,0,0), GBPSumRetEA.EA18, 'Display', 'off');
GPParmaEA24 = estimate(arima(p,0,0), GBPSumRetEA.EA24, 'Display', 'off');
GPParmaEA30 = estimate(arima(p,0,0), GBPSumRetEA.EA30, 'Display', 'off');
GPParmaEA36 = estimate(arima(p,0,0), GBPSumRetEA.EA36, 'Display', 'off');
GPParmaEA42 = estimate(arima(p,0,0), GBPSumRetEA.EA42, 'Display', 'off');
GPParmaEA48 = estimate(arima(p,0,0), GBPSumRetEA.EA48, 'Display', 'off');
GPParmaEA54 = estimate(arima(p,0,0), GBPSumRetEA.EA54, 'Display', 'off');
GPParmaEA60 = estimate(arima(p,0,0), GBPSumRetEA.EA60, 'Display', 'off');

GPParmaSubstrEA.EA6 = GPParmaInf6.AR;
GPParmaSubstrEA.EA12 = GPParmaEA12.AR;
GPParmaSubstrEA.EA18 = GPParmaEA18.AR;
GPParmaSubstrEA.EA24 = GPParmaEA24.AR;
GPParmaSubstrEA.EA30 = GPParmaEA30.AR;
GPParmaSubstrEA.EA36 = GPParmaEA36.AR;
GPParmaSubstrEA.EA42 = GPParmaEA42.AR;
GPParmaSubstrEA.EA48 = GPParmaEA48.AR;
GPParmaSubstrEA.EA54 = GPParmaEA54.AR;
GPParmaSubstrEA.EA60 = GPParmaEA60.AR;

```

Calculation Sub-Combo Economic Activity

```

% Weights for Sub-combo
GPPEWMAEI = array2table(zeros(1,10));
GPPEWMAEI.Properties.VariableNames =
{'EA6','EA12','EA18','EA24','EA30','EA36','EA42','EA48','EA54','EA60'};

for j = 1 : 10
    GPPEWMAEI{1,j} = 1/sqrt(GBPSumEWMAEA{1,j});
end

SubCwEA = array2table(zeros(1,10));
SubCwEA.Properties.VariableNames =
{'EA6','EA12','EA18','EA24','EA30','EA36','EA42','EA48','EA54','EA60'};

for j = 1 : 10
    SubCwEA{1,j} = GPPEWMAEI{1,j}/sum(GPPEWMAEI{1,:},2);
end

% Find Sub - Combo EA returns in Excel and Load Sub - Combo EA returns
% later.

```

Average monthly returns for sub-strategies for Inflation index

```
GBPSumRetInf = table();
GBPSumRetInf.TIME = GBPRetEA6.TIME;
GBPSumRetInf = table2timetable(GBPSumRetInf);
GBPSumRetInf.Inf6 = sum(GBPRetInf6{:,1:21},2,'omitnan');
GBPSumRetInf.Inf12 = sum(GBPRetInf12{:,1:21},2,'omitnan');
GBPSumRetInf.Inf18 = sum(GBPRetInf18{:,1:21},2,'omitnan');
GBPSumRetInf.Inf24 = sum(GBPRetInf24{:,1:21},2,'omitnan');
GBPSumRetInf.Inf30 = sum(GBPRetInf30{:,1:21},2,'omitnan');
GBPSumRetInf.Inf36 = sum(GBPRetInf36{:,1:21},2,'omitnan');
GBPSumRetInf.Inf42 = sum(GBPRetInf42{:,1:21},2,'omitnan');
GBPSumRetInf.Inf48 = sum(GBPRetInf48{:,1:21},2,'omitnan');
GBPSumRetInf.Inf54 = sum(GBPRetInf54{:,1:21},2,'omitnan');
GBPSumRetInf.Inf60 = sum(GBPRetInf60{:,1:21},2,'omitnan');

GBPSqSumRetInf = table();
GBPSqSumRetInf.Inf6 = GBPSumRetInf.Inf6.^2;
GBPSqSumRetInf.Inf12 = GBPSumRetInf.Inf12.^2;
GBPSqSumRetInf.Inf18 = GBPSumRetInf.Inf18.^2;
GBPSqSumRetInf.Inf24 = GBPSumRetInf.Inf24.^2;
GBPSqSumRetInf.Inf30 = GBPSumRetInf.Inf30.^2;
GBPSqSumRetInf.Inf36 = GBPSumRetInf.Inf36.^2;
GBPSqSumRetInf.Inf42 = GBPSumRetInf.Inf42.^2;
GBPSqSumRetInf.Inf48 = GBPSumRetInf.Inf48.^2;
GBPSqSumRetInf.Inf54 = GBPSumRetInf.Inf54.^2;
GBPSqSumRetInf.Inf60 = GBPSumRetInf.Inf60.^2;

GBPAvgRetInf = table();
GBPAvgRetInf.Inf6 = 100 * 12 * mean(GBPSumRetInf.Inf6);
GBPAvgRetInf.Inf12 = 100 * 12 * mean(GBPSumRetInf.Inf12);
GBPAvgRetInf.Inf18 = 100 * 12 * mean(GBPSumRetInf.Inf18);
GBPAvgRetInf.Inf24 = 100 * 12 * mean(GBPSumRetInf.Inf24);
GBPAvgRetInf.Inf30 = 100 * 12 * mean(GBPSumRetInf.Inf30);
GBPAvgRetInf.Inf36 = 100 * 12 * mean(GBPSumRetInf.Inf36);
GBPAvgRetInf.Inf42 = 100 * 12 * mean(GBPSumRetInf.Inf42);
GBPAvgRetInf.Inf48 = 100 * 12 * mean(GBPSumRetInf.Inf48);
GBPAvgRetInf.Inf54 = 100 * 12 * mean(GBPSumRetInf.Inf54);
GBPAvgRetInf.Inf60 = 100 * 12 * mean(GBPSumRetInf.Inf60);

GBPSqAvgRetInf = table();
GBPSqAvgRetInf.Inf6 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetInf.Inf6));
GBPSqAvgRetInf.Inf12 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetInf.Inf12));
GBPSqAvgRetInf.Inf18 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetInf.Inf18));
GBPSqAvgRetInf.Inf24 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetInf.Inf24));
GBPSqAvgRetInf.Inf30 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetInf.Inf30));
GBPSqAvgRetInf.Inf36 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetInf.Inf36));
GBPSqAvgRetInf.Inf42 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetInf.Inf42));
GBPSqAvgRetInf.Inf48 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetInf.Inf48));
GBPSqAvgRetInf.Inf54 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetInf.Inf54));
GBPSqAvgRetInf.Inf60 = 100 * sqrt(12) * sqrt(mean(GBPSqSumRetInf.Inf60));
```

```

GBPWeightsInf = array2table(zeros(1,10));
GBPWeightsInf.Properties.VariableNames =
{ 'Inf6', 'Inf12', 'Inf18', 'Inf24', 'Inf30', 'Inf36', 'Inf42', 'Inf48', 'Inf54', 'Inf60' };
for j = 1 : 10
    GBPWeightsInf{1,j} = (1-lambda);
end

for t = 2 : 397
    for j = 1 : 10
        GBPWeightsInf{t,j} = GBPWeightsInf{t-1,j} * lambda;
    end
end
GBPWeightsInf = flip(GBPWeightsInf);

GBPEWMAInf = array2table(zeros(397,10));
GBPEWMAInf.Properties.VariableNames =
{ 'Inf6', 'Inf12', 'Inf18', 'Inf24', 'Inf30', 'Inf36', 'Inf42', 'Inf48', 'Inf54', 'Inf60' };

for t = 1 : 397
    for j = 1 : 10
        GBPEWMAInf{t,j} = GBPSqSumRetInf{t,j} * GBPWeightsInf{t,j};
    end
end

GBPSumEWMAInf = array2table(zeros(1,10));
GBPSumEWMAInf.Properties.VariableNames =
{ 'Inf6', 'Inf12', 'Inf18', 'Inf24', 'Inf30', 'Inf36', 'Inf42', 'Inf48', 'Inf54', 'Inf60' };

for j = 1 : 10
    GBPSumEWMAInf{1,j} = sum(GBPEWMAInf{:,j});
end

```

Annualized SharpeRatio + skewness + kurtosis + AR(1) Substrategies Inflation index

```

GBPSRInf = array2table(zeros(1,10));
GBPSRInf.Properties.VariableNames =
{ 'Inf6', 'Inf12', 'Inf18', 'Inf24', 'Inf30', 'Inf36', 'Inf42', 'Inf48', 'Inf54', 'Inf60' };

for j = 1 : 10
    GBPSRInf{1,j} = GBPAvgRetInf{1,j}/GBPSqAvgRetInf{1,j};
end

% Skewness
GBPSkewnessInf = array2table(zeros(1,10));
GBPSkewnessInf.Properties.VariableNames =
{ 'Inf6', 'Inf12', 'Inf18', 'Inf24', 'Inf30', 'Inf36', 'Inf42', 'Inf48', 'Inf54', 'Inf60' };

for j = 1 : 10
    GBPSkewnessInf{1,j} = skewness(GBPSumRetInf{:,j});

```

```

end

% Excess Kurtosis
GBPKurtosisInf = array2table(zeros(1,10));
GBPKurtosisInf.Properties.VariableNames =
{'Inf6','Inf12','Inf18','Inf24','Inf30','Inf36','Inf42','Inf48','Inf54','Inf60'};

for j = 1 : 10
    GBPKurtosisInf{1,j} = kurtosis(GBPSumRetInf{:,j})-3;
end

% AR(1)
GBParmasubstrInf = array2table(zeros(1,10));
GBParmasubstrInf.Properties.VariableNames =
{'Inf6','Inf12','Inf18','Inf24','Inf30','Inf36','Inf42','Inf48','Inf54','Inf60'};
p = 1;
GBParmaInf6 = estimate(arima(p,0,0), GBPSumRetInf.Inf6, 'Display', 'off');
GBParmaInf12 = estimate(arima(p,0,0), GBPSumRetInf.Inf12, 'Display', 'off');
GBParmaInf18 = estimate(arima(p,0,0), GBPSumRetInf.Inf18, 'Display', 'off');
GBParmaInf24 = estimate(arima(p,0,0), GBPSumRetInf.Inf24, 'Display', 'off');
GBParmaInf30 = estimate(arima(p,0,0), GBPSumRetInf.Inf30, 'Display', 'off');
GBParmaInf36 = estimate(arima(p,0,0), GBPSumRetInf.Inf36, 'Display', 'off');
GBParmaInf42 = estimate(arima(p,0,0), GBPSumRetInf.Inf42, 'Display', 'off');
GBParmaInf48 = estimate(arima(p,0,0), GBPSumRetInf.Inf48, 'Display', 'off');
GBParmaInf54 = estimate(arima(p,0,0), GBPSumRetInf.Inf54, 'Display', 'off');
GBParmaInf60 = estimate(arima(p,0,0), GBPSumRetInf.Inf60, 'Display', 'off');

GBParmasubstrInf.Inf6 = GBParmaInf6.AR;
GBParmasubstrInf.Inf12 = GBParmaInf12.AR;
GBParmasubstrInf.Inf18 = GBParmaInf18.AR;
GBParmasubstrInf.Inf24 = GBParmaInf24.AR;
GBParmasubstrInf.Inf30 = GBParmaInf30.AR;
GBParmasubstrInf.Inf36 = GBParmaInf36.AR;
GBParmasubstrInf.Inf42 = GBParmaInf42.AR;
GBParmasubstrInf.Inf48 = GBParmaInf48.AR;
GBParmasubstrInf.Inf54 = GBParmaInf54.AR;
GBParmasubstrInf.Inf60 = GBParmaInf60.AR;

```

Calculation Sub-Combo Inflation

```

% Weights for Sub-combo
GBPEWMAInfI = array2table(zeros(1,10));
GBPEWMAInfI.Properties.VariableNames =
{'Inf6','Inf12','Inf18','Inf24','Inf30','Inf36','Inf42','Inf48','Inf54','Inf60'};

for j = 1 : 10
    GBPEWMAInfI{1,j} = 1/sqrt(GBPSumEWMAInf{1,j});
end

SubCwInf = array2table(zeros(1,10));
SubCwInf.Properties.VariableNames =
{'Inf6','Inf12','Inf18','Inf24','Inf30','Inf36','Inf42','Inf48','Inf54','Inf60'};

```

```

for j = 1 : 10
    SubCwInf{1,j} = GBPEWMAInfi{1,j}/sum(GBPEWMAInfi{1,:},2);
end

% Find Returns for Sub - Combo Inflation in Excel and Load returns for Sub
% - Combo Inflation later.

```

SUB COMBO ECONOMIC ACTIVITY

Load Sub - Combo EA returns from Excel.

```

GBPRetEASubopts          = detectImportOptions('Calculations-
GBP.xlsx','sheet','Ret_EAsub','range','A:V');
GBPRetEASub              = readtable('Calculations-
GBP.xlsx',GBPRetEASubopts);
GBPRetEASub.TIME         =
    datetime(GBPRetEASub.TIME,'InputFormat','yyyy-MM');
GBPRetEASub              = table2timetable(GBPRetEASub);
GBPRetEASub.ATS          = str2double(GBPRetEASub.ATS);
GBPRetEASub.BEF          = str2double(GBPRetEASub.BEF);
GBPRetEASub.DKK          = str2double(GBPRetEASub.DKK);
GBPRetEASub.FIM          = str2double(GBPRetEASub.FIM);
GBPRetEASub.FRF          = str2double(GBPRetEASub.FRF);
GBPRetEASub.IEP          = str2double(GBPRetEASub.IEP);
GBPRetEASub.ITAL          = str2double(GBPRetEASub.ITAL);
GBPRetEASub.NLG          = str2double(GBPRetEASub.NLG);
GBPRetEASub.PTE          = str2double(GBPRetEASub.PTE);
GBPRetEASub.ESP          = str2double(GBPRetEASub.ESP);
GBPRetEASub.GBP          = str2double(GBPRetEASub.GBP);
GBPRetEASub(398:end,:)   = [];

GBPEASubsum   = array2table(zeros(397,1));
GBPEASubsum   = sum(GBPRetEASub{:,:21},2,'omitnan');
GBPSqEASubsum = GBPEASubsum.^2;

GBPAvgEASubsum        = 100 * 12 * mean(GBPEASubsum);
GBPAvgSqEASubsum      = 100 * sqrt(12) * sqrt(mean(GBPSqEASubsum));

```

Sharpe Ratio Sub - Combo ECONOMIC ACTIVITY

```

GBPSREASubC = GBPAvgEASubsum/GBPAvgSqEASubsum;

GBPSkewnessEASubC = skewness(GBPEASubsum);
GBPKurtosisEASubC = kurtosis(GBPEASubsum)-3;

GBParmaSCEA = estimate(arima(p,0,0), GBPEASubsum, 'Display', 'off' );

```

SUB COMBO INFLATION

Load Sub - Combo INF returns from Excel.

```
GBPRetInfSubopts          = detectImportOptions('Calculations-
GBP.xlsx','sheet','Ret_Infsub','range','A:V');
GBPRetInfSub              = readtable('Calculations-
GBP.xlsx',GBPRetInfSubopts);
GBPRetInfSub.TIME         =
    datetime(GBPRetInfSub.TIME,'InputFormat','yyyy-MM');
GBPRetInfSub              = table2timetable(GBPRetInfSub);
GBPRetInfSub.ATS          = str2double(GBPRetInfSub.ATS);
GBPRetInfSub.BEF          = str2double(GBPRetInfSub.BEF);
GBPRetInfSub.DKK          = str2double(GBPRetInfSub.DKK);
GBPRetInfSub.FIM          = str2double(GBPRetInfSub.FIM);
GBPRetInfSub.FRF          = str2double(GBPRetInfSub.FRF);
GBPRetInfSub.IEP          = str2double(GBPRetInfSub.IEP);
GBPRetInfSub.ITAL         = str2double(GBPRetInfSub.ITAL);
GBPRetInfSub.NLG          = str2double(GBPRetInfSub.NLG);
GBPRetInfSub.PTE          = str2double(GBPRetInfSub.PTE);
GBPRetInfSub.ESP          = str2double(GBPRetInfSub.ESP);
GBPRetInfSub.GBP          = str2double(GBPRetInfSub.GBP);
GBPRetInfSub(398:end,:)   = [];

GBPInfSubsum   = array2table(zeros(397,1));
GBPInfSubsum   = sum(GBPRetInfSub{:,:21},2,'omitnan');
GBPSqInfSubsum = GBPInfSubsum.^2;

GBPAvgInfSubsum   = 100 * 12 * mean(GBPInfSubsum);
GBPAvgSqInfSubsum = 100 * sqrt(12) * sqrt(mean(GBPSqInfSubsum));
```

Sharpe Ratio Sub - Combo ECONOMIC ACTIVITY

```
GBPSRInfSubC = GBPAvgInfSubsum/GBPAvgSqInfSubsum;

GBPSkewnessInfSubC = skewness(GBPInfSubsum);
GBPKurtosisInfSubC = kurtosis(GBPInfSubsum)-3;

GBParmaSCInf = estimate(arima(p,0,0), GBPInfSubsum, 'Display', 'off' );
```

COMBO strategy

Load Combo returns from Excel.

```
GBPRetComboopts          = detectImportOptions('Calculations-
GBP.xlsx','sheet','Ret_Combo','range','A:V');
GBPRetCombo              = readtable('Calculations-
GBP.xlsx',GBPRetComboopts);
```

```

GBPRetCombo.TIME          =
    datetime(GBPRetCombo.TIME, 'InputFormat', 'yyyy-MM');
GBPRetCombo.ATS           =
    str2double(GBPRetCombo.ATS);
GBPRetCombo.BEF           =
    str2double(GBPRetCombo.BEF);
GBPRetCombo.DKK           =
    str2double(GBPRetCombo.DKK);
GBPRetCombo.FIM           =
    str2double(GBPRetCombo.FIM);
GBPRetCombo.FRF           =
    str2double(GBPRetCombo.FRF);
GBPRetCombo.IEP           =
    str2double(GBPRetCombo.IEP);
GBPRetCombo.ITL           =
    str2double(GBPRetCombo.ITL);
GBPRetCombo.NLG           =
    str2double(GBPRetCombo.NLG);
GBPRetCombo.PTE           =
    str2double(GBPRetCombo.PTE);
GBPRetCombo.ESP           =
    str2double(GBPRetCombo.ESP);
GBPRetCombo.GBP           =
    str2double(GBPRetCombo.GBP);
GBPRetCombo(398:end,:)    =
    [];

GBPCombosum   = array2table(zeros(397,1));
GBPCombosum   = sum(GBPRetCombo{:,1:21},2,'omitnan');
GBPSqCombosum = GBPCombosum.^2;

GBPAvgCombosum        = 100 * 12 * mean(GBPCombosum);
GBPAvgSqCombosum      = 100 * sqrt(12) * sqrt(mean(GBPSqCombosum));

```

Sharpe Ratio Combo

```

GBPSRCombo = GBPAvgCombosum/GBPAvgSqCombosum;

GBPSkewnessCombo = skewness(GBPCombosum);
GBPKurtosisCombo = kurtosis(GBPCombosum)-3;

GBParmaCombo = estimate(arima(p,0,0), GBPCombosum, 'Display', 'off');

```

CARRY strategy

Load CARRY returns from Excel.

```

GBPRetCarryopts          =
    detectImportOptions('Calculations-
GBP.xlsx','sheet','Ret Carry','range','A:V');
GBPRetCarry               =
    readtable('Calculations-
GBP.xlsx',GBPRetCarryopts);
GBPRetCarry.TIME          =
    datetime(GBPRetCarry.TIME, 'InputFormat', 'yyyy-MM');
GBPRetCarry.ATS           =
    str2double(GBPRetCarry.ATS);
GBPRetCarry.BEF           =
    str2double(GBPRetCarry.BEF);
GBPRetCarry.DKK           =
    str2double(GBPRetCarry.DKK);
GBPRetCarry.FIM           =
    str2double(GBPRetCarry.FIM);
GBPRetCarry.FRF           =
    str2double(GBPRetCarry.FRF);
GBPRetCarry.IEP           =
    str2double(GBPRetCarry.IEP);
GBPRetCarry.ITL           =
    str2double(GBPRetCarry.ITL);
GBPRetCarry.NLG           =
    str2double(GBPRetCarry.NLG);

```

```

GBPRetCarry.PTE          = str2double(GBPRetCarry.PTE);
GBPRetCarry.ESP          = str2double(GBPRetCarry.ESP);
GBPRetCarry.GBP          = str2double(GBPRetCarry.GBP);
GBPRetCarry(398:end,:)   = [];

GBPCarrysum   = array2table(zeros(397,1));
GBPCarrysum   = sum(GBPRetCarry{:,1:21},2,'omitnan');
GBPSqCarrysum = GBPCarrysum.^2;

GBPAvgCarrysum        = 100 * 12 * mean(GBPCarrysum);
GBPAvgSqCarrysum      = 100 * sqrt(12) * sqrt(mean(GBPSqCarrysum));

```

Sharpe Ratio CARRY

```

GBPSRCarry = GBPAvgCarrysum/GBPAvgSqCarrysum;

GBPSkewnessCarry = skewness(GBPCarrysum);
GBPKurtosisCarry = kurtosis(GBPCarrysum)-3;

GBParmaCarry = estimate(arima(p,0,0), GBPCarrysum, 'Display', 'off');

```

Diversified portfolio of combo strategy and carry strategy

Load Div returns from Excel.

```

GBPRetDivopts           = detectImportOptions('Calculations-
GBP.xlsx','sheet','Ret Div');
GBPRetDiv                = readtable('Calculations-
GBP.xlsx',GBPRetDivopts);
GBPRetDiv.TIME           = datetime(GBPRetDiv.TIME,'InputFormat','yyyy-
MM');
GBPRetDiv                = table2timetable(GBPRetDiv);
GBPRetDiv(398:end,:)     = [];

```



```

GBPAvgDivsum            = 100 * 12 * mean(GBPRetDiv.Returns,'omitnan');
GBPAvgSqDivsum          = 100 * sqrt(12) * std(GBPRetDiv.Returns,'omitnan');

```

Sharpe Ratio Div

```

GBPSRDiv = GBPAvgDivsum/GBPAvgSqDivsum;

GBPSkewnessDiv = skewness(GBPRetDiv.Returns);
GBPKurtosisDiv = kurtosis(GBPRetDiv.Returns)-3;

GBParmaDiv = estimate(arima(p,0,0), GBPRetDiv.Returns, 'Display', 'off');

```

GBP Cumulative returns

```
GBPCumopts          = detectImportOptions('Calculations-
GBP.xlsx', 'sheet', 'Cumret', 'range', 'J:N');
GBPCum             = readtable('Calculations-GBP.xlsx', GBPCumopts);
GBPCum.TIME        = datetime(GBPCum.TIME, 'InputFormat', 'yyyy-MM');
GBPCum(398:end,:) = [ ];
```

Panel regression GBP

Load data

```
GBPRegEAopts       = detectImportOptions('Calculations-
GBP.xlsx', 'Sheet', 'Reg EA');
GBPRegEA           = readtable('Calculations-GBP.xlsx', GBPRegEAopts);
GBPRegEA.TIME      = datetime(GBPRegEA.TIME, 'InputFormat', 'yyyy-MM');
GBPRegEA.TIME      = dateshift(GBPRegEA.TIME, 'end', 'month');

GBPRegInfoopts     = detectImportOptions('Calculations-
GBP.xlsx', 'Sheet', 'Reg Inf');
GBPRegInf          = readtable('Calculations-GBP.xlsx', GBPRegInfoopts);
GBPRegInf.TIME     = datetime(GBPRegInf.TIME, 'InputFormat', 'yyyy-MM');
GBPRegInf.TIME     = dateshift(GBPRegInf.TIME, 'end', 'month');

GBPRegComboopts    = detectImportOptions('Calculations-
GBP.xlsx', 'Sheet', 'Reg Combo');
GBPRegCombo         = readtable('Calculations-GBP.xlsx',
                                'ReadVariableNames', false);
GBPRegCombo.TIME   = datetime(GBPRegCombo.TIME, 'InputFormat', 'yyyy-
MM');
GBPRegCombo.TIME   = dateshift(GBPRegCombo.TIME, 'end', 'month');

GBPRegCarryopts    = detectImportOptions('Calculations-
GBP.xlsx', 'Sheet', 'Reg Carry');
GBPRegCarry         = readtable('Calculations-GBP.xlsx',
                                'ReadVariableNames', false);
GBPRegCarry.TIME   = datetime(GBPRegCarry.TIME, 'InputFormat', 'yyyy-
MM');
GBPRegCarry.TIME   = dateshift(GBPRegCarry.TIME, 'end', 'month');

GBPRegEAINFOpts    = detectImportOptions('Calculations-
GBP.xlsx', 'Sheet', 'Reg EA+Inf');
GBPRegEAINF         = readtable('Calculations-GBP.xlsx',
                                'ReadVariableNames', false);
GBPRegEAINF.TIME   = datetime(GBPRegEAINF.TIME, 'InputFormat', 'yyyy-
MM');
GBPRegEAINF.TIME   = dateshift(GBPRegEAINF.TIME, 'end', 'month');

GBPRegCoCaopts     = detectImportOptions('Calculations-
GBP.xlsx', 'Sheet', 'Reg Combo~Carry');
GBPRegCoCa          = readtable('Calculations-GBP.xlsx',
                                'ReadVariableNames', false);
GBPRegCoCaopts     = [ ];
```

```
GBPRegCoCa.TIME          = datetime(GBPRegCoCa.TIME, 'InputFormat', 'yyyy-MM') ;
GBPRegCoCa.TIME          = dateshift(GBPRegCoCa.TIME, 'end', 'month');
```

GBP Panel Regression EA sub combo

```
% focus on the time series dimension
GBPRegEA.y_cat = categorical(GBPRegEA.TIME);
GBPEAmonths_cat = categories(GBPRegEA.y_cat);
GBPT_EA = length(GBPEAmonths_cat);

% focus on the cross sectional dimension
GBPRegEA.c_cat = categorical(GBPRegEA.Currency);
GBPEAcountries_cat = categories(GBPRegEA.c_cat);
GBPN_EA = length(GBPEAcountries_cat);

% Estimate regression with country fixed effects and time fixed effects
GBPregM_EA = fitlm(GBPRegEA, 'y ~ x + c_cat + y_cat');

% Entity fixed
GBPregEF_EA = fitlm(GBPRegEA, 'y ~ x + c_cat');

% Time fixed
GBPregTF_EA = fitlm(GBPRegEA, 'y ~ x + y_cat');
```

GBP Panel Regression Inf sub combo

```
% focus on the time series dimension
GBPRegInf.y_cat = categorical(GBPRegInf.TIME);
GBPInfmonths_cat = categories(GBPRegInf.y_cat);
GBPT_Inf = length(GBPInfmonths_cat);

% focus on the cross sectional dimension
GBPRegInf.c_cat = categorical(GBPRegInf.Currency);
GBPIncountries_cat = categories(GBPRegInf.c_cat);
GBPN_Inf = length(GBPIncountries_cat);

% Estimate regression with country fixed effects and time fixed effects
GBPregM_Inf = fitlm(GBPRegInf, 'y ~ x + c_cat + y_cat');

% Entity fixed
GBPregEF_Inf = fitlm(GBPRegInf, 'y ~ x + c_cat');

% Time fixed
GBPregTF_Inf = fitlm(GBPRegInf, 'y ~ x + y_cat');
```

GBP Panel Regression Combo

```
% focus on the time series dimension
```

```

GBPRegCombo.y_cat = categorical(GBPRegCombo.TIME);
GBPCombomonths_cat = categories(GBPRegCombo.y_cat);
GBPT_Combo = length(GBPCombomonths_cat);

% focus on the cross sectional dimension
GBPRegCombo.c_cat = categorical(GBPRegCombo.Currency);
GBPCombocountries_cat = categories(GBPRegCombo.c_cat);
N_Combo = length(GBPCombocountries_cat);

%Estimate regression with country fixed effects and time fixed effects
GBPregM_Combo = fitlm(GBPRegCombo, 'y ~ x + c_cat + y_cat');

% Entity fixed
GBPregEF_Combo = fitlm(GBPRegCombo, 'y ~ x + c_cat');

% Time fixed
GBPregTF_Combo = fitlm(GBPRegCombo, 'y ~ x + y_cat');

```

GBP Panel Regression Carry

```

% focus on the time series dimension
GBPRegCarry.y_cat = categorical(GBPRegCarry.TIME);
GBPCarrymonths_cat = categories(GBPRegCarry.y_cat);
GBPT_Carry = length(GBPCarrymonths_cat);

% focus on the cross sectional dimension
GBPRegCarry.c_cat = categorical(GBPRegCarry.Currency);
GBPCarrycountries_cat = categories(GBPRegCarry.c_cat);
GBPN_Carry = length(GBPCarrycountries_cat);

%Estimate regression with country fixed effects and time fixed effects
GBPregM_Carry = fitlm(GBPRegCarry, 'y ~ x + c_cat + y_cat');

% Entity fixed
GBPregEF_Carry = fitlm(GBPRegCarry, 'y ~ x + c_cat');

% Time fixed
GBPregTF_Carry = fitlm(GBPRegCarry, 'y ~ x + y_cat');

```

GBP Panel regression EA and Inf

```

% focus on the time series dimension
GBPRegEAINF.y_cat = categorical(GBPRegEAINF.TIME);
GBPEAINFmonths_cat = categories(GBPRegEAINF.y_cat);
GBPT_EAINF = length(GBPEAINFmonths_cat);

% focus on the cross sectional dimension
GBPRegEAINF.c_cat = categorical(GBPRegEAINF.Currency);
GBPEAINFcountries_cat = categories(GBPRegEAINF.c_cat);
GBPN_EAINF = length(GBPEAINFcountries_cat);

%Estimate regression with country fixed effects and time fixed effects
GBPregM_EAINF = fitlm(GBPRegEAINF, 'y ~ x1 + x2 + c_cat + y_cat');

```

```
% Entity fixed
GBPRegEF_EAINF = fitlm(GBPRegEAINF, 'y ~ x1 + x2 + c_cat');

% Time fixed
GBPRegTF_EAINF = fitlm(GBPRegEAINF, 'y ~ x1 + x2 + y_cat');
```

GBP Reg Combo~Carry

```
GBPreg_ComboCarry = fitlm(GBPRegCoCa, 'Combo ~ Carry');
```

GBP Sub-sample panel regression

```
% Economic Activity
% 1989-1999
fssGBPRegEA = table();
fssGBPRegEA = GBPRegEA;
fssGBPRegEA = table2timetable(fssGBPRegEA);
fssGBPRegEA = fssGBPRegEA(timerange('1989-01-01', '2000-01-01'), :);
fssGBPRegEA = timetable2table(fssGBPRegEA);
% 2000-2010
sssGBPRegEA = table();
sssGBPRegEA = GBPRegEA;
sssGBPRegEA = table2timetable(sssGBPRegEA);
sssGBPRegEA = sssGBPRegEA(timerange('2000-01-01', '2011-01-01'), :);
sssGBPRegEA = timetable2table(sssGBPRegEA);
% 2011-2022
tssGBPRegEA = table();
tssGBPRegEA = GBPRegEA;
tssGBPRegEA = table2timetable(tssGBPRegEA);
tssGBPRegEA = tssGBPRegEA(timerange('2011-01-01', '2022-02-01'), :);
tssGBPRegEA = timetable2table(tssGBPRegEA);

% Inflation
% 1989-1999
fssGBPRegInf = table();
fssGBPRegInf = GBPRegInf;
fssGBPRegInf = table2timetable(fssGBPRegInf);
fssGBPRegInf = fssGBPRegInf(timerange('1989-01-01', '2000-01-01'), :);
fssGBPRegInf = timetable2table(fssGBPRegInf);
% 2000-2010
sssGBPRegInf = table();
sssGBPRegInf = GBPRegInf;
sssGBPRegInf = table2timetable(sssGBPRegInf);
sssGBPRegInf = sssGBPRegInf(timerange('2000-01-01', '2011-01-01'), :);
sssGBPRegInf = timetable2table(sssGBPRegInf);
% 2011-2022
tssGBPRegInf = table();
tssGBPRegInf = GBPRegInf;
tssGBPRegInf = table2timetable(tssGBPRegInf);
tssGBPRegInf = tssGBPRegInf(timerange('2011-01-01', '2022-02-01'), :);
tssGBPRegInf = timetable2table(tssGBPRegInf);
```

```

% Combo
% 1989-1999
fssGBPRegCombo = table();
fssGBPRegCombo = GBPRegCombo;
fssGBPRegCombo = timetable(fssGBPRegCombo);
fssGBPRegCombo = fssGBPRegCombo(timerange('1989-01-01', '2000-01-01'), :);
fssGBPRegCombo = timetable2table(fssGBPRegCombo);
% 2000-2010
sssGBPRegCombo = table();
sssGBPRegCombo = GBPRegCombo;
sssGBPRegCombo = timetable(sssGBPRegCombo);
sssGBPRegCombo = sssGBPRegCombo(timerange('2000-01-01', '2011-01-01'), :);
sssGBPRegCombo = timetable2table(sssGBPRegCombo);

% 2011-2022
tssGBPRegCombo = table();
tssGBPRegCombo = GBPRegCombo;
tssGBPRegCombo = timetable(tssGBPRegCombo);
tssGBPRegCombo = tssGBPRegCombo(timerange('2011-01-01', '2022-02-01'), :);
tssGBPRegCombo = timetable2table(tssGBPRegCombo);

```

GBP Sub-sample Panel Regression EA sub combo 1989-1999

```

% focus on the time series dimension
fssGBPRegEA.y_cat = categorical(fssGBPRegEA.TIME);
fssGBPEAmonts_cat = categories(fssGBPRegEA.y_cat);
GBPT_fssEA = length(fssGBPEAmonts_cat);

% focus on the cross sectional dimension
fssGBPRegEA.c_cat = categorical(fssGBPRegEA.Currency);
fssGBPEAcountries_cat = categories(fssGBPRegEA.c_cat);
GBPN_fssEA = length(fssGBPEAcountries_cat);

% Estimate regression with country fixed effects and time fixed effects
GBPregM_fssEA = fitlm(fssGBPRegEA, 'y ~ x + c_cat + y_cat');

% Entity fixed
GBPregEF_fssEA = fitlm(fssGBPRegEA, 'y ~ x + c_cat');

% Time fixed
GBPregTF_fssEA = fitlm(fssGBPRegEA, 'y ~ x + y_cat');

```

GBP Sub-sample Panel Regression EA sub combo 2000-2011

```

% focus on the time series dimension
sssGBPRegEA.y_cat = categorical(sssGBPRegEA.TIME);
sssGBPEAmonts_cat = categories(sssGBPRegEA.y_cat);
GBPT_sssEA = length(sssGBPEAmonts_cat);

```

```

% focus on the cross sectional dimension
sssGBPRegEA.c_cat = categorical(sssGBPRegEA.Currency);
sssGBPEAcountries_cat = categories(sssGBPRegEA.c_cat);
GBPN_sssEA = length(sssGBPEAcountries_cat);

% Estimate regression with country fixed effects and time fixed effects
GBPregM_sssEA = fitlm(sssGBPRegEA, 'y ~ x + c_cat + y_cat');

% Entity fixed
GBPregEF_sssEA = fitlm(sssGBPRegEA, 'y ~ x + c_cat');

% Time fixed
GBPregTF_sssEA = fitlm(sssGBPRegEA, 'y ~ x + y_cat');

```

GBP Sub-sample Panel Regression EA sub combo 2011-2022

```

% focus on the time series dimension
tssGBPRegEA.y_cat = categorical(tssGBPRegEA.TIME);
tssGBPEAmonths_cat = categories(tssGBPRegEA.y_cat);
GBPT_tssEA = length(tssGBPEAmonths_cat);

% focus on the cross sectional dimension
tssGBPRegEA.c_cat = categorical(tssGBPRegEA.Currency);
tssGBPEAcountries_cat = categories(tssGBPRegEA.c_cat);
GBPN_tssEA = length(tssGBPEAcountries_cat);

% Estimate regression with country fixed effects and time fixed effects
GBPregM_tssEA = fitlm(tssGBPRegEA, 'y ~ x + c_cat + y_cat');

% Entity fixed
GBPregEF_tssEA = fitlm(tssGBPRegEA, 'y ~ x + c_cat');

% Time fixed
GBPregTF_tssEA = fitlm(tssGBPRegEA, 'y ~ x + y_cat');

```

GBP Sub-sample Panel Regression Inf sub combo 1989-1999

```

% focus on the time series dimension
fssGBPRegInf.y_cat = categorical(fssGBPRegInf.TIME);
fssGBPIfmmonths_cat = categories(fssGBPRegInf.y_cat);
GBPT_fssInf = length(fssGBPIfmmonths_cat);

% focus on the cross sectional dimension
fssGBPRegInf.c_cat = categorical(fssGBPRegInf.Currency);
fssGBPIfcountries_cat = categories(fssGBPRegInf.c_cat);
GBPN_fssInf = length(fssGBPIfcountries_cat);

% Estimate regression with country fixed effects and time fixed effects
GBPregM_fssInf = fitlm(fssGBPRegInf, 'y ~ x + c_cat + y_cat');

```

```
% Entity fixed
GBPregEF_fssInf = fitlm(fssGBPRegInf, 'y ~ x + c_cat');

% Time fixed
GBPregTF_fssInf = fitlm(fssGBPRegInf, 'y ~ x + y_cat');
```

GBP Sub-sample Panel Regression Inf sub combo 2000-2011

```
% focus on the time series dimension
sssGBPRegInf.y_cat = categorical(sssGBPRegInf.TIME);
sssGBPIfmmonths_cat = categories(sssGBPRegInf.y_cat);
GBPT_sssInf = length(sssGBPIfmmonths_cat);

% focus on the cross sectional dimension
sssGBPRegInf.c_cat = categorical(sssGBPRegInf.Currency);
sssGBPIfcountries_cat = categories(sssGBPRegInf.c_cat);
GBPN_sssInf = length(sssGBPIfcountries_cat);

% Estimate regression with country fixed effects and time fixed effects
GBPregM_sssInf = fitlm(sssGBPRegInf, 'y ~ x + c_cat + y_cat');

% Entity fixed
GBPregEF_sssInf = fitlm(sssGBPRegInf, 'y ~ x + c_cat');

% Time fixed
GBPregTF_sssInf = fitlm(sssGBPRegInf, 'y ~ x + y_cat');
```

GBP Sub-sample Panel Regression Inf sub combo 2011-2022

```
% focus on the time series dimension
tssGBPRegInf.y_cat = categorical(tssGBPRegInf.TIME);
tssGBPIfmmonths_cat = categories(tssGBPRegInf.y_cat);
GBPT_tssInf = length(tssGBPIfmmonths_cat);

% focus on the cross sectional dimension
tssGBPRegInf.c_cat = categorical(tssGBPRegInf.Currency);
tssGBPIfcountries_cat = categories(tssGBPRegInf.c_cat);
GBPN_tssInf = length(tssGBPIfcountries_cat);

% Estimate regression with country fixed effects and time fixed effects
GBPregM_tssInf = fitlm(tssGBPRegInf, 'y ~ x + c_cat + y_cat');

% Entity fixed
GBPregEF_tssInf = fitlm(tssGBPRegInf, 'y ~ x + c_cat');

% Time fixed
GBPregTF_tssInf = fitlm(tssGBPRegInf, 'y ~ x + y_cat');
```

GBP Sub-sample Panel Regression Combo sub combo 1989-1999

```
% focus on the time series dimension
fssGBPRegCombo.y_cat = categorical(fssGBPRegCombo.TIME);
fssGBPCombomonths_cat = categories(fssGBPRegCombo.y_cat);
GBPT_fssCombo = length(fssGBPCombomonths_cat);

% focus on the cross sectional dimension
fssGBPRegCombo.c_cat = categorical(fssGBPRegCombo.Currency);
fssGBPCombocountries_cat = categories(fssGBPRegCombo.c_cat);
GBPN_fssCombo = length(fssGBPCombocountries_cat);

% Estimate regression with country fixed effects and time fixed effects
GBPregM_fssCombo = fitlm(fssGBPRegCombo, 'y ~ x + c_cat + y_cat');

% Entity fixed
GBPregEF_fssCombo = fitlm(fssGBPRegCombo, 'y ~ x + c_cat');

% Time fixed
GBPregTF_fssCombo = fitlm(fssGBPRegCombo, 'y ~ x + y_cat');
```

GBP Sub-sample Panel Regression Combo sub combo 2000-2011

```
% focus on the time series dimension
sssGBPRegCombo.y_cat = categorical(sssGBPRegCombo.TIME);
sssGBPCombomonths_cat = categories(sssGBPRegCombo.y_cat);
GBPT_sssCombo = length(sssGBPCombomonths_cat);

% focus on the cross sectional dimension
sssGBPRegCombo.c_cat = categorical(sssGBPRegCombo.Currency);
sssGBPCombocountries_cat = categories(sssGBPRegCombo.c_cat);
GBPN_sssCombo = length(sssGBPCombocountries_cat);

% Estimate regression with country fixed effects and time fixed effects
GBPregM_sssCombo = fitlm(sssGBPRegCombo, 'y ~ x + c_cat + y_cat');

% Entity fixed
GBPregEF_sssCombo = fitlm(sssGBPRegCombo, 'y ~ x + c_cat');

% Time fixed
GBPregTF_sssCombo = fitlm(sssGBPRegCombo, 'y ~ x + y_cat');
```

GBP Sub-sample Panel Regression Combo sub combo 2011-2022

```
% focus on the time series dimension
```

```

tssGBPRegCombo.y_cat = categorical(tssGBPRegCombo.TIME);
tssGBPCombomonths_cat = categories(tssGBPRegCombo.y_cat);
GBPT_tssCombo = length(tssGBPCombomonths_cat);

% focus on the cross sectional dimension
tssGBPRegCombo.c_cat = categorical(tssGBPRegCombo.Currency);
tssGBPCombocountries_cat = categories(tssGBPRegCombo.c_cat);
GBPN_tssCombo = length(tssGBPCombocountries_cat);

% Estimate regression with country fixed effects and time fixed effects
GBPregM_tssCombo = fitlm(tssGBPRegCombo, 'y ~ x + c_cat + y_cat');

% Entity fixed
GBPregEF_tssCombo = fitlm(tssGBPRegCombo, 'y ~ x + c_cat');

% Time fixed
GBPregTF_tssCombo = fitlm(tssGBPRegCombo, 'y ~ x + y_cat');

```

GBP Sub-sample AR(1)

```

% Economic Activity

% 1989-1999
fGBPEASubsum      = table();
fGBPEASubsum.Returns = GBPEASubsum;
fGBPEASubsum.TIME   = GBPRetEASub.TIME;
fGBPEASubsum        = table2timetable(fGBPEASubsum);
fGBPEASubsum        =
fGBPEASubsum(timerange('1989-01-01', '2000-01-01'), :);
fGBParmaEA         = estimate(arima(p,0,0),
fGBPEASubsum.Returns, 'Display', 'off');

% 2000-2010
sGBPEASubsum      = table();
sGBPEASubsum.Returns = GBPEASubsum;
sGBPEASubsum.TIME   = GBPRetEASub.TIME;
sGBPEASubsum        = table2timetable(sGBPEASubsum);
sGBPEASubsum        =
sGBPEASubsum(timerange('2000-01-01', '2011-01-01'), :);
sGBParmaEA         = estimate(arima(p,0,0),
sGBPEASubsum.Returns, 'Display', 'off');

% 2011-2022
tGBPEASubsum      = table();
tGBPEASubsum.Returns = GBPEASubsum;
tGBPEASubsum.TIME   = GBPRetEASub.TIME;
tGBPEASubsum        = table2timetable(tGBPEASubsum);
tGBPEASubsum        =
tGBPEASubsum(timerange('2011-01-01', '2022-02-01'), :);
tGBParmaEA         = estimate(arima(p,0,0),
tGBPEASubsum.Returns, 'Display', 'off');

% Inflation
% 1989-1999
fGBPInfSubsum     = table();

```

```

fGBPIInfSubsum.Returns      = GBPInfSubsum;
fGBPIInfSubsum.TIME         = GBPRetInfSub.TIME;
fGBPIInfSubsum               = table2timetable(fGBPIInfSubsum);
fGBPIInfSubsum               =
fGBPIInfSubsum(timerange('1989-01-01', '2000-01-01'), :);
fGBParmaInf                 = estimate(arima(p,0,0),
fGBPIInfSubsum.Returns, 'Display', 'off' );
% 2000-2010
sGBPIInfSubsum               = table();
sGBPIInfSubsum.Returns      = GBPInfSubsum;
sGBPIInfSubsum.TIME         = GBPRetInfSub.TIME;
sGBPIInfSubsum               = table2timetable(sGBPIInfSubsum);
sGBPIInfSubsum               =
sGBPIInfSubsum(timerange('2000-01-01', '2011-01-01'), :);
sGBParmaInf                 = estimate(arima(p,0,0),
sGBPIInfSubsum.Returns, 'Display', 'off' );
% 2011-2022
tGBPIInfSubsum               = table();
tGBPIInfSubsum.Returns      = GBPInfSubsum;
tGBPIInfSubsum.TIME         = GBPRetInfSub.TIME;
tGBPIInfSubsum               = table2timetable(tGBPIInfSubsum);
tGBPIInfSubsum               =
tGBPIInfSubsum(timerange('2011-01-01', '2022-02-01'), :);
tGBParmaInf                 = estimate(arima(p,0,0),
tGBPIInfSubsum.Returns, 'Display', 'off' );

% Combo
% 1989-1999
fGBPCombosum                = table();
fGBPCombosum.Returns        = GBPCombosum;
fGBPCombosum.TIME           = GBPRetCombo.TIME;
fGBPCombosum               = table2timetable(fGBPCombosum);
fGBPCombosum               =
fGBPCombosum(timerange('1989-01-01', '2000-01-01'), :);
fGBParmaCombo                = estimate(arima(p,0,0),
fGBPCombosum.Returns, 'Display', 'off' );
% 2000-2010
sGBPCombosum                = table();
sGBPCombosum.Returns        = GBPCombosum;
sGBPCombosum.TIME           = GBPRetCombo.TIME;
sGBPCombosum               = table2timetable(sGBPCombosum);
sGBPCombosum               =
sGBPCombosum(timerange('2000-01-01', '2011-01-01'), :);
sGBParmaCombo                = estimate(arima(p,0,0),
sGBPCombosum.Returns, 'Display', 'off' );
% 2011-2022
tGBPCombosum                = table();
tGBPCombosum.Returns        = GBPCombosum;
tGBPCombosum.TIME           = GBPRetCombo.TIME;
tGBPCombosum               = table2timetable(tGBPCombosum);
tGBPCombosum               =
tGBPCombosum(timerange('2011-01-01', '2022-02-01'), :);
tGBParmaCombo                = estimate(arima(p,0,0),
tGBPCombosum.Returns, 'Display', 'off' );

```

4. FIGURES

```
x = 6:6:60;
% Bar graphs
%USD
figure('WindowStyle', 'docked');
bar(x,USDSREA{1,1:end}, 'r');
grid on;
title('Economic Activity');
xlabel('Lookback period (months)');
ylabel('Sharpe ratio');
legend('USD-domestic');
ylim([-0.15 0.5])

figure('WindowStyle', 'docked');
bar(x,USDSRInf{1,1:end}, 'r');
grid on;
title('Inflation');
xlabel('Lookback period (months)');
ylabel('Sharpe ratio');
legend('USD-domestic');
ylim([-0.15 0.5])

%GBP
figure('WindowStyle', 'docked');
bar(x,GBPSREA{1,1:end}, 'b');
grid on;
title('Economic Activity');
xlabel('Lookback period (months)');
ylabel('Sharpe ratio');
legend('GBP-domestic');
ylim([-0.15 0.5])

figure('WindowStyle', 'docked');
bar(x,GBPSRInf{1,1:end}, 'b');
grid on;
title('Inflation');
xlabel('Lookback period (months)');
ylabel('Sharpe ratio');
legend('GBP-domestic');
ylim([-0.15 0.5])

% Cumulative returns
% GBP
figure('WindowStyle', 'docked');
plot(GBPCum.TIME, GBPCum.Easub);
hold on;
plot(GBPCum.TIME, GBPCum.Infsub);
hold on;
plot(GBPCum.TIME, GBPCum.Combo);
legend('Economic Activity', 'Inflation', 'Combo');
xlabel('Year');
```

```
ylabel('Cumulative return');

figure('WindowStyle', 'docked');
plot(GBPCum.TIME, GBPCum.Easub);
hold on;
plot(GBPCum.TIME, GBPCum.Infsub);
hold on;
plot(GBPCum.TIME, GBPCum.Combo);
hold on;
plot(GBPCum.TIME, GBPCum.Carry);
legend('Economic Activity', 'Inflation', 'Combo', 'Carry');
xlabel('Year');
ylabel('Cumulative return');

% Volatility GBP
figure('WindowStyle', 'docked');
plot(GBPCum.TIME, GBPSqEASubsum);
hold on;
plot(GBPCum.TIME, GBPSqInfSubsum);
hold on;
plot(GBPCum.TIME, GBPSqCombosum);
hold on;
plot(GBPCum.TIME, GBPSqCarrysum);
legend('Economic Activity', 'Inflation', 'Combo', 'Carry');
xlabel('Year');
```

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