

## **DATA ACCESS and CODE**

Hyytinen and Putkuri (MS13-509)

### **"Household optimism and overborrowing"**

We use data from two sources. Each data set is as such proprietary. Below we detail the access policy regarding each of them.

#### **1. Statistics Finland's Income Distribution Statistics (In Finnish: "Tulonjakotilasto")**

Income Distribution Statistics can be accessed with the permission of Statistics Finland. For access to these data, the interested researcher should contact the Research Services Unit of Statistics Finland, FI-00022 Statistics Finland (e-mail: [tutkijapalvelut@stat.fi](mailto:tutkijapalvelut@stat.fi)). We have used a version of Income Distribution Statistics that Bank of Finland has acquired from the Statistics Finland.

#### **2. Macroeconomic and regional data**

Our macroeconomic and regional data has been gathered from various sources, including Statistics Finland, Federation of Finnish Financial Services and Bank of Finland's databases (including data from Reuters, NASDAQ OMX and Statistics Finland). While we cannot make these data publicly available, an Excel file that includes all the macroeconomic and regional data that we have used in the analysis can be obtained for replication purposes from one of the authors upon request (email: [hanna.putkuri@bof.fi](mailto:hanna.putkuri@bof.fi)).

#### **3. Stata code**

Our estimation data are the result of merging, first, a number of separate Income Distribution Statistics data files (obtained originally from the Statistics Finland), and then merging the resulting data with the Excel file containing the macroeconomic and regional data. The Stata codes that we have used are the following:

1. *MS13-509\_Code1.do* creates two-year “mini-panels” from the original Statistics Finland data files. The resulting data sets are called rawpanel1994\_1995.dta, rawpanel1995\_1996.dta, ..., rawpanel2012\_2013.dta
2. *MS13-509\_Code2.do* reads in the mini-panels and combines them into a larger panel data set (1994-2013). This code also drops variables that will not be used in the analysis. The resulting data set is called “t94\_13.dta”.
3. *MS13-509\_Code3.do* reads in t94\_13.dta and then generates a set of new (transformed) variables and renames some variables, drops non-reference persons from the data and generates survey commands (weights). The resulting data set is called “basicdata94\_13.dta”.
4. *MS13-509\_Code4.do* reads in basicdata94\_13.dta and appends the macro and regional level data to it. The resulting data set is called “addeddata94\_13.dta”.
5. *MS13-509\_Code5.do* reads in addeddata94\_13.dta and implements the analyses and estimations reported in the paper.

## **MS13-509\_Code1.do**

```
clear

/* Stata/MP 13.1 */

/* --- Start-up options --- */

#delimit;
program drop _all;
macro drop _all;
matrix drop _all;
set memory 500m;
set more off;
set type double;
set logtype text;
capture log close;

/* --- Write here the path of the folder in which this do-file is located --- */

cd "\\\DATA4\data\RP\Tutkimus\ TU\Tutkimusdata\Tulonjakoaineisto\Putkuri\Projekti_AHY_HPU";

/* --- Write here the path of the folder in which the data file is located --- */

local datapolku "\\\DATA4\data\RP\Tutkimus\ TU\Tutkimusdata\Tulonjakoaineisto\Putkuri\Data";

/* --- Give the name of your data file(s) here --- */

local tuja_1994_data "palv94.csv";
local tuja_1995_data "palv95.csv";
local tuja_1996_data "palv96.csv";
local tuja_1997_data "palv97.csv";
local tuja_1998_data "palv98.csv";
local tuja_1999_data "palv99.csv";
local tuja_2000_data "palv00.csv";
local tuja_2001_data "palv01.csv";
local tuja_2002_data "palv02.csv";
local tuja_2003_data "palv03.csv";
local tuja_2004_data "palv04.csv";
local tuja_2005_data "palv05.csv";
local tuja_2006_data "palv06.csv";
local tuja_2007_data "palv07.csv";
local tuja_2008_data "palv08.csv";
local tuja_2009_data "palv09.csv";
local tuja_2010_data "palv10.csv";
local tuja_2011_data "palv11.csv";
local tuja_2012_data "palv12.csv";
local tuja_2013_data "palv13.csv";

/* --- Name your output file here --- */

log using myoutput_code1.log, replace;
```

```

/* Note: The household identification variable (konu) for different households is the same at different decades (eg
in year 1994 and 2004) */
/* Therefore we need to create a new variable (konu_u) to identify households in the panel data set */

/* --- Create konu_u for 1994 --- */

insheet using `datapolku'`tuja_1994_data', clear;

generate /*str*/ temp1 = 1993;
generate /*str*/ temp3 = 1994;
 tostring konu, generate(temp2);

generate str konu_u = string(temp1) + string(konu) if konu < 40001;
replace konu_u = string(temp3) + string(konu) if konu >= 40001;

destring konu_u, replace;
drop temp1 temp2 temp3;

gen year = 1994;
save `datapolku'/t1994, replace;

use `datapolku'/t1994, clear;
order year konu konu_u;

/* --- Create konu_u for 1995 --- */

insheet using `datapolku'`tuja_1995_data', clear;

generate /*str*/ temp1 = 1994;
generate /*str*/ temp3 = 1995;
 tostring konu, generate(temp2);

generate str konu_u = string(temp1) + string(konu) if konu < 50001;
replace konu_u = string(temp3) + string(konu) if konu >= 50001;

destring konu_u, replace;
drop temp1 temp2 temp3;

gen year = 1995;
save `datapolku'/t1995, replace;

use `datapolku'/t1995, clear;
order year konu konu_u;

/* --- Create a mini panel for 1994 and 1995 using konu_u --- */

use `datapolku'/t1994, clear;
append using `datapolku'/t1995;
sort konu_u year;

order konu_u konu year;

```

```

/* --- Save the mini panel --- */

save `datapolku'/rawpanel1994_1995, replace;

/* --- Create konu_u for 1996 --- */

insheet using `datapolku'/`tuja_1996_data', clear;

generate /*str*/ temp1 = 1995;
generate /*str*/ temp3 = 1996;
 tostring konu, generate(temp2);

generate str konu_u = string(temp1) + string(konu) if konu <60001;
replace konu_u = string(temp3) + string(konu) if konu >= 60001;

destring konu_u, replace;
drop temp1 temp2 temp3;

gen year = 1996;
save `datapolku'/t1996, replace;

use `datapolku'/t1996, clear;
order year konu konu_u;

/* --- Create a mini panel for 1995 and 1996 using konu_u --- */

use `datapolku'/t1995, clear;
append using `datapolku'/t1996;
sort konu_u year;

order konu_u konu year;

/* --- Save the mini panel --- */

save `datapolku'/rawpanel1995_1996, replace;

/* --- Create konu_u for 1997 --- */

insheet using `datapolku'/`tuja_1997_data', clear;

generate /*str*/ temp1 = 1996;
generate /*str*/ temp3 = 1997;
 tostring konu, generate(temp2);

generate str konu_u = string(temp1) + string(konu) if konu < 70001;
replace konu_u = string(temp3) + string(konu) if konu >= 70001;

destring konu_u, replace;
drop temp1 temp2 temp3;

gen year = 1997;
save `datapolku'/t1997, replace;

```

```

use `datapolku'/t1997, clear;
order year konu konu_u;

/* --- Create a mini panel for 1996 and 1997 using konu_u --- */

use `datapolku'/t1996, clear;
append using `datapolku'/t1997;
sort konu_u year;

order konu_u konu year;

/* --- Save the mini panel --- */

save `datapolku'/rawpanel1996_1997, replace;

/* --- Create konu_u for 1998 --- */

insheet using `datapolku'/'tuja_1998_data', clear;

generate /*str*/ temp1 = 1997;
generate /*str*/ temp3 = 1998;
 tostring konu, generate(temp2);

generate str konu_u = string(temp1) + string(konu) if konu < 80001;
replace konu_u = string(temp3) + string(konu) if konu >= 80001 ;

destring konu_u, replace;
drop temp1 temp2 temp3;

gen year = 1998;
save `datapolku'/t1998, replace;

use `datapolku'/t1998, clear;
order year konu konu_u;

/* --- Create a mini panel for 1997 and 1998 using konu_u --- */

use `datapolku'/t1997, clear;
append using `datapolku'/t1998;
sort konu_u year;

order konu_u konu year;

/* --- Save the mini panel --- */

save `datapolku'/rawpanel1997_1998, replace;

/* --- Create konu_u for 1999 --- */

insheet using `datapolku'/'tuja_1999_data', clear;

generate /*str*/ temp1 = 1998;
generate /*str*/ temp3 = 1999;

```

```

tostring konu, generate(temp2);

generate str konu_u = string(temp1) + string(konu) if konu < 90001;
replace konu_u = string(temp3) + string(konu) if konu >= 90001;

destring konu_u, replace;
drop temp1 temp2 temp3;

gen year = 1999;
save `datapolku'/t1999, replace;

use `datapolku'/t1999, clear;

/* --- Create a mini panel for 1998 and 1999 using konu_u --- */

use `datapolku'/t1998, clear;
append using `datapolku'/t1999;
sort konu_u year;

order konu_u konu year;

/* --- Save the mini panel --- */

save `datapolku'/rawpanel1998_1999, replace;

/* --- Create konu_u for 2000, note a new decade --- */

insheet using `datapolku'/'tuja_2000_data', clear;

generate /*str*/ temp1 = 1999;
generate /*str*/ temp3 = 2000;
tostring konu, generate(temp2);

generate str konu_u = string(temp1) + string(konu) if konu >= 90001;
replace konu_u = string(temp3) + string(konu) if konu < 90001;

destring konu_u, replace;
drop temp1 temp2 temp3;

gen year = 2000;
save `datapolku'/t2000, replace;

use `datapolku'/t2000, clear;
order year konu konu_u;

/* --- Create a mini panel for 1999 and 2000 using konu_u --- */

use `datapolku'/t1999, clear;
append using `datapolku'/t2000;
sort konu_u year;

order konu_u konu year;

```

```

/* --- Save the mini panel --- */

save `datapolku'/rawpanel1999_2000, replace;

/* --- Create konu_u for 2001 --- */

insheet using `datapolku'/`tuja_2001_data', clear;

generate /*str*/ temp1 = 2000;
generate /*str*/ temp3 = 2001;
 tostring konu, generate(temp2);

generate str konu_u = string(temp1) + string(konu) if konu < 10001;
replace konu_u = string(temp3) + string(konu) if konu >= 10001;

destring konu_u, replace;
drop temp1 temp2 temp3;

gen year = 2001;
save `datapolku'/t2001, replace;

use `datapolku'/t2001, clear;
order year konu konu_u;

/* --- Create a mini panel for 2000 and 2001 using konu_u --- */

use `datapolku'/t2000, clear;
append using `datapolku'/t2001;
sort konu_u year;

order konu_u konu year;

/* --- Save the mini panel --- */

save `datapolku'/rawpanel2000_2001, replace;

/* --- Create konu_u for 2002 --- */

insheet using `datapolku'/`tuja_2002_data', clear;

generate /*str*/ temp1 = 2001;
generate /*str*/ temp3 = 2002;
 tostring konu, generate(temp2);

generate str konu_u = string(temp1) + string(konu) if konu < 20001;
replace konu_u = string(temp3) + string(konu) if konu >= 20001;

destring konu_u, replace;
drop temp1 temp2 temp3;

gen year = 2002;
save `datapolku'/t2002, replace;

```

```

use `datapolku'/t2002, clear;
order year konu konu_u;

/* --- Create a mini panel for 2001 and 2002 using konu_u --- */

use `datapolku'/t2001, clear;
append using `datapolku'/t2002;
sort konu_u year;

order konu_u konu year;

/* --- Save the mini panel --- */

save `datapolku'/rawpanel2001_2002, replace;

/* --- Create konu_u for 2003 --- */

insheet using `datapolku'/'tuja_2003_data', clear;

generate /*str*/ temp1 = 2002;
generate /*str*/ temp3 = 2003;
 tostring konu, generate(temp2);

generate str konu_u = string(temp1) + string(konu) if konu < 30001;
replace konu_u = string(temp3) + string(konu) if konu >= 30001;

destring konu_u, replace;
drop temp1 temp2 temp3;

gen year = 2003;
save `datapolku'/t2003, replace;

use `datapolku'/t2003, clear;
order year konu konu_u;

/* --- Create a mini panel for 2002 and 2003 using konu_u --- */

use `datapolku'/t2002, clear;
append using `datapolku'/t2003;
sort konu_u year;

order konu_u konu year;

/* --- Save the mini panel --- */

save `datapolku'/rawpanel2002_2003, replace;

/* --- Create konu_u for 2004 --- */

insheet using `datapolku'/'tuja_2004_data', clear;

generate /*str*/ temp1 = 2003;
generate /*str*/ temp3 = 2004;

```

```

tostring konu, generate(temp2);

generate str konu_u = string(temp1) + string(konu) if konu < 40001;
replace konu_u = string(temp3) + string(konu) if konu >= 40001;

destring konu_u, replace;
drop temp1 temp2 temp3;

gen year = 2004;
save `datapolku'/t2004, replace;

use `datapolku'/t2004, clear;
order year konu konu_u;

/* --- Create a mini panel for 2003 and 2004 using konu_u --- */

use `datapolku'/t2003, clear;
append using `datapolku'/t2004;
sort konu_u year;

order konu_u konu year;

/* --- Save the mini panel --- */

save `datapolku'/rawpanel2003_2004, replace;

/* --- Create konu_u for 2005 --- */

insheet using `datapolku'/'tuja_2005_data', clear;

generate /*str*/ temp1 = 2004;
generate /*str*/ temp3 = 2005;
tostring konu, generate(temp2);

generate str konu_u = string(temp1) + string(konu) if konu < 50001;
replace konu_u = string(temp3) + string(konu) if konu >= 50001;

destring konu_u, replace;
drop temp1 temp2 temp3;

gen year = 2005;
save `datapolku'/t2005, replace;

use `datapolku'/t2005, clear;
order year konu konu_u;

/* --- Create a mini panel for 2004 and 2005 using konu_u --- */

use `datapolku'/t2004, clear;
append using `datapolku'/t2005;
sort konu_u year;

order konu_u konu year;

```

```

/* --- Save the mini panel --- */

save `datapolku'/rawpanel2004_2005, replace;

/* --- Create konu_u for 2006 --- */

insheet using `datapolku'/'tuja_2006_data', clear;

generate /*str*/ temp1 = 2005;
generate /*str*/ temp3 = 2006;
 tostring konu, generate(temp2);

generate str konu_u = string(temp1) + string(konu) if konu < 60001;
replace konu_u = string(temp3) + string(konu) if konu >= 60001;

destring konu_u, replace;
drop temp1 temp2 temp3;

gen year = 2006;
save `datapolku'/t2006, replace;

use `datapolku'/t2006, clear;
order year konu konu_u;

/* --- Create a mini panel for 2005 and 2006 using konu_u --- */

use `datapolku'/t2005, clear;
append using `datapolku'/t2006;
sort konu_u year;

order konu_u konu year;

/* --- Save the mini panel --- */

save `datapolku'/rawpanel2005_2006, replace;

/* --- Create konu_u for 2007 --- */

insheet using `datapolku'/'tuja_2007_data', clear;

generate /*str*/ temp1 = 2006;
generate /*str*/ temp3 = 2007;
 tostring konu, generate(temp2);

generate str konu_u = string(temp1) + string(konu) if konu < 70001;
replace konu_u = string(temp3) + string(konu) if konu >= 70001;

destring konu_u, replace;
drop temp1 temp2 temp3;

gen year = 2007;
save `datapolku'/t2007, replace;

```

```

use `datapolku'/t2007, clear;
order year konu konu_u;

/* --- Create a mini panel for 2006 and 2007 using konu_u --- */

use `datapolku'/t2006, clear;
append using `datapolku'/t2007;
sort konu_u year;

order konu_u konu year;

/* --- Save the mini panel --- */

save `datapolku'/rawpanel2006_2007, replace;

/* --- Create konu_u for 2008 --- */

insheet using `datapolku'/tuja_2008_data', clear;

generate /*str*/ temp1 = 2007;
generate /*str*/ temp3 = 2008;
 tostring konu, generate(temp2);

generate str konu_u = string(temp1) + string(konu) if konu < 80001;
replace konu_u = string(temp3) + string(konu) if konu >= 80001;

destring konu_u, replace;
drop temp1 temp2 temp3;

gen year = 2008;
save `datapolku'/t2008, replace;

use `datapolku'/t2008, clear;
order year konu konu_u;

/* --- Create a mini panel for 2007 and 2008 using konu_u --- */

use `datapolku'/t2007, clear;
append using `datapolku'/t2008;
sort konu_u year;

order konu_u konu year;

/* --- Save the mini panel --- */

save `datapolku'/rawpanel2007_2008, replace;

/* --- Create konu_u for 2009 --- */

insheet using `datapolku'/tuja_2009_data', clear;

generate /*str*/ temp1 = 2006;

```

```

generate /*str*/ temp3 = 2007;
generate /*str*/ temp4 = 2008;
generate /*str*/ temp5 = 2009;
 tostring konu, generate(temp2);

generate str konu_u = string(temp5) + string(konu) if konu >= 90001;
replace konu_u = string(temp4) + string(konu) if konu < 90001;
replace konu_u = string(temp3) + string(konu) if konu < 80001;
replace konu_u = string(temp1) + string(konu) if konu < 70001;

destring konu_u, replace;
drop temp1 temp2 temp3 temp4 temp5;

gen year = 2009;
save `datapolku'/t2009, replace;

use `datapolku'/t2009, clear;
order year konu konu_u;

/* --- Create a mini panel for 2008 and 2009 using konu_u --- */

use `datapolku'/t2008, clear;
append using `datapolku'/t2009;
sort konu_u year;

order konu_u konu year;

/* --- Save the mini panel --- */

save `datapolku'/rawpanel2008_2009, replace;

/* --- Create konu_u for 2010, note a new decade and a change in the structure of the data --- */

insheet using `datapolku'/'tuja_2010_data', clear;

generate /*str*/ temp1 = 2007;
generate /*str*/ temp3 = 2008;
generate /*str*/ temp4 = 2009;
generate /*str*/ temp5 = 2010;
 tostring konu, generate(temp2);

generate str konu_u = string(temp5) + string(konu) if konu >= 00001;
replace konu_u = string(temp1) + string(konu) if konu >= 70001;
replace konu_u = string(temp3) + string(konu) if konu >= 80001;
replace konu_u = string(temp4) + string(konu) if konu >= 90001;

destring konu_u, replace;
drop temp1 temp2 temp3 temp4 temp5;

gen year = 2010;
save `datapolku'/t2010, replace;

use `datapolku'/t2010, clear;

```

```

order year konu konu_u;

/* --- Create a mini panel for 2009 and 2010 using konu_u --- */

use `datapolku'/t2009, clear;
append using `datapolku'/t2010;
sort konu_u year;

order konu_u konu year;

/* --- Save the mini panel --- */

save `datapolku'/rawpanel2009_2010, replace;

/* --- Create konu_u for 2011 --- */

insheet using `datapolku'/'tuja_2011_data', clear;

generate /*str*/ temp1 = 2008;
generate /*str*/ temp3 = 2009;
generate /*str*/ temp4 = 2010;
generate /*str*/ temp5 = 2011;
 tostring konu, generate(temp2);

generate str konu_u = string(temp4) + string(konu) if konu >= 00001;
replace konu_u = string(temp5) + string(konu) if konu >= 10001;
replace konu_u = string(temp1) + string(konu) if konu >= 80001;
replace konu_u = string(temp3) + string(konu) if konu >= 90001;

destring konu_u, replace;
drop temp1 temp2 temp3 temp4 temp5;

gen year = 2011;
save `datapolku'/t2011, replace;

use `datapolku'/t2011, clear;
order year konu konu_u;

/* --- Create a mini panel for 2010 and 2011 using konu_u --- */

use `datapolku'/t2010, clear;
append using `datapolku'/t2011;
sort konu_u year;

order konu_u konu year;

/* --- Save the mini panel --- */

save `datapolku'/rawpanel2010_2011, replace;

/* --- Create konu_u for 2012 --- */

insheet using `datapolku'/'tuja_2012_data', clear;

```

```

generate /*str*/ temp1 = 2009;
generate /*str*/ temp3 = 2010;
generate /*str*/ temp4 = 2011;
generate /*str*/ temp5 = 2012;
 tostring konu, generate(temp2);

generate str konu_u = string(temp3) + string(konu) if konu >= 00001;
replace konu_u = string(temp4) + string(konu) if konu >= 10001;
replace konu_u = string(temp5) + string(konu) if konu >= 20001;
replace konu_u = string(temp1) + string(konu) if konu >= 90001;

destring konu_u, replace;
drop temp1 temp2 temp3 temp4 temp5;

gen year = 2012;
save `datapolku'/t2012, replace;

use `datapolku'/t2012, clear;
order year konu konu_u;

/* --- Create a mini panel for 2011 and 2012 using konu_u --- */

use `datapolku'/t2011, clear;
append using `datapolku'/t2012;
sort konu_u year;

order konu_u konu year;

/* --- Save the mini panel --- */

save `datapolku'/rawpanel2011_2012, replace;

/* --- Create konu_u for 2013 --- */

insheet using `datapolku'/'tuja_2013_data', clear;

generate /*str*/ temp1 = 2010;
generate /*str*/ temp3 = 2011;
generate /*str*/ temp4 = 2012;
generate /*str*/ temp5 = 2013;
 tostring konu, generate(temp2);

generate str konu_u = string(temp1) + string(konu) if konu >= 00001;
replace konu_u = string(temp3) + string(konu) if konu >= 10001;
replace konu_u = string(temp4) + string(konu) if konu >= 20001;
replace konu_u = string(temp5) + string(konu) if konu >= 30001;

destring konu_u, replace;
drop temp1 temp2 temp3 temp4 temp5;

gen year = 2013;
save `datapolku'/t2013, replace;

```

```
use `datapolku'/t2013, clear;
order year konu konu_u;

/* --- Create a mini panel for 2012 and 2013 using konu_u --- */

use `datapolku'/t2012, clear;
append using `datapolku'/t2013;
sort konu_u year;

order konu_u konu year;

/* --- Save the mini panel --- */

save `datapolku'/rawpanel2012_2013, replace;

/* --- End of file --- */
```

## **MS13-509\_Code2.do**

```
clear

/* Stata/MP 13.1 */

/* --- Start-up options --- */

#delimit;
program drop _all;
macro drop _all;
matrix drop _all;
set maxvar 30000;
set matsize 5000;
set memory 700m;
set more off;
set type double;
set logtype text;
capture log close;

/* --- Write here the path of the folder in which this do-file is located --- */

cd "\\\DATA4\data\RP\Tutkimus\ TU\Tutkimusdata\Tulonjakoaineisto\Putkuri\Projekti_AHY_HPU";

/* --- Write here the path of the folder in which the data file is located --- */

local datapolku1 "\\\DATA4\data\RP\Tutkimus\ TU\Tutkimusdata\Tulonjakoaineisto\Putkuri\Data";
local datapolku2 "\\\DATA4\data\RP\Tutkimus\ TU\Tutkimusdata\Tulonjakoaineisto\Putkuri\Projekti_AHY_HPU";

/* --- Give the name of your data file(s) here --- */

local t1994 "t1994.dta";
local t1995 "t1995.dta";
local t1996 "t1996.dta";
local t1997 "t1997.dta";
local t1998 "t1998.dta";
local t1999 "t1999.dta";
local t2000 "t2000.dta";
local t2001 "t2001.dta";
local t2002 "t2002.dta";
local t2003 "t2003.dta";
local t2004 "t2004.dta";
local t2005 "t2005.dta";
local t2006 "t2006.dta";
local t2007 "t2007.dta";
local t2008 "t2008.dta";
local t2009 "t2009.dta";
local t2010 "t2010.dta";
local t2008 "t2011.dta";
local t2009 "t2012.dta";
local t2010 "t2013.dta";
```

```

/* --- Name your output file here --- */

log using myoutput_code2.log, replace;

/* --- Combine the two-year mini panels into a larger panel data set (1994–2013) --- */
/* --- Drop variables that will not be used in the analysis --- */

use `datapolku1'/t1994, clear;
append using `datapolku1'/t1995;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu ktu haastlaa maakunta sp sivsaaty tutkinto
ikavu rake elivtu ckieli aslaji
ansind95 ansind96
arv9394 arv9495
arv95 arv96
aslaimk aslaihoin aslaikor muulaimk;
save `datapolku1'/t94_95, replace;

use `datapolku1'/t94_95, clear;
append using `datapolku1'/t1996;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu ktu haastlaa laani maakunta sp sivsaaty tutkinto
koulala
ikavu rake elivtu ckieli aslaji
ansind95 ansind96 ansind97
arv9394 arv9495 arv9596
arv95 arv96 arv97
sopinuta ylivelka
aslaimk aslaihoin aslaikor muulaimk;
save `datapolku1'/t94_96, replace;

use `datapolku1'/t94_96, clear;
append using `datapolku1'/t1997;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu ktu haastlaa laani maakunta sp sivsaaty tutkinto
koulala kouisced
ikavu rake elivtu ckieli aslaji
ansind95 ansind96 ansind97 ansind98
arv9394 arv9495 arv9596 arv9697
arv95 arv96 arv97 arv98
sopinuta ylivelka syytila
aslaimk aslaihoin aslaikor laiopin olyhen opkorot muulaimk laimuut;
save `datapolku1'/t94_97, replace;

use `datapolku1'/t94_97, clear;
append using `datapolku1'/t1998;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu ktu haastlaa laani maakunta sp sivsaaty tutkinto
koulala kouisced isced97
ikavu rake elivtu ckieli aslaji
ansind95 ansind96 ansind97 ansind98 ansind99
arv9394 arv9495 arv9596 arv9697 arv9798
arv95 arv96 arv97 arv98 arv99
sopinuta ylivelka syytila laskut
aslaimk aslaihoin aslaikor laiopin olyhen opkorot muulaimk laimuut;
save `datapolku1'/t94_98, replace;

```

```

use `datapolku1'/t94_98, clear;
append using `datapolku1'/t1999;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu ktu haastlaa laani maakunta sp sivsaaty tutkinto
koulas koulala koulal kouisced isced97
ikavu rake elivtu ckieli aslaji
ansind95 ansind96 ansind97 ansind98 ansind99 ansind00
arv9394 arv9495 arv9596 arv9697 arv9798 arv9899
arv95 arv96 arv97 arv98 arv99 arv00
sopinuta ylivalka syytila laskut lyhenn
aslaimk aslaihoin aslaikor laiopin oplyhen opkorot muulaimk laimuut;
save `datapolku1'/t94_99, replace;

use `datapolku1'/t94_99, clear;
append using `datapolku1'/t2000;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu ktu haastlaa laani maakunta sp sivsaaty tutkinto
koulas koulala koulal kouisced isced97
ikavu rake elivtu ckieli aslaji
ansind95 ansind96 ansind97 ansind98 ansind99 ansind00 ansind01
arv9394 arv9495 arv9596 arv9697 arv9798 arv9899 arv9900
arv95 arv96 arv97 arv98 arv99 arv00 arv01
sopinuta ylivalka syytila laskut lyhenn
aslaimk aslaihoin aslaikor laiopin oplyhen opkorot muulaimk laimuut;
save `datapolku1'/t94_00, replace;

use `datapolku1'/t94_00, clear;
append using `datapolku1'/t2001;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu ktu haastlaa laani maakunta sp sivsaaty tutkinto
koulas koulala koulal kouisced isced97
ikavu rake elivtu ckieli aslaji
ansind95 ansind96 ansind97 ansind98 ansind99 ansind00 ansind01 ansind02
arv9394 arv9495 arv9596 arv9697 arv9798 arv9899 arv9900 arv0001
arv95 arv96 arv97 arv98 arv99 arv00 arv01 arv02
sopinuta ylivalka syytila laskut lyhenn
aslaimk aslaihoin aslaikor laiopin oplyhen opkorot muulaimk laimuut;
save `datapolku1'/t94_01, replace;
*/
use `datapolku1'/t94_01, clear;
append using `datapolku1'/t2002;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu desoecd ktu kturaha haastlaa laani maakunta sp
sivsaaty tutkinto koulas koulala koulal kouisced isced97
ikavu rake elivtu ckieli aslaji
ansind95 ansind96 ansind97 ansind98 ansind99 ansind00 ansind01 ansind02 ansind03
arv9394 arv9495 arv9596 arv9697 arv9798 arv9899 arv9900 arv0001 arv0102
arv95 arv96 arv97 arv98 arv99 arv00 arv01 arv02 arv03
sopinuta ylivalka syytila laskut lyhenn
aslaimk aslaihoin aslaikor laiopin oplyhen opkorot muulaimk laimuut;
save `datapolku1'/t94_02, replace;

use `datapolku1'/t94_02, clear;
append using `datapolku1'/t2003;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu desoecd ktu kturaha haastlaa laani maakunta sp
sivsaaty tutkinto koulas koulala koulal kouisced isced97
ikavu rake elivtu ckieli mamutuki aslaji

```

ansind95 ansind96 ansind97 ansind98 ansind99 ansind00 ansind01 ansind02 ansind03 ansind04  
arv9394 arv9495 arv9596 arv9697 arv9798 arv9899 arv9900 arv0001 arv0102 arvioed  
arv95 arv96 arv97 arv98 arv99 arv00 arv01 arv02 arv03 arvionyk  
sopinuta ylivalka syytila laskut lyhenn  
aslainmk aslaihoin laiopin oplyhen opkorot muulaimk laimuut;  
save `datapolku1'/t94\_03, replace;

use `datapolku1'/t94\_03, clear;  
append using `datapolku1'/t2004;  
keep konu\_u year ykor pkor paneeli soss asko paasoss deskyktu desoecd ktu kturaha haastlaa laani maakunta sp  
sivsaaty tutkinto koulas koulala koulal kouisced isced97  
ikavu rake elivtu ckieli mamutuki aslaji  
ansind95 ansind96 ansind97 ansind98 ansind99 ansind00 ansind01 ansind02 ansind03 ansind04 ansind05  
arv9394 arv9495 arv9596 arv9697 arv9798 arv9899 arv9900 arv0001 arv0102 arvioed  
arv95 arv96 arv97 arv98 arv99 arv00 arv01 arv02 arv03 arvionyk  
sopinuta ylivalka syytila laskut lyhenn  
aslainmk aslaina aslaihoin aslaikor aslailih laiopin oplaina oplyhen opkorot oplaikor oplailih muulaimk laimuut;  
save `datapolku1'/t94\_04, replace;

use `datapolku1'/t94\_04, clear;  
append using `datapolku1'/t2005;  
keep konu\_u year ykor pkor paneeli soss asko paasoss deskyktu desoecd ktu kturaha haastlaa laani maakunta sp  
sivsaaty tutkinto koulas koulala koulal kouisced isced97  
ikavu rake elivtu ckieli mamutuki aslaji  
ansind95 ansind96 ansind97 ansind98 ansind99 ansind00 ansind01 ansind02 ansind03 ansind04 ansind05 ansind06  
arv9394 arv9495 arv9596 arv9697 arv9798 arv9899 arv9900 arv0001 arv0102 arvioed  
arv95 arv96 arv97 arv98 arv99 arv00 arv01 arv02 arv03 arvionyk  
sopinuta ylivalka syytila laskut lyhenn  
aslainmk aslaina aslaihoin aslaikor aslailih laiopin oplaina oplyhen opkorot oplaikor oplailih muulaimk laimuut;  
save `datapolku1'/t94\_05, replace;

use `datapolku1'/t94\_05, clear;  
append using `datapolku1'/t2006;  
keep konu\_u year ykor pkor paneeli soss asko paasoss deskyktu desoecd ktu kturaha haastlaa laani maakunta sp  
sivsaaty tutkinto koulas koulala koulal kouisced isced97  
ikavu rake elivtu ckieli mamutuki aslaji  
ansind95 ansind96 ansind97 ansind98 ansind99 ansind00 ansind01 ansind02 ansind03 ansind04 ansind05 ansind06  
ansind07  
arv9394 arv9495 arv9596 arv9697 arv9798 arv9899 arv9900 arv0001 arv0102 arvioed  
arv95 arv96 arv97 arv98 arv99 arv00 arv01 arv02 arv03 arvionyk  
sopinuta ylivalka syytila laskut lyhenn asrasit toimtulo  
aslainmk aslaina aslaihoin aslaikor aslailih laiopin oplaina oplyhen opkorot oplaikor oplailih muulaimk laimuut  
muulaina;  
save `datapolku1'/t94\_06, replace;

use `datapolku1'/t94\_06, clear;  
append using `datapolku1'/t2007;  
keep konu\_u year ykor pkor paneeli soss asko paasoss deskyktu desoecd ktu kturaha haastlaa laani maakunta sp  
sivsaaty tutkinto koulas koulala koulal kouisced isced97  
ikavu rake elivtu ckieli mamutuki aslaji  
ansind95 ansind96 ansind97 ansind98 ansind99 ansind00 ansind01 ansind02 ansind03 ansind04 ansind05 ansind06  
ansind07 ansind08  
arv9394 arv9495 arv9596 arv9697 arv9798 arv9899 arv9900 arv0001 arv0102 arvioed

```
arv95 arv96 arv97 arv98 arv99 arv00 arv01 arv02 arv03 arvionyk
sopinuta ylivelka syytila laskut lyhenn asrasit toimtulo
aslainmk aslaina aslaihoi aslaikoraslailih laiopin oplaina olyhen opkorot oplaikor oplailih muulaimk laimuut
muulaina muuvelat
thavelat tlavelat muukorot thakorot tlakorot;
save `datapolku1'/t94_07, replace;

use `datapolku1'/t94_07, clear;
append using `datapolku1'/t2008;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu desoecd ktu kturaha haastlaa laani maakunta sp
sivsaaty tutkinto koulas koulala koukal kouisced isced97
ikavu rake elivtu ckieli mamutuki aslaji
ansind95 ansind96 ansind97 ansind98 ansind99 ansind00 ansind01 ansind02 ansind03 ansind04 ansind05 ansind06
ansind07 ansind08 ansind09
arv9394 arv9495 arv9596 arv9697 arv9798 arv9899 arv9900 arv0001 arv0102 arvioed
arv95 arv96 arv97 arv98 arv99 arv00 arv01 arv02 arv03 arvionyk
sopinuta ylivelka syytila laskut lyhenn asrasit toimtulo
aslainmk aslaina aslaihoi aslaikoraslailih laiopin oplaina olyhen opkorot oplaikor oplailih muulaimk laimuut
muulaina muuvelat
thavelat tlavelat muukorot thakorot tlakorot;
save `datapolku1'/t94_08, replace;

use `datapolku1'/t2009, clear;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu desoecd ktu kturaha laani maakunta sp sivsaaty koulas
koukal isced97
ikavu rake elivtu ckieli mamutuki yhtez yllaez uusivelk aslaji
ansind10
arvioed
arvionyk
sopinuta ylivelka syytila laskut lyhenn asrasit toimtulo
aslaina aslaikoraslailih oplaina oplaikor oplailih muuvelat
thavelat tlavelat muukorot thakorot tlakorot;
save `datapolku1'/t2009_dropped, replace;

use `datapolku1'/t94_08, clear;
append using `datapolku1'/t2009_dropped;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu desoecd ktu kturaha haastlaa laani maakunta sp
sivsaaty tutkinto koulas koulala koukal kouisced isced97
ikavu rake elivtu ckieli mamutuki yhtez yllaez uusivelk aslaji
ansind95 ansind96 ansind97 ansind98 ansind99 ansind00 ansind01 ansind02 ansind03 ansind04 ansind05 ansind06
ansind07 ansind08 ansind09 ansind10
arv9394 arv9495 arv9596 arv9697 arv9798 arv9899 arv9900 arv0001 arv0102 arvioed
arv95 arv96 arv97 arv98 arv99 arv00 arv01 arv02 arv03 arvionyk
sopinuta ylivelka syytila laskut lyhenn asrasit toimtulo
aslainmk aslaina aslaihoi aslaikoraslailih laiopin oplaina olyhen opkorot oplaikor oplailih muulaimk laimuut
muulaina muuvelat
thavelat tlavelat muukorot thakorot tlakorot;
save `datapolku1'/t94_09, replace;

use `datapolku1'/t2010, clear;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu desoecd ktu kturaha maakunta sp sivsaaty koulas koukal
isced97
ikavu rake elivtu ckieli mamutuki yhtez yllaez uusivelk aslaji
```

```
ansind11
arvioed
arvionyk
sopinuta ylivelka syytila laskut lyhenn asrasit toimtulo
aslaina aslaikor aslailyh oplaina oplaikor oplailyh muuvelat
thavelat tlavelat muukorot thakorot tlakorot;
save `datapolku1'/t2010_dropped, replace;

use `datapolku1'/t94_09, clear;
append using `datapolku1'/t2010_dropped;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu desoecd ktu kturaha haastlaa laani maakunta sp
sivsaaty tutkinto koulas koulala koukal kouisced isced97
ikavu rake elivtu ckieli mamutuki yhtez yllaez uusivelk aslaji
ansind95 ansind96 ansind97 ansind98 ansind99 ansind00 ansind01 ansind02 ansind03 ansind04 ansind05 ansind06
ansind07 ansind08 ansind09 ansind10 ansind11
arv9394 arv9495 arv9596 arv9697 arv9798 arv9899 arv9900 arv0001 arv0102 arvioed
arv95 arv96 arv97 arv98 arv99 arv00 arv01 arv02 arv03 arvionyk
sopinuta ylivelka syytila laskut lyhenn asrasit toimtulo
aslaimk aslaina aslaihoin aslaikor aslailyh laiopin oplaina oplyhen opkorot oplaikor oplailyh muulaimk laimuut
muulaina muuvelat
thavelat tlavelat muukorot thakorot tlakorot;
save `datapolku1'/t94_10, replace;

use `datapolku1'/t2011, clear;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu desoecd ktu kturaha maakunta sp sivsaaty koulas koulal
isced97
ikavu rake elivtu ckieli mamutuki yhtez yllaez uusivelk aslaji
ansind12
arvioed
arvionyk
sopinuta ylivelka syytila laskut lyhenn asrasit toimtulo
aslaina aslaikor aslailyh oplaina oplaikor oplailyh muuvelat
thavelat tlavelat muukorot thakorot tlakorot;
save `datapolku1'/t2011_dropped, replace;

use `datapolku1'/t94_10, clear;
append using `datapolku1'/t2011_dropped;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu desoecd ktu kturaha haastlaa laani maakunta sp
sivsaaty tutkinto koulas koulala koukal kouisced isced97
ikavu rake elivtu ckieli mamutuki yhtez yllaez uusivelk aslaji
ansind95 ansind96 ansind97 ansind98 ansind99 ansind00 ansind01 ansind02 ansind03 ansind04 ansind05 ansind06
ansind07 ansind08 ansind09 ansind10 ansind11 ansind12
arv9394 arv9495 arv9596 arv9697 arv9798 arv9899 arv9900 arv0001 arv0102 arvioed
arv95 arv96 arv97 arv98 arv99 arv00 arv01 arv02 arv03 arvionyk
sopinuta ylivelka syytila laskut lyhenn asrasit toimtulo
aslaimk aslaina aslaihoin aslaikor aslailyh laiopin oplaina oplyhen opkorot oplaikor oplailyh muulaimk laimuut
muulaina muuvelat
thavelat tlavelat muukorot thakorot tlakorot;
save `datapolku1'/t94_11, replace;

use `datapolku1'/t2012, clear;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu desoecd ktu kturaha maakunta sp sivsaaty koulas koulal
isced97
```

```
ikavu rake elivtu ckieli yhtez yllaez uusivelk aslaji
ansind13
arvioed
arvionyk
sopinuta ylivelka syyttila laskut lyhenn asrasit toimtulo
aslaina aslaikor aslailyh oplaina oplaikor oplailyh muuvelat
thavelat tlavelat muukorot thakorot tlakorot;
save `datapolku1'/t2012_dropped, replace;

use `datapolku1'/t94_11, clear;
append using `datapolku1'/t2012_dropped;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu desoecd ktu kturaha haastlaa laani maakunta sp
sivsaaty tutkinto koulas koulala koulsed isced97
ikavu rake elivtu ckieli mamutuki yhtez yllaez uusivelk aslaji
ansind95 ansind96 ansind97 ansind98 ansind99 ansind00 ansind01 ansind02 ansind03 ansind04 ansind05 ansind06
ansind07 ansind08 ansind09 ansind10 ansind11 ansind12 ansind13
arv9394 arv9495 arv9596 arv9697 arv9798 arv9899 arv9900 arv0001 arv0102 arvioed
arv95 arv96 arv97 arv98 arv99 arv00 arv01 arv02 arv03 arvionyk
sopinuta ylivelka syyttila laskut lyhenn asrasit toimtulo
aslaimk aslaina aslaihoi aslaikor aslailyh laiopin oplaina oplyhen opkorot oplaikor oplailyh muulaimk laimuut
muulaina muuvelat
thavelat tlavelat muukorot thakorot tlakorot;
save `datapolku1'/t94_12, replace;

use `datapolku1'/t2013, clear;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu desoecd ktu kturaha maakunta sp sivsaaty koulas koulal
isced97
ikavu rake elivtu ckieli yhtez yllaez uusivelk aslaji
ansind14
arvioed
arvionyk
sopinuta ylivelka syyttila laskut lyhenn asrasit toimtulo
aslaina aslaikor aslailyh oplaina oplaikor oplailyh muuvelat
thavelat tlavelat muukorot thakorot tlakorot;
save `datapolku1'/t2013_dropped, replace;

use `datapolku1'/t94_12, clear;
append using `datapolku1'/t2013_dropped;
keep konu_u year ykor pkor paneeli soss asko paasoss deskyktu desoecd ktu kturaha haastlaa laani maakunta sp
sivsaaty tutkinto koulas koulala koulsed isced97
ikavu rake elivtu ckieli mamutuki yhtez yllaez uusivelk aslaji
ansind95 ansind96 ansind97 ansind98 ansind99 ansind00 ansind01 ansind02 ansind03 ansind04 ansind05 ansind06
ansind07 ansind08 ansind09 ansind10 ansind11 ansind12 ansind13 ansind14
arv9394 arv9495 arv9596 arv9697 arv9798 arv9899 arv9900 arv0001 arv0102 arvioed
arv95 arv96 arv97 arv98 arv99 arv00 arv01 arv02 arv03 arvionyk
sopinuta ylivelka syyttila laskut lyhenn asrasit toimtulo
aslaimk aslaina aslaihoi aslaikor aslailyh laiopin oplaina oplyhen opkorot oplaikor oplailyh muulaimk laimuut
muulaina muuvelat
thavelat tlavelat muukorot thakorot tlakorot;
save `datapolku1'/t94_13, replace;

save `datapolku2'/t94_13, replace;
```

```
browse;  
exit;  
  
/* --- End of file --- */
```

### **MS13-509\_Code3.do**

```
clear
clear matrix
clear mata

/* Stata/MP 13.1 */

/* --- Start-up options --- */

#delimit;
program drop _all;
macro drop _all;
matrix drop _all;
set maxvar 30000;
set matsize 5000;
set memory 700m;
set more off;
set type double;
set logtype text;
capture log close;

/* --- Write here the path of the folder in which this do-file is located --- */

cd "\\\DATA4\data\RP\Tutkimus\ TU\Tutkimusdata\Tulonjakoaineisto\Putkuri\Projekti_AHY_HPU";

/* --- Write here the path of the folder in which the data file is located --- */

local datapolku "\\\DATA4\data\RP\Tutkimus\ TU\Tutkimusdata\Tulonjakoaineisto\Putkuri\Projekti_AHY_HPU";

/* --- Name your output file here --- */

log using myoutput_code3.log, replace;

/* --- Specify which data to use --- */

use `datapolku'\t94_13.dta, clear;

/* --- Rename, generate and drop variables --- */

replace aslaina = aslaimk if (year < 2004 & aslaina == .);
drop aslaimk;

replace aslaihoi = (aslakor +aslailyh) if (year > 2003 & aslaihoi == .);

replace oplaina = laiopin if (year < 2004 & oplaina == .);
drop laiopin;

replace oplaikor = opkorot if (year < 2004 & oplaikor == .);
drop opkorot;
replace oplailyh = oplihen if (year < 2004 & oplailyh == .);
drop oplihen;
```

```

gen muutvelat = .;
replace muutvelat = muulaimk if (year < 1997 & muutvelat == .);
replace muutvelat = laimuut if ((year == 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006) &
muutvelat == .);
replace muutvelat = (muuvelat + thavelat + tlavelat) if (year > 2006 & muutvelat == .);

drop muulaimk laimuut muulaina muuvelat thavelat tlavelat;

gen muutkorot = .;
replace muutkorot = (muukorot + thakorot + tlakorot);
drop muukorot thakorot tlakorot;

/* total debt */
gen kaikkivelat = .;
replace kaikkivelat = (aslaina + muutvelat) if (year < 1997 & kaikkivelat == .);
replace kaikkivelat = (aslaina + oplaina + muutvelat) if (year > 1996 & kaikkivelat == .);
rename kaikkivelat D;

gen kaikkikorot = .;
replace kaikkikorot = (aslaikor + muutkorot) if (year < 1997 & kaikkikorot == .);
replace kaikkikorot = (aslaikor + oplaikor + muutkorot) if (year > 1996 & kaikkikorot == .);

/* mortgage debt */
rename aslaina mortgage;

/* non-mortgage debt */
gen nonmortgage = .;
replace nonmortgage = muutvelat if (year < 1997);
replace nonmortgage = (oplaina + muutvelat) if (year > 1996);

/* disposable income */
rename ktu l;

/* gender */
rename sp gender;

/* level of education */
replace koulas = tutkinto if (year < 1998 & koulas == .);
drop tutkinto;
rename koulas degree;

replace koulal = koulala if (year < 1998 & koulal == .);
drop koulala;
rename koulal field;

replace isced97 = kouisced if (year < 1998 & isced97 == .);
drop kouisced;
rename isced97 isced;

/*index of wage and salary earnings*/
gen ansind = .;
replace ansind = ansind95 if (year == 1994 & ansind == .);

```

```

replace ansind = ansind96 if (year == 1995 & ansind == .);
replace ansind = ansind97 if (year == 1996 & ansind == .);
replace ansind = ansind98 if (year == 1997 & ansind == .);
replace ansind = ansind99 if (year == 1998 & ansind == .);
replace ansind = ansind00 if (year == 1999 & ansind == .);
replace ansind = ansind01 if (year == 2000 & ansind == .);
replace ansind = ansind02 if (year == 2001 & ansind == .);
replace ansind = ansind03 if (year == 2002 & ansind == .);
replace ansind = ansind04 if (year == 2003 & ansind == .);
replace ansind = ansind05 if (year == 2004 & ansind == .);
replace ansind = ansind06 if (year == 2005 & ansind == .);
replace ansind = ansind07 if (year == 2006 & ansind == .);
replace ansind = ansind08 if (year == 2007 & ansind == .);
replace ansind = ansind09 if (year == 2008 & ansind == .);
replace ansind = ansind10 if (year == 2009 & ansind == .);
replace ansind = ansind11 if (year == 2010 & ansind == .);
replace ansind = ansind12 if (year == 2011 & ansind == .);
replace ansind = ansind13 if (year == 2012 & ansind == .);
replace ansind = ansind14 if (year == 2013 & ansind == .);
drop ansind95 ansind96 ansind97 ansind98 ansind99 ansind00 ansind01 ansind02
ansind03 ansind04 ansind05 ansind06 ansind07 ansind08 ansind09 ansind10 ansind11
ansind12 ansind13 ansind14;

```

```

/* realizations */
replace arvioed = arv9394 if (year == 1994 & arvioed == .);
replace arvioed = arv9495 if (year == 1995 & arvioed == .);
replace arvioed = arv9596 if (year == 1996 & arvioed == .);
replace arvioed = arv9697 if (year == 1997 & arvioed == .);
replace arvioed = arv9798 if (year == 1998 & arvioed == .);
replace arvioed = arv9899 if (year == 1999 & arvioed == .);
replace arvioed = arv9900 if (year == 2000 & arvioed == .);
replace arvioed = arv0001 if (year == 2001 & arvioed == .);
replace arvioed = arv0102 if (year == 2002 & arvioed == .);
drop arv9394 arv9495 arv9596 arv9697 arv9798 arv9899 arv9900 arv0001 arv0102;

```

```

/* expectations */
replace arvionyk = arv95 if (year == 1994 & arvionyk == .);
replace arvionyk = arv96 if (year == 1995 & arvionyk == .);
replace arvionyk = arv97 if (year == 1996 & arvionyk == .);
replace arvionyk = arv98 if (year == 1997 & arvionyk == .);
replace arvionyk = arv99 if (year == 1998 & arvionyk == .);
replace arvionyk = arv00 if (year == 1999 & arvionyk == .);
replace arvionyk = arv01 if (year == 2000 & arvionyk == .);
replace arvionyk = arv02 if (year == 2001 & arvionyk == .);
replace arvionyk = arv03 if (year == 2002 & arvionyk == .);
drop arv95 arv96 arv97 arv98 arv99 arv00 arv01 arv02 arv03;

```

```

order year konu_u asko ansind arvioed arvionyk
sopinuta ylivelka syyttila laskut lyhenn asrasit toimtulo
D kaikkikorot mortgage nonmortgage aslaihoi aslaikor aslailyh oplaina oplaikor oplailyh muutvelat muutkorot
soss paasoss deskyktu desoecd I haastlaa laani maakunta sivsaaty ikavu rake elivtu
ykor pkor;

```

```

save `datapolku'/basicdata94_13.dta, replace;

/* --- Keep only household reference persons --- */

keep if asko == 1;

/* --- Define data as panel data and generate survey commands --- */

tset konu_u year, yearly;
sort konu_u year;

svyset konu_u [pweight= ykor];

gen new_ykor=round(ykor);
gen new_pkor=round(pkcor);

/* --- Compare aggregated debt and income using different weights --- */

table year [fweight=new_ykor], contents(sum I);
table year [fweight=new_pkor], contents(sum I);

table year [fweight=new_ykor], contents(sum D);
table year [fweight=new_pkor], contents(sum D);

/* --- Generate dummies for debt and mortgage and non-mortgage debt holders --- */

gen mortgage_dum = 0;
replace mortgage_dum = 1 if mortgage >0 & mortgage !=.;

gen nonmortgage_dum = 0;
replace nonmortgage_dum = 1 if nonmortgage >0 & nonmortgage !=.;

gen D_dum = 0;
replace D_dum = 1 if D > 0 & D != .;

save `datapolku'/basicdata94_13.dta, replace;

/* --- Summarise data --- */

summarize _all;
xtdes;
xtsum;
browse;
exit;

/* --- End of file --- */

```

## **MS13-509\_Code4.do**

```
clear
clear matrix
clear mata

/* Stata/MP 13.1 */

/* --- Start-up options --- */

#delimit;
program drop _all;
macro drop _all;
matrix drop _all;
set maxvar 30000;
set matsize 5000;
set memory 500m;
set more off;
set type double;
set logtype text;
capture log close;

/* First save the required data into data files macro_agg.dta (macro-level data) and macro_reg.dta (regional data)
*/
/* --- Write here the path of the folder in which this do-file is located --- */

cd "\\\DATA4\\data\\RP\\Tutkimus\\TU\\Tutkimusdata\\Tulonjakoaineisto\\Putkuri\\Projekti_AHY_HPU";

/* --- Write here the path of the folder in which the data file is located --- */

local datapolku "\\\DATA4\\data\\RP\\Tutkimus\\TU\\Tutkimusdata\\Tulonjakoaineisto\\Putkuri\\Projekti_AHY_HPU";

/* --- Name your output file here --- */

log using myoutput_code4.log, replace;

/* Use and save the panel data file */

use `datapolku'/basicdata94_13.dta, clear;
save `datapolku'/addeddata94_13.dta, replace;
use `datapolku'/addeddata94_13.dta, clear;

/* Add macro-level data */

merge m:1 year using `datapolku'/macro_agg_2013.dta;

save `datapolku'/addeddata94_13.dta, replace;

/* Add regional data */

use `datapolku'/addeddata94_13.dta, clear;
```

```
tab year maakunta, cell;  
  
egen year_maakunta = group(year maakunta);  
  
order konu_u year maakunta year_maakunta;  
sort year_maakunta;  
  
merge m:1 year_maakunta using `datapolku'/macro_reg_2013.dta, generate(_merge2);  
  
save `datapolku'/addeddata94_13.dta, replace;  
  
browse;  
exit;  
  
/* --- End of file --- */
```

## **MS13-509\_Code5.do**

```
clear
clear matrix
clear mata

/* Stata/MP 14.1 */

/* --- Start-up options --- */

program drop _all
macro drop _all
matrix drop _all
set maxvar 30000
set matsize 5000
set memory 500m
set more off, permanently
set type double
set logtype text
capture log close

/* --- Write here the path of the folder in which this do-file is located --- */

cd "\\\DATA4\data\RP\Tutkimus\ TU\Tutkimusdata\Tulonjakoaineisto\Putkuri\Projekti_AHY_HPU"

/* --- Write here the path of the folder in which the data file is located --- */

global datapolku "\\\DATA4\data\RP\Tutkimus\ TU\Tutkimusdata\Tulonjakoaineisto\Putkuri\Projekti_AHY_HPU"

/* --- Name your output file here --- */

log using myoutput_code5.log, replace

/* --- Specify which data to use --- */

*use
\\DATA4\data\RP\Tutkimus\ TU\Tutkimusdata\Tulonjakoaineisto\Putkuri\Projekti_AHY_HPU\addeddata94_13.dta
, clear
*save
\\DATA4\data\RP\Tutkimus\ TU\Tutkimusdata\Tulonjakoaineisto\Putkuri\Projekti_AHY_HPU\AHY_HPU_data_jmc
b_rev.dta, replace
use
\\DATA4\data\RP\Tutkimus\ TU\Tutkimusdata\Tulonjakoaineisto\Putkuri\Projekti_AHY_HPU\AHY_HPU_data_jmc
b_rev.dta, clear

/* --- Declare data to be panel data --- */

xtset konu_u year, yearly
sort konu_u year

/* Some data checking */
```

```

table year [pweight = ykor], contents(sum D sum mortgage sum nonmortgage sum I sum asko)

/* --- Check panels (1st-4th research time) and drop data not used --- */

table year [pweight = ykor], contents(sum asko)

tab year paneeli, cell
drop if year == 2013 & paneeli == 1

*table year [pweight = ykor], contents(sum asko)

/* --- CALCULATE DEBT-RELATED VARIABLES --- */

/* Debt-to-income and debt-service-to-income ratios */

sort konu_u year

replace D = D/1000 /* In thousands EUR */
replace mortgage = mortgage/1000 /* In thousands EUR */
replace nonmortgage = nonmortgage/1000 /* In thousands EUR */
replace I = I/1000 /* In thousands EUR */
replace aslaihoi = aslaihoi/1000 /* In thousands EUR */

gen D_I = . /* Total debt to income */
replace D_I = D/I

gen D_I_lag = .
replace D_I_lag = L.D_I

gen D_lag = .
replace D_lag = L.D

sort konu_u year
gen I_lag = .
replace I_lag = L.I
gen I_lag_2 = I_lag^2

gen D_lagged_I = .
replace D_lagged_I = D/I_lag

table year, c(n D_I n D_I_lag n D_lagged_I)

table year if paneeli == 2, contents(sum I sum I_lag)
table year if I_lag != ., contents(sum I sum I_lag)
table year if I_lag != . & paneeli == 2, contents(sum I sum I_lag)

by konu_u: gen delta_D_I = D/I - L.D_I
by konu_u: gen delta_D = (D - L.D)
sum delta_D, de

sort konu_u year

gen M_I = . /* Mortgage debt to income */

```

```

replace M_I = mortgage/I

gen M_I_lag =
replace M_I_lag = L.M_I

gen N_I = . /* Non-mortgage debt to income */
replace N_I = nonmortgage/I

gen N_I_lag =
replace N_I_lag = L.N_I

gen M_lagged_I =
replace M_lagged_I = mortgage/I_lag

gen N_lagged_I =
replace N_lagged_I = nonmortgage/I_lag

gen DS_I = . /* Mortgage service to income */
replace DS_I = aslaihoi/I

gen DS_I_lag =
replace DS_I_lag = L.DS_I

/* Overindebtedness */

table year, c(n ylivelka n sopinuta n lyhenn n laskut n toimtulo)

sum ylivelka, de
gen over_indebt = . /* 8, 9, bl */
replace over_indebt = 1 if ylivelka == 1 /* yes */
replace over_indebt = 0 if ylivelka == 2 /* no */
sum ylivelka if paneeli == 2, de
sum over_indebt if paneeli == 2, de
gen over_indebt_lag =
sort konu_u year
by konu_u: replace over_indebt_lag = L.over_indebt

table year, c(n ylivelka n over_indebt n over_indebt_lag)

/* Reschedule */
gen repayment = . /* 8, 9, bl */
replace repayment = 1 if sopinuta == 1 /* yes */
replace repayment = 0 if sopinuta == 2 /* no */

/* Debt payment problems */
gen problems = . /* 8, 9 */
replace problems = 1 if lyhenn == 1 | lyhenn == 2 /* Once or more often */
replace problems = 0 if lyhenn == 3 /* Never */

/* Bills */
gen bills = . /* 8, 9, 0 */
replace bills = 1 if laskut == 1 | laskut == 2 /* Very often or often */
replace bills = 0 if laskut == 3 | laskut == 4 | laskut == 5 /* Sometimes, once, never */

```

```

gen bills2 = . /* 8, 9, 0 */
replace bills2 = 1 if laskut == 1 | laskut == 2 | laskut == 3 /* Very often, often or sometimes */
replace bills2 = 0 if laskut == 4 | laskut == 5 /* Once, never */

gen bills_D = . /* 8, 9, 0 */
replace bills_D = 1 if laskut == 1 & D > 0 | laskut == 2 & D > 0 | laskut == 3 & D > 0 /* Very often, often or
sometimes & has debt */
replace bills_D = 0 if laskut == 4 & D > 0 | laskut == 5 & D > 0 /* Once, never & has debt */

/*Problems in making ends meet */
gen resources = . /* 8, 9, 0 */
replace resources = 1 if toimtulo == 1 | toimtulo == 2 /* Large or some difficulties */
replace resources = 0 if toimtulo == 3 | toimtulo == 4 | toimtulo == 5 | toimtulo == 6 /* Small or no difficulties */

gen resources_D = . /* 8, 9, 0 */
replace resources_D = 1 if toimtulo == 1 & D > 0 | toimtulo == 2 & D > 0 /* Large or some difficulties & has debt */
replace resources_D = 0 if toimtulo == 3 & D > 0 | toimtulo == 4 & D > 0 | toimtulo == 5 & D > 0 | toimtulo == 6 & D
> 0 /* Small or no difficulties & has debt */

table year, c(mean over_indebt mean repayment mean problems mean bills mean resources)
table year, c(mean over_indebt mean bills mean bills2)
table year, c(mean bills mean bills_D mean resources mean resources_D)

table year, c(n ylivelka n sopinut n lyhenn n laskut n toimtulo)
table year, c(n over_indebt n repayment n problems n bills n resources)
table year, c(n bills n bills_D n resources n resources_D)

pwcorr resources over_indebt
pwcorr resources repayment
pwcorr resources problems
pwcorr resources bills
pwcorr resources bills2

sort konu_u year
by konu_u: gen lag_repayment = L.repayment
by konu_u: gen lag_problems = L.problems
by konu_u: gen lag_bills = L.bills
by konu_u: gen lag_resources = L.resources

table year, c(n ylivelka n sopinut n lyhenn n laskut n toimtulo)
table year, c(n over_indebt n repayment n problems n bills n resources)

tab repayment sopinuta [aweight = ykor], cell
tab problems lyhenn [aweight = ykor], cell
tab bills laskut [aweight = ykor], cell
tab resources toimtulo [aweight = ykor], cell

/* --- CALCULATE CONTROL VARIABLES --- */

/* Control variables (t, t-1) */

gen age =

```

```

by konu_u: replace age = ikavu
gen age2 = age^2
gen age3 = age^3
gen age4 = age^4
drop ikavu

global age1 "c.age"
global age2 "c.age c.age#c.age"
global age3 "c.age c.age#c.age c.age#c.age#c.age"
global age4 "c.age c.age#c.age c.age#c.age#c.age c.age#c.age#c.age#c.age"

replace gender = 0 if gender == 2 /* 1 = male, 0 = female */

gen life = .
gen life_temp = .
by konu_u: replace life_temp = L.elivtu
replace life = 11 if life_temp >=11 & life_temp <=16 /* Single */
replace life = 20 if life_temp == 20 | life_temp == 83 | life_temp == 84 /* Single parents */
replace life = 31 if life_temp >=31 & life_temp <=36 /* Couples without kids */
replace life = 40 if life_temp >=40 & life_temp <=82 /* Couples with kids */
replace life = 90 if life_temp == 90 /* Others */
drop elivtu

gen family = .
gen family_temp = .
by konu_u: replace family_temp = L.rake /* Size of household (# of children) */
replace family = 0 if family_temp == 10 | family_temp == 22 | family_temp == 33 | family_temp == 44 |
family_temp == 55 | family_temp == 66 /* No kids*/
replace family = 1 if family_temp == 21 | family_temp == 31 | family_temp == 32 | family_temp == 42 |
family_temp == 43 | family_temp == 53 | family_temp == 54 | family_temp == 64 | family_temp == 65 /* 1-2
kids*/
replace family = 2 if family_temp == 41 | family_temp == 51 | family_temp == 52 | family_temp == 61 |
family_temp == 62 | family_temp == 63 /* >2 kids*/

gen rake_lag = .
by konu_u: replace rake_lag = L.rake
drop rake

gen socio = .
gen socio_temp = .
by konu_u: replace socio_temp = L.paasoss /* Socioeconomic status */
replace socio = 11 if socio_temp == 11 | socio_temp == 12 /* Agrig. employers & entrp. */
replace socio = 21 if socio_temp >=21 & socio_temp <=29 /* Employers and entreps. */
replace socio = 31 if socio_temp >=31 & socio_temp <=39 /* White collar, upper-level */
replace socio = 41 if socio_temp >=41 & socio_temp <=49 /* White collar, lower-level */
replace socio = 51 if socio_temp >=51 & socio_temp <=59 /* Blue collar */
replace socio = 60 if socio_temp ==60 /* Univ. and other students */
replace socio = 70 if socio_temp >=70 & socio_temp <=79 /* Retired */
replace socio = 81 if socio_temp == 81 /* Long-term unempl. */
replace socio = 99 if socio_temp == 80 | socio_temp ==82 | socio_temp ==99 /* Others */

gen just_retired = .
replace just_retired = 0 if socio != .

```

```

replace just_retired = 1 if (socio != 70 & paasoss >=70 & paasoss <=79) /* Who are not retired at t-1 but are at t */

gen just_lost_job = .
replace just_lost_job = 0 if socio != .
replace just_lost_job = 1 if socio != 81 & paasoss == 81 /* Who are not unemployed at t-1 but are at t */
drop paasoss

gen degree_temp = .
by konu_u: replace degree_temp = L.degree
replace degree = .
replace degree = 0 if degree_temp == 9 /* Unknown */
replace degree = 1 if degree_temp == 0 /* None or comprehensive */
replace degree = 2 if degree_temp == 3 | degree_temp == 4 /* Secondary-level */
replace degree = 3 if degree_temp == 5 | degree_temp == 6 /* Lower-degree tertiary */
replace degree = 4 if degree_temp == 7 | degree_temp == 8 /* Upper-degree tertiary or doctorate */

gen married = .
gen married_temp = .
by konu_u: replace married_temp = L.sivsaaty
replace married = 0 if married_temp == 1 | married_temp == 0 /* Single or missing*/
replace married = 1 if married_temp == 2 /* Married */
replace married = 2 if married_temp == 3 | married_temp == 4 /* Divorced */
replace married = 3 if married_temp == 5 /* Widow */
drop sivsaaty

gen region = .
by konu_u: replace region = L.maakunta

gen language = 0
replace language = 1 if ckieli == 2 /* Swedish-speaking */
drop ckieli

gen immigrant = .
replace immigrant = 0 if mamutuki == 0 | yhtez == 0 | yllaez == 0
replace immigrant = 1 if mamutuki > 0 & mamutuki != .
replace immigrant = 1 if yhtez > 0 & yhtez != .
replace immigrant = 1 if yllaez > 0 & yllaez != .

gen tenure = .
gen tenure_temp = .
by konu_u: replace tenure_temp = L.aslaji
replace tenure = 0 if tenure_temp == 8 /* Removable */
replace tenure = 1 if tenure_temp == 1 | tenure_temp == 2 | tenure_temp == 3 /* Owner-occupied */
replace tenure = 0 if tenure_temp == 4 | tenure_temp == 5 | tenure_temp == 6 | tenure_temp == 7 /* Rented or
right of residence */

drop *_temp

/* Generate cohort age-group dummies */

gen bornyear = year - age
sum bornyear, de
egen cohorts = cut(bornyear), at(1900(3)2000)

```

```

xi, noomit: tabstat i.cohorts, stat(n mean) col(stat) format(%9.2f)
replace cohorts = 1981 if cohorts >= 1981
replace cohorts = 1921 if cohorts < 1921

sum age, de
egen age_g = cut(age), at(16(3)100)
xi, noomit: tabstat i.age_g, stat(n mean) col(stat) format(%9.2f)
replace age_g = 19 if age_g < 19
replace age_g = 79 if age_g > 79

/* Check macro variables; change refers here to relative change from t to t+1 */

replace mrate12 = mrate12/100 /* 12-month Euribor/Helibor */
replace ur = ur/100 /* Unemployment rate */
replace gdpr = gdpr/100 /* Nominal GDP growth */
replace gdpr_real = gdpr_real/100 /* Real GDP growth */
replace infl = infl/100 /* Inflation rate */
replace hex_return = hex_return/100 /* Change in nominal share prices */
rename hex_return hex_return_nom /* Change in nominal share prices */
replace volahex = volahex/100 /* Volatility of share prices */
replace hprice_change = hprice_change/100 /* Change in nominal house prices */
replace hprice_realchange = hprice_realchange/100 /* Change in real house prices */
rename hprice_realchange house_infl /* Change in real house prices */

gen hex_return = hex_return_nom - infl /* Change in real share prices */

sum mrate12 vola12 ur gdpr infl gdpr_real house_infl maturity hex_return volahex

/* --- Take note of those who had debt at t-1 but do not have at t --- */

gen Had_D = 0
by konu_u: replace Had_D = 1 if L.D>0 & L.D<1 & L.D!=. & D == 0

gen Had_M = 0
by konu_u: replace Had_M = 1 if L.mortgage>0 & L.mortgage<10 & L.mortgage!=. & mortgage == 0

gen Had_M0 = 0
by konu_u: replace Had_M0 = 1 if L.mortgage>0 & L.mortgage!=. & mortgage == 0

bysort Had_D: sum D, de
bysort Had_D: sum D_lag, de

/* --- CALCULATE PESSIMIST-REALIST-OPTIMIST VARIABLES: 2 different definitions, each "increasing in optimism" -- */
/* Create variables A, E and F */

order konu_u year paneeli arvioed arvionyk
sort konu_u year paneeli

gen A = arvioed if paneeli == 2 | paneeli == 3 | paneeli == 4 /* Actual realized outcome for period t */
by konu_u: gen E = L.arvionyk /* Expected outcome for t, as seen in period t-1 */
gen F = arvionyk if paneeli == 2 | paneeli == 3 | paneeli == 4 /* Expected outcome for t+1, as seen in period t */

```

```

order konu_u year paneeli arvioed A arvionyk E F

/* Drop those for whom A and E not observed at 2nd, 3rd or 4th panel */

tab paneeli A, cell
tab paneeli E, cell
tab paneeli F, cell

drop if A == . & paneeli == 2
drop if A == . & paneeli == 3
drop if A == . & paneeli == 4

drop if E == . & paneeli == 2
drop if E == . & paneeli == 3
drop if E == . & paneeli == 4

drop if F == . & paneeli == 2
drop if F == . & paneeli == 3
drop if F == . & paneeli == 4

/* Drop those who answered 8 (don't want to say) or 9 (don't know), or for whom A or E = 0 */

drop if A == 0 & paneeli == 2
drop if A == 0 & paneeli == 3
drop if A == 0 & paneeli == 4

drop if A == 8 | A == 9 & paneeli == 2
drop if A == 8 | A == 9 & paneeli == 3
drop if A == 8 | A == 9 & paneeli == 4

drop if E == 0 & paneeli == 2
drop if E == 0 & paneeli == 3
drop if E == 0 & paneeli == 4

drop if E == 8 | E == 9 & paneeli == 2
drop if E == 8 | E == 9 & paneeli == 3
drop if E == 8 | E == 9 & paneeli == 4

drop if F == 0 & paneeli == 2
drop if F == 0 & paneeli == 3
drop if F == 0 & paneeli == 4

drop if F == 8 | F == 9 & paneeli == 2
drop if F == 8 | F == 9 & paneeli == 3
drop if F == 8 | F == 9 & paneeli == 4

sum E A F

/* Definition FE1: qualitative forecast error (FE) but pessimist (optimist) only if forecast error large enough: A-E < -1
(A-E > 1) */

gen FE1 = .

```

```

replace FE1 = 1 if A-E < -1 /* Clearly pessimistic FE */
replace FE1 = 2 if A-E == -1 /* Moderately pessimistic FE */
replace FE1 = 3 if A-E == 0 /* No FE */
replace FE1 = 4 if A-E == 1 /* Moderately optimistic FE */
replace FE1 = 5 if A-E > 1 /* Clearly optimistic FE */
replace FE1 = . if A == . | E == .

/* Definition FE2: numerical forecast error (FE) with two types of optimists */

gen FE2 = .
replace FE2 = 1 if A-E < 0 /* Pessimistic FE */
replace FE2 = 2 if A-E == 0 /* No FE */
replace FE2 = 3 if A-E > 0 & A <= 3 /* Prudent optimistic FE: financial situation did not get worse (ie got better or stayed the same) */
replace FE2 = 4 if A-E > 0 & A >= 4 /* Non-Prudent optimistic FE: financial situation got worse */
replace FE2 = . if A == . | E == .

/* --- TRIM DATA --- */

/* Drop "extreme" values */

tabstat D_I M_I N_I delta_D DS_I if (FE1 != .), stat(mean p50 sd min max) long col(stat) format(%9.3f)

bysort year: egen p99_D_I = pctile(D_I) if (paneeli == 2 | paneeli == 3 | paneeli == 4), p(99)
bysort year: egen p99_M_I = pctile(M_I) if (paneeli == 2 | paneeli == 3 | paneeli == 4), p(99)
bysort year: egen p99_N_I = pctile(N_I) if (paneeli == 2 | paneeli == 3 | paneeli == 4), p(99)
bysort year: egen Dch_p99 = pctile(delta_D) if (paneeli == 2 | paneeli == 3 | paneeli == 4), p(99)
bysort year: egen Dch_p1 = pctile(delta_D) if (paneeli == 2 | paneeli == 3 | paneeli == 4), p(1)
bysort year: egen p99_DS_I = pctile(DS_I) if (paneeli == 2 | paneeli == 3 | paneeli == 4), p(99)

bysort year: egen p99_D_I_lag = pctile(D_I_lag) if (paneeli == 2 | paneeli == 3 | paneeli == 4), p(99)
bysort year: egen p99_M_I_lag = pctile(M_I_lag) if (paneeli == 2 | paneeli == 3 | paneeli == 4), p(99)
bysort year: egen p99_N_I_lag = pctile(N_I_lag) if (paneeli == 2 | paneeli == 3 | paneeli == 4), p(99)
bysort year: egen p99_DS_I_lag = pctile(DS_I_lag) if (paneeli == 2 | paneeli == 3 | paneeli == 4), p(99)

drop if D_I > p99_D_I
drop if M_I > p99_M_I
drop if N_I > p99_N_I
drop if DS_I > p99_DS_I
drop if delta_D > Dch_p99
drop if delta_D < Dch_p1

drop if D_I_lag > p99_D_I_lag
drop if M_I_lag > p99_M_I_lag
drop if N_I_lag > p99_N_I_lag
drop if DS_I_lag > p99_DS_I_lag

drop if D_I < 0 | D_I == .
drop if M_I < 0 | M_I == .
drop if N_I < 0 | N_I == .
drop if DS_I < 0 | DS_I == .

drop if I_lag < 0 | I_lag == .

```

```

drop if age < 16

tabstat D_I M_I N_I delta_D DS_I if (FE1 != .), stat(mean p50 sd min max) long col(stat) format(%9.3f)

/* --- FINANCIAL SOPHISTICATION INDEX (FSI) --- */

* Coefficients based on Calvet-Campbell-Sodini (2009)
* Financial variables need to be converted into US dollars using the exchange rate at end-2002
* 1 EUR = $ 1.0487 (31 Dec 2002)

sort year

tabstat cpi, by(year)
/* cpi at 2002 = 104.1858 */

/* disposable income */
gen I_2002 = I_lag*104.1858/cpi
gen I_USD = I_2002*1000*1.0487
gen ln_I_USD = ln(I_USD)
egen mean_ln_I_USD = mean(ln_I_USD), by(year)
egen sd_ln_I_USD = sd(ln_I_USD), by(year)
gen I_FSI = (ln_I_USD - mean_ln_I_USD) / sd_ln_I_USD

gen D_2002 = D_lag*104.1858/cpi
gen D_USD = D_2002*1000*1.0487
gen ln_D_USD = ln(D_USD+1)
egen mean_ln_D_USD = mean(ln_D_USD), by(year)
egen sd_ln_D_USD = sd(ln_D_USD), by(year)
gen D_FSI = (ln_D_USD - mean_ln_D_USD) / sd_ln_D_USD

tabstat I_FSI D_FSI, by(year)
by year: sum I_FSI D_FSI

gen retired = 0
replace retired = 1 if socio == 70 /* Retired */
egen mean_retired = mean(retired), by(year)
replace retired = retired - mean_retired

gen unemployed = 0
replace unemployed = 1 if socio == 81 /* Long-term unemployed */
egen mean_unemployed = mean(unemployed), by(year)
replace unemployed = unemployed - mean_unemployed

gen entrepreneur = 0
replace entrepreneur = 1 if socio == 21 /* Employers and entrepreneurs */
egen mean_entrepreneur = mean(entrepreneur), by(year)
replace entrepreneur = entrepreneur - mean_entrepreneur

gen student = 0
replace student = 1 if socio == 60 /* University and other students */
egen mean_student = mean(student), by(year)
replace student = student - mean_student

```

```

sort konu_u year

gen household_size = .
replace household_size = 1 if rake_lag == 10
replace household_size = 2 if rake_lag > 10 & rake_lag < 30
replace household_size = 3 if rake_lag > 30 & rake_lag < 40
replace household_size = 4 if rake_lag > 40 & rake_lag < 50
replace household_size = 5 if rake_lag > 50 & rake_lag < 60
replace household_size = 6 if rake_lag > 60
egen mean_household_size = mean(household_size), by(year)
egen sd_household_size = sd(household_size), by(year)
replace household_size = (household_size - mean_household_size) / sd_household_size

gen highschool = 0
replace highschool = 1 if degree == 2 /* Secondary-level education */
egen mean_highschool = mean(highschool), by(year)
replace highschool = highschool - mean_highschool

gen post_highschool = 0
replace post_highschool = 1 if degree > 2 /* At least lower-degree tertiary */
egen mean_post_highschool = mean(post_highschool), by(year)
replace post_highschool = post_highschool - mean_post_highschool

gen no_educ_data = 0
replace no_educ_data = 1 if degree == 0 /* Unknown */
egen mean_no_educ_data = mean(no_educ_data), by(year)
replace no_educ_data = no_educ_data - mean_no_educ_data

sort year
by year: sum retired unemployed entrepreneur student
by year: sum household_size highschool post_highschool no_educ_data

gen FSI = -0.673*I_FSI +0.379*D_FSI + 0.313*retired -0.614*unemployed -2.865*entrepreneur +0.243*student -0.012*age_g +0.632*household_size + 0.805*highschool +0.327*post_highschool -1.070*no_educ_data

gen FSI_2 = 0.313*retired -0.614*unemployed -2.865*entrepreneur +0.243*student -0.012*age_g +0.632*household_size + 0.805*highschool +0.327*post_highschool -1.070*no_educ_data

tabstat I D I_lag D_lag I_2002 D_2002 I_USD D_USD if (FE1 != .), stat(n mean p50 sd min max) long col(stat) format(%9.3f)

tabstat I_FSI D_FSI retired unemployed entrepreneur student if (FE1 != .), stat(n mean p50 sd min max) long col(stat) format(%9.3f)

tabstat household_size highschool post_highschool no_educ_data FSI if (FE1 != .), stat(n mean p50 sd min max) long col(stat) format(%9.3f)

table FE1, c(n FSI mean I mean D mean I_lag mean D_lag)
table FE1, c(n FSI mean I_USD mean D_USD mean I_FSI mean D_FSI)
table FE1, c(n FSI mean retired mean unemployed mean entrepreneur mean student)
table FE1, c(n FSI mean household_size mean highschool mean post_highschool mean no_educ_data)
table FE1, c(n FSI mean FSI mean FSI_2 median FSI median FSI_2)

```

```

table FE2, c(n FSI mean FSI mean FSI_2 median FSI median FSI_2)

sort konu_u year

/* ****
/* ** MAIN ANALYSIS: DESCRIPTIVE STATISTICS ** */
/* **** */

/* USE WEIGHTING: [pweight = ykor], if possible, otherwise [aweight = ykor] or [fweight = new_ykor] */
/* tabstat: pweight not allowed, fweight: may not use noninteger frequency weights */

/* TABLE A1: Descriptive statistics */

/* TABLE A1, PANEL A: Main dependent variables */
/* ONLINE APPENDIX, TABLE A1, PANEL A: Dependent variables for robustness tests */

tabstat D_I M_I N_I DS_I over_indebt repayment bills problems resources if (FE1 != .), stat(n mean p50 sd min max)
long col(stat) format(%9.3f)
tabstat D_I M_I N_I DS_I over_indebt repayment bills problems resources if (FE1 != .) [aweight = ykor], stat(n mean
p50 sd min max) long col(stat) format(%9.3f)

/* TABLE A1, PANEL B: Continuous and indicator control micro variables */

sort konu_u year
gen in_change = I - I_lag

reg I I_lag i.year
predict res_I, r /* Residual = measure of income surprises: Note, this is in thousands EUR already */

*weighted
reg I I_lag i.year [pweight = ykor]
predict res_I2, r /* Residual = measure of income surprises: Note, this is in thousands EUR already */

*nolag
reg I i.year
predict res_I3, r /* Residual = measure of income surprises: Note, this is in thousands EUR already */

*nolag & weighted
reg I i.year [pweight = ykor]
predict res_I4, r /* Residual = measure of income surprises: Note, this is in thousands EUR already */

tabstat I I_lag in_change res_I res_I2 res_I3 res_I4 [aweight = ykor], stat(mean) by(year)

*data checking
pwcorr I I_lag
pwcorr I_lag res_I
pwcorr I_lag over_indebt

tabstat age_g gender language just_retired I_lag res_I if (FE1 != .), stat(N mean p50 sd min max) long col(stat)
format(%9.3f)
tabstat age_g gender language tenure just_retired I_lag res_I married degree life family socio region if (FE1 != .)
[aweight = ykor], stat(N mean p50 sd min max) long col(stat) format(%9.3f)

```

```

/* List all exogenous and endogenous variables here that are used in the paper */
/* Macro: Short-term interest rate (nominal), volatility of (nominal) short-term interest rate, unemployment rate,
inflation rate,
real GDP growth, real house price change, maturity of new housing loans, real share price change, volatility of
(nominal) share prices */
/* Control: education, gender, family type (structure), family size, socioeconomic situation, marital status, region
of residence, just retired*/

global rhs2 "i.life i.married i.family i.tenure i.cohorts i.degree i.socio i.region"
global rhs_macro "mrate12 vola12 ur infl gdpr_real house_infl hex_return volahex maturity"
global rhs_control "i.degree gender i.life i.family i.socio just_retired i.married language i.region tenure"

/* TABLE A1, PANEL C: Categorical control variables */

xi, noomit: tabstat $rhs2 if (FE1 != .), stat(mean) col(stat) format(%9.3f) longstub
xi, noomit: tabstat $rhs2 if (FE1 != .) [aweight = ykor], stat(mean) col(stat) format(%9.3f) longstub

/* TABLE A1, PANEL D: Control macro variables */

tabstat $rhs_macro if (FE1 != .), stat(N mean p50 sd min max) long col(stat) format(%9.3f)
tabstat $rhs_macro if (FE1 != .) [aweight = ykor], stat(N mean p50 sd min max) long col(stat) format(%9.3f)

/* ONLINE APPENDIX, TABLE A1, PANEL B: Distributions */

tabstat D_I if (FE1 != . & D_I == 0) [aweight = ykor], stat(N) long col(stat) format(%9.3f)
tabstat D_I if (FE1 != . & D_I > 0 & D_I < 0.5) [aweight = ykor], stat(N) long col(stat) format(%9.3f)
tabstat D_I if (FE1 != . & D_I >= 0.5 & D_I < 1) [aweight = ykor], stat(N) long col(stat) format(%9.3f)
tabstat D_I if (FE1 != . & D_I >= 1 & D_I < 2) [aweight = ykor], stat(N) long col(stat) format(%9.3f)
tabstat D_I if (FE1 != . & D_I >= 2) [aweight = ykor], stat(N) long col(stat) format(%9.3f)

tabstat M_I if (FE1 != . & M_I == 0) [aweight = ykor], stat(N) long col(stat) format(%9.3f)
tabstat M_I if (FE1 != . & M_I > 0 & M_I < 0.5) [aweight = ykor], stat(N) long col(stat) format(%9.3f)
tabstat M_I if (FE1 != . & M_I >= 0.5 & M_I < 1) [aweight = ykor], stat(N) long col(stat) format(%9.3f)
tabstat M_I if (FE1 != . & M_I >= 1 & M_I < 2) [aweight = ykor], stat(N) long col(stat) format(%9.3f)
tabstat M_I if (FE1 != . & M_I >= 2) [aweight = ykor], stat(N) long col(stat) format(%9.3f)

tabstat N_I if (FE1 != . & N_I == 0) [aweight = ykor], stat(N) long col(stat) format(%9.3f)
tabstat N_I if (FE1 != . & N_I > 0 & N_I < 0.5) [aweight = ykor], stat(N) long col(stat) format(%9.3f)
tabstat N_I if (FE1 != . & N_I >= 0.5 & N_I < 1) [aweight = ykor], stat(N) long col(stat) format(%9.3f)
tabstat N_I if (FE1 != . & N_I >= 1 & N_I < 2) [aweight = ykor], stat(N) long col(stat) format(%9.3f)
tabstat N_I if (FE1 != . & N_I >= 2) [aweight = ykor], stat(N) long col(stat) format(%9.3f)

tabstat DS_I if (FE1 != . & DS_I == 0) [aweight = ykor], stat(N) long col(stat) format(%9.3f)
tabstat DS_I if (FE1 != . & DS_I > 0 & DS_I < 0.5) [aweight = ykor], stat(N) long col(stat) format(%9.3f)
tabstat DS_I if (FE1 != . & DS_I >= 0.5 & DS_I < 1) [aweight = ykor], stat(N) long col(stat) format(%9.3f)

/* TABLE 1: Cross-tabulation of expectations and actual outcomes */

tab E A, cell
tab E A [aweight = ykor], cell

/* TABLE 2: Distribution and cross-tabulation of forecast errors */

```

```

/* TABLE 2, Panel A */

tab FE1
tab FE1 [aweight = ykor]
tab FE2
tab FE2 [aweight = ykor]

table FE1, c(mean in_change mean res_I)
table FE1 [aweight = ykor], c(mean in_change mean res_I)
table FE2, c(mean in_change mean res_I)
table FE2 [aweight = ykor], c(mean in_change mean res_I)

table FE1, c(mean in_change mean res_I3)
table FE1 [aweight = ykor], c(mean in_change mean res_I3)
table FE2, c(mean in_change mean res_I3)
table FE2 [aweight = ykor], c(mean in_change mean res_I3)

/* TABLE 2, Panel B */

tab FE1 FE2, cell
tab FE1 FE2 [aweight = ykor], cell

/* TABLE 2, Panel C */

table A, c(mean in_change mean res_I)
table A [aweight = ykor], c(mean in_change mean res_I)

table E, c(mean in_change mean res_I)
table E [aweight = ykor], c(mean in_change mean res_I)

*2 = weighted, 3 = no lag, 4 = weighted & no lag

table A, c(mean in_change mean res_I2)
table A [aweight = ykor], c(mean in_change mean res_I2)

table E, c(mean in_change mean res_I2)
table E [aweight = ykor], c(mean in_change mean res_I2)

table A, c(mean in_change mean res_I3)
table A [aweight = ykor], c(mean in_change mean res_I3)

table E, c(mean in_change mean res_I3)
table E [aweight = ykor], c(mean in_change mean res_I3)

table A, c(mean in_change mean res_I4)
table A [aweight = ykor], c(mean in_change mean res_I4)

table E, c(mean in_change mean res_I4)
table E [aweight = ykor], c(mean in_change mean res_I4)

*Some data checking

table year [pweight = ykor], contents(sum D sum mortgage sum nonmortgage sum I sum asko)

```

```

/* **** MAIN ANALYSIS: DETERMINANTS OF OPTIMISM ** */
/* **** */

egen my_clust = group(region year)

/* --- TABLE 3: FORECAST ERRORS AND INDEBTEDNESS --- */

/* TABLE 3, Panel A */

char FE1[omit] 3

eststo clear
xi: reg D_I i.FE1 [pweight = ykor], vce(cluster my_clust) coeflegend
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg D_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg D_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg D_I i.FE1 D_I_lag $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

esttab, b(%7.3f) se(%7.3f) keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5) stats(N r2) nonumbers mtitles("Model 1"
"Model 2" "Model 3" "Model 4") nogaps nolines
eststo clear

/* ONLINE APPENDIX, TABLE A7, PANEL A: Shocks to income */

char FE1[omit] 3

eststo clear
xi: reg D_I i.FE1 [pweight = ykor], vce(cluster my_clust) coeflegend
test _IFE1_5 - _IFE1_1 = 0

```

```

test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg D_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg D_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g res_I [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg D_I i.FE1 D_I_lag $rhs_macro $rhs_control i.cohorts i.age_g res_I [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

esttab, b(%7.3f) se(%7.3f) keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5) stats(N r2) nonumbers mtitles("Model 1"
"Model 2" "Model 3" "Model 4") nogaps nolines
eststo clear

/* ONLINE APPENDIX, TABLE A5, PANEL A: Mortgage debt to income */

char FE1[omit] 3

eststo clear
xi: reg M_I i.FE1 [pweight = ykor], vce(cluster my_clust) coeflegend
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg M_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg M_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0

```

```

test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg M_I i.FE1 M_I_lag $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

```

```

esttab, b(%7.3f) se(%7.3f) keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5) stats(N r2) nonumbers mtitles("Model 1"
"Model 2" "Model 3" "Model 4") nogaps nolines
eststo clear

```

/\* ONLINE APPENDIX, TABLE A6, PANEL A: Non-mortgage debt to income \*/

```

char FE1[omit] 3

```

```

eststo clear
xi: reg N_I i.FE1 [pweight = ykor], vce(cluster my_clust) coeflegend
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

```

```

xi: reg N_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

```

```

xi: reg N_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

```

```

xi: reg N_I i.FE1 N_I_lag $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

```

```

esttab, b(%7.3f) se(%7.3f) keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5) stats(N r2) nonumbers mtitles("Model 1"
"Model 2" "Model 3" "Model 4") nogaps nolines
eststo clear

```

/\* ONLINE APPENDIX, TABLE A4, PANEL A: Mortgage service to income \*/

```

char FE1[omit] 3

eststo clear
xi: reg DS_I i.FE1 [pweight = ykor], vce(cluster my_clust) coeflegend
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg DS_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg DS_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg DS_I i.FE1 DS_I_lag $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

esttab, b(%7.3f) se(%7.3f) keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5) stats(N r2) nonumbers mtitles("Model 1"
"Model 2" "Model 3" "Model 4") nogaps nolines
eststo clear

/* ONLINE APPENDIX, TABLE A8, PANEL A: Financial sophistication index */

char FE1[omit] 3

eststo clear
xi: reg D_I i.FE1 FSI [pweight = ykor], vce(cluster my_clust) coeflegend
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg D_I i.FE1 FSI $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

```

```

xi: reg D_I i.FE1 FSI $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg D_I i.FE1 D_I_lag FSI $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

esttab, b(%7.3f) se(%7.3f) keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5 FSI) stats(N r2) nonumbers mtitles("Model 1"
"Model 2" "Model 3" "Model 4") nogaps nolines
eststo clear

/* ONLINE APPENDIX, TABLE A9, PANEL A: Debt to lagged income */

char FE1[omit] 3

eststo clear
xi: reg D_lagged_I i.FE1 [pweight = ykor], vce(cluster my_clust) coeflegend
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg D_lagged_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg D_lagged_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

esttab, b(%7.3f) se(%7.3f) keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5) stats(N r2) nonumbers mtitles("Model 1"
"Model 2" "Model 3") nogaps nolines
eststo clear

/* Mortgage debt to lagged income */

char FE1[omit] 3

```

```

eststo clear
xi: reg M_lagged_I i.FE1 [pweight = ykor], vce(cluster my_clust) coeflegend
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg M_lagged_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg M_lagged_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

esttab, b(%7.3f) se(%7.3f) keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5) stats(N r2) nonumbers mtitles("Model 1"
"Model 2" "Model 3") nogaps nolines
eststo clear

/* Non-mortgage debt to lagged income */

char FE1[omit] 3

eststo clear
xi: reg N_lagged_I i.FE1 [pweight = ykor], vce(cluster my_clust) coeflegend
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg N_lagged_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: reg N_lagged_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

```

```

esttab, b(%7.3f) se(%7.3f) keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5) stats(N r2) nonumbers mtitles("Model 1"
"Model 2" "Model 3") nogaps nolines
eststo clear

/* TABLE 3, Panel B */

char FE2[omit] 2

eststo clear
xi: reg D_I i.FE2 [pweight = ykor], vce(cluster my_clust) coeflegend
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg D_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg D_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg D_I i.FE2 D_I_lag $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

esttab, b(%7.3f) se(%7.3f) keep(_IFE2_1 _IFE2_3 _IFE2_4) nonumbers mtitles("Model 1" "Model 2" "Model 3"
"Model 4") stats(N r2) nogaps nolines
eststo clear

/* ONLINE TABLE A7, PANEL B */

char FE2[omit] 2

eststo clear
xi: reg D_I i.FE2 [pweight = ykor], vce(cluster my_clust) coeflegend
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg D_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

```

```

xi: reg D_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g res_I [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg D_I i.FE2 D_I_lag $rhs_macro $rhs_control i.cohorts i.age_g res_I [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

esttab, b(%7.3f) se(%7.3f) keep(_IFE2_1 _IFE2_3 _IFE2_4) nonumbers mtitles("Model 1" "Model 2" "Model 3"
"Model 4") stats(N r2) nogaps nolines
eststo clear

/* ONLINE TABLE A5, PANEL B */

char FE2[omit] 2

eststo clear
xi: reg M_I i.FE2 [pweight = ykor], vce(cluster my_clust) coeflegend
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg M_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg M_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg M_I i.FE2 M_I_lag $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

esttab, b(%7.3f) se(%7.3f) keep(_IFE2_1 _IFE2_3 _IFE2_4) nonumbers mtitles("Model 1" "Model 2" "Model 3"
"Model 4") stats(N r2) nogaps nolines
eststo clear

/* ONLINE TABLE A6, PANEL B */

char FE2[omit] 2

```

```

eststo clear
xi: reg N_I i.FE2 [pweight = ykor], vce(cluster my_clust) coeflegend
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg N_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg N_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg N_I i.FE2 N_I_lag $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

esttab, b(%7.3f) se(%7.3f) keep(_IFE2_1 _IFE2_3 _IFE2_4) nonumbers mtitles("Model 1" "Model 2" "Model 3"
"Model 4") stats(N r2) nogaps nolines
eststo clear

/* ONLINE TABLE A4, PANEL B */

char FE2[omit] 2

eststo clear
xi: reg DS_I i.FE2 [pweight = ykor], vce(cluster my_clust) coeflegend
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg DS_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg DS_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

```

```

xi: reg DS_I i.FE2 DS_I_lag $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

esttab, b(%7.3f) se(%7.3f) keep(_IFE2_1 _IFE2_3 _IFE2_4) nonumbers mtitles("Model 1" "Model 2" "Model 3"
"Model 4") stats(N r2) nogaps nolines
eststo clear

/* ONLINE TABLE A8, PANEL B */

char FE2[omit] 2

eststo clear
xi: reg D_I i.FE2 FSI [pweight = ykor], vce(cluster my_clust) coeflegend
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg D_I i.FE2 FSI $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg D_I i.FE2 FSI $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg D_I i.FE2 FSI D_I_lag $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

esttab, b(%7.3f) se(%7.3f) keep(_IFE2_1 _IFE2_3 _IFE2_4 FSI) nonumbers mtitles("Model 1" "Model 2" "Model 3"
"Model 4") stats(N r2) nogaps nolines
eststo clear

/* ONLINE TABLE A9, PANEL B */

char FE2[omit] 2

eststo clear
xi: reg D_lagged_I i.FE2 [pweight = ykor], vce(cluster my_clust) coeflegend
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

```

```

xi: reg D_lagged_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg D_lagged_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

esttab, b(%7.3f) se(%7.3f) keep(_IFE2_1 _IFE2_3 _IFE2_4) nonumbers mtitles("Model 1" "Model 2" "Model 3")
stats(N r2) nogaps nolines
eststo clear

/* Mortgage debt to lagged income */

char FE2[omit] 2

eststo clear
xi: reg M_lagged_I i.FE2 [pweight = ykor], vce(cluster my_clust) coeflegend
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg M_lagged_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg M_lagged_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

esttab, b(%7.3f) se(%7.3f) keep(_IFE2_1 _IFE2_3 _IFE2_4) nonumbers mtitles("Model 1" "Model 2" "Model 3")
stats(N r2) nogaps nolines
eststo clear

/* Non-mortgage debt to lagged income */

char FE2[omit] 2

eststo clear
xi: reg N_lagged_I i.FE2 [pweight = ykor], vce(cluster my_clust) coeflegend
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0

```

```

eststo

xi: reg N_lagged_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: reg N_lagged_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

esttab, b(%7.3f) se(%7.3f) keep(_IFE2_1 _IFE2_3 _IFE2_4) nonumbers mtitles("Model 1" "Model 2" "Model 3")
stats(N r2) nogaps nolines
eststo clear

/* ONLINE TABLE A3, PANEL A */

*Tobit

* $E(y | y > 0)$ 

char FE1[omit] 3

eststo clear
xi: quietly tobit D_I i.FE1, vce(cluster my_clust) II(0)
estadd margins, predict(e(0,.)) dydx(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: quietly tobit D_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g, vce(cluster my_clust) II(0)
estadd margins, predict(e(0,.)) dydx(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: quietly tobit D_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g I_lag, vce(cluster my_clust) II(0)
estadd margins, predict(e(0,.)) dydx(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: quietly tobit D_I i.FE1 D_I_lag $rhs_macro $rhs_control i.cohorts i.age_g I_lag, vce(cluster my_clust) II(0)
estadd margins, predict(e(0,.)) dydx(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5)

```

```

test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

esttab, cells("margins_b(star fmt(%7.3f))" "margins_se(par fmt(%7.3f))") keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5)
mtitles("Model 1" "Model 2" "Model 3" "Model 4") nonumbers nogaps nolines
eststo clear

/* ONLINE TABLE A2, PANEL A */

*Pr(y > 0)

char FE1[omit] 3

eststo clear
xi: quietly tobit D_I i.FE1, vce(cluster my_clust) ll(0)
estadd margins, predict(p(0,.)) dydx(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: quietly tobit D_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g, vce(cluster my_clust) ll(0)
estadd margins, predict(p(0,.)) dydx(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: quietly tobit D_I i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g I_lag, vce(cluster my_clust) ll(0)
estadd margins, predict(p(0,.)) dydx(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

xi: quietly tobit D_I i.FE1 D_I_lag $rhs_macro $rhs_control i.cohorts i.age_g I_lag, vce(cluster my_clust) ll(0)
estadd margins, predict(p(0,.)) dydx(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5)
test _IFE1_5 - _IFE1_1 = 0
test _IFE1_5 - _IFE1_4 = 0
test _IFE1_1 - _IFE1_2 = 0
test _IFE1_4 - _IFE1_2 = 0
eststo

esttab, cells("margins_b(star fmt(%7.3f))" "margins_se(par fmt(%7.3f))") keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5)
mtitles("Model 1" "Model 2" "Model 3" "Model 4") nonumbers nogaps nolines
eststo clear

```

```

/* ONLINE TABLE A3, PANEL B */

*E(y / y > 0)

char FE2[omit] 2

eststo clear
xi: quietly tobit D_I i.FE2, vce(cluster my_clust) ll(0)
estadd margins, predict(e(0,.)) dydx(_IFE2_1 _IFE2_3 _IFE2_4)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: quietly tobit D_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g, vce(cluster my_clust) ll(0)
estadd margins, predict(e(0,.)) dydx(_IFE2_1 _IFE2_3 _IFE2_4)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: quietly tobit D_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g I_lag, vce(cluster my_clust) ll(0)
estadd margins, predict(e(0,.)) dydx(_IFE2_1 _IFE2_3 _IFE2_4)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: quietly tobit D_I i.FE2 D_I_lag $rhs_macro $rhs_control i.cohorts i.age_g I_lag, vce(cluster my_clust) ll(0)
estadd margins, predict(e(0,.)) dydx(_IFE2_1 _IFE2_3 _IFE2_4)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

esttab, cells("margins_b(star fmt(%7.3f))" "margins_se(par fmt(%7.3f))" "keep(_IFE2_1 _IFE2_3 _IFE2_4)" "mtitles("Model 1" "Model 2" "Model 3" "Model 4")" "nonumbers" "nogaps" "nolines")
eststo clear

/* ONLINE TABLE A2, PANEL B */

*Pr(y > 0)

char FE2[omit] 2

eststo clear
xi: quietly tobit D_I i.FE2, vce(cluster my_clust) ll(0)
estadd margins, predict(p(0,.)) dydx(_IFE2_1 _IFE2_3 _IFE2_4)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

```

```

xi: quietly tobit D_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g, vce(cluster my_clust) ll(0)
estadd margins, predict(p(0,.)) dydx(_IFE2_1 _IFE2_3 _IFE2_4)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: quietly tobit D_I i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g I_lag, vce(cluster my_clust) ll(0)
estadd margins, predict(p(0,.)) dydx(_IFE2_1 _IFE2_3 _IFE2_4)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

xi: quietly tobit D_I i.FE2 D_I_lag $rhs_macro $rhs_control i.cohorts i.age_g I_lag, vce(cluster my_clust) ll(0)
estadd margins, predict(p(0,.)) dydx(_IFE2_1 _IFE2_3 _IFE2_4)
test _IFE2_4 - _IFE2_1 = 0
test _IFE2_3 - _IFE2_1 = 0
test _IFE2_4 - _IFE2_3 = 0
eststo

esttab, cells("margins_b(star fmt(%7.3f))" "margins_se(par fmt(%7.3f))") keep(_IFE2_1 _IFE2_3 _IFE2_4)
mtitles("Model 1" "Model 2" "Model 3" "Model 4") nonumbers nogaps nolines
eststo clear

/* --- TABLE 4: FORECAST ERRORS AND OVERINDEBTEDNESS --- */

/* TABLE 4, PANEL A */

char FE1[omit] 3
eststo clear
xi: regress over_indebt i.FE1 [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress over_indebt i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress over_indebt i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress over_indebt i.FE1 FSI $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster my_clust)
eststo
esttab, b(%7.3f) se(%7.3f) keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5 FSI) nonumbers mtitles("Model 4A1" "Model 4A2" "Model 4A3" "Model4A4") stats(N r2) nogaps nolines
eststo clear

*Shocks to income

char FE1[omit] 3
eststo clear
xi: regress over_indebt i.FE1 [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress over_indebt i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
eststo

```

```

xi: regress over_indebt i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g res_I [pweight = ykor], vce(cluster
my_clust)
eststo
esttab, b(%7.3f) se(%7.3f) keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5) nonumbers mtitles("Model 4A1" "Model 4A2"
"Model 4A3") stats(N r2) nogaps nolines
eststo clear

*Logit

char FE1[omit] 3

eststo clear
xi: quietly logit over_indebt i.FE1 [pweight = ykor], vce(cluster my_clust)
estadd margins [pweight = ykor], dydx(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5)
esttab, cells("margins_b(star fmt(%7.3f))" "margins_se(par fmt(%7.3f))") keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5)
nonumbers nogaps nolines
eststo

xi: quietly logit over_indebt i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
estadd margins [pweight = ykor], dydx(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5)
eststo

xi: quietly logit over_indebt i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster
my_clust) iter(100) /* convergence */
estadd margins [pweight = ykor], dydx(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5)
eststo

esttab, cells("margins_b(star fmt(%7.3f))" "margins_se(par fmt(%7.3f))") keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5)
stats(N) nonumbers mtitles("Model 1" "Model 2" "Model 3") nogaps nolines
eststo clear

/* TABLE 4, PANEL B */

char FE2[omit] 2
eststo clear
xi: regress over_indebt i.FE2 [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress over_indebt i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress over_indebt i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster
my_clust)
eststo
xi: regress over_indebt i.FE2 FSI $rhs_macro $rhs_control i.cohorts i.age_g I_lag [pweight = ykor], vce(cluster
my_clust)
eststo
esttab, b(%7.3f) se(%7.3f) keep(_IFE2_1 _IFE2_3 _IFE2_4 FSI) nonumbers mtitles("Model 4B1" "Model 4B2"
"Model 4B3" "Model 4B4") stats(N r2) nogaps nolines
eststo clear

*Shocks to income

char FE2[omit] 2
eststo clear

```

```

xi: regress over_indebt i.FE2 [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress over_indebt i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress over_indebt i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g res_I [pweight = ykor], vce(cluster my_clust)
eststo
esttab, b(%7.3f) se(%7.3f) keep(_IFE2_1 _IFE2_3 _IFE2_4) nonumbers mtitles("Model 4B1" "Model 4B2" "Model 4B3") stats(N r2) nogaps nolines
eststo clear

*Logit

char FE2[omit] 2

eststo clear
xi: quietly logit over_indebt i.FE2 [pweight = ykor], vce(cluster my_clust)
estadd margins [pweight = ykor], dydx(_IFE2_1 _IFE2_3 _IFE2_4)
eststo

xi: quietly logit over_indebt i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g [pweight = ykor], vce(cluster my_clust)
estadd margins [pweight = ykor], dydx(_IFE2_1 _IFE2_3 _IFE2_4)
eststo

xi: quietly logit over_indebt i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust) iter(100) /* convergence */
estadd margins [pweight = ykor], dydx(_IFE2_1 _IFE2_3 _IFE2_4)
eststo

esttab, cells("margins_b(star fmt(%7.3f))" "margins_se(par fmt(%7.3f))") keep(_IFE2_1 _IFE2_3 _IFE2_4) stats(N)
nonumbers mtitles("Model 1" "Model 2" "Model 3") nogaps nolines
eststo clear

/* TABLE 4, PANEL C */

/* over_indebt_lag as an extra explanatory variable */

char FE1[omit] 3

eststo clear
xi: regress over_indebt i.FE1 over_indebt_lag [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress over_indebt i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g over_indebt_lag [pweight = ykor],
vce(cluster my_clust)
eststo
xi: regress over_indebt i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g l_lag over_indebt_lag [pweight = ykor],
vce(cluster my_clust)
eststo
xi: regress over_indebt i.FE1 FSI $rhs_macro $rhs_control i.cohorts i.age_g l_lag over_indebt_lag [pweight = ykor],
vce(cluster my_clust)
eststo
esttab, b(%7.3f) se(%7.3f) keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5 FSI over_indebt_lag) nonumbers mtitles("Model 4C1" "Model 4C2" "Model 4C3" "Model 4C4") stats(N r2) nogaps nolines

```

```

eststo clear

/* TABLE 4, PANEL D */

/* over_indebt_lag as an extra explanatory variable */

char FE2[omit] 2

eststo clear
xi: regress over_indebt i.FE2 over_indebt_lag [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress over_indebt i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g over_indebt_lag [pweight = ykor],
vce(cluster my_clust)
eststo
xi: regress over_indebt i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g l_lag over_indebt_lag [pweight = ykor],
vce(cluster my_clust)
eststo
xi: regress over_indebt i.FE2 FSI $rhs_macro $rhs_control i.cohorts i.age_g l_lag over_indebt_lag [pweight = ykor],
vce(cluster my_clust)
eststo
esttab, b(%7.3f) se(%7.3f) keep(_IFE2_1 _IFE2_3 _IFE2_4 FSI over_indebt_lag) nonumbers mtitles("Model 4D1"
"Model 4D2" "Model 4D3" "Model 4D4") stats(N r2) nogaps nolines
eststo clear

/* --- TABLE 5: FORECAST ERRORS AND ALTERNATIVE INDICATORS OF OVERINDEBTEDNESS --- */

pwcorr l_lag res_l
pwcorr res_l res_l3
pwcorr l_lag res_l3

/* TABLE 5, PANEL A */

char FE1[omit] 3
eststo clear
xi: regress repayment i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress bills i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress problems i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress resources i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
eststo
esttab, b(%7.3f) se(%7.3f) keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5) nonumbers mtitles("Model 5A1" "Model 5A2"
"Model 5A3" "Model 5A4") stats(N r2) nogaps nolines
eststo clear

*FSI
char FE1[omit] 3
eststo clear
xi: regress repayment i.FE1 FSI $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster
my_clust)
eststo
xi: regress bills i.FE1 FSI $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)

```

```

eststo
xi: regress problems i.FE1 FSI $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress resources i.FE1 FSI $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
eststo
esttab, b(%7.3f) se(%7.3f) keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5 FSI) nonumbers mtitles("Model 5A1" "Model 5A2" "Model 5A3" "Model 5A4") stats(N r2) nogaps nolines
eststo clear

*Shocks to income
char FE1[omit] 3
eststo clear
xi: regress repayment i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g res_I [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress bills i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g res_I [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress problems i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g res_I [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress resources i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g res_I [pweight = ykor], vce(cluster my_clust)
eststo
esttab, b(%7.3f) se(%7.3f) keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5) nonumbers mtitles("Model 5A1" "Model 5A2" "Model 5A3" "Model 5A4") stats(N r2) nogaps nolines
eststo clear

*Logit

char FE1[omit] 3

eststo clear
xi: quietly logit repayment i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
estadd margins [pweight = ykor], dydx(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5)
eststo

xi: quietly logit bills i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
iter(100) /* convergence */
estadd margins [pweight = ykor], dydx(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5)
eststo

xi: quietly logit problems i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
iter(100) /* convergence */
estadd margins [pweight = ykor], dydx(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5)
eststo

xi: quietly logit resources i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
estadd margins [pweight = ykor], dydx(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5)
eststo

esttab, cells("margins_b(star fmt(%7.3f))" "margins_se(par fmt(%7.3f))") keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5) stats(N) nonumbers mtitles("Model 1" "Model 2" "Model 3" "Model 4") nogaps nolines

```

```

eststo clear

/* TABLE 5, PANEL B */

char FE2[omit] 2
eststo clear
xi: regress repayment i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress bills i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress problems i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress resources i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
eststo
esttab, b(%7.3f) se(%7.3f) keep(_IFE2_1 _IFE2_3 _IFE2_4) nonumbers mtitles("Model 5B1" "Model 5B2" "Model 5B3" "Model 5B4") stats(N r2) nogaps nolines
eststo clear

*FSI
char FE2[omit] 2
eststo clear
xi: regress repayment i.FE2 FSI $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress bills i.FE2 FSI $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress problems i.FE2 FSI $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress resources i.FE2 FSI $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
eststo
esttab, b(%7.3f) se(%7.3f) keep(_IFE2_1 _IFE2_3 _IFE2_4 FSI) nonumbers mtitles("Model 5B1" "Model 5B2" "Model 5B3" "Model 5B4") stats(N r2) nogaps nolines
eststo clear

*Shocks to income
char FE2[omit] 2
eststo clear
xi: regress repayment i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g res_I [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress bills i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g res_I [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress problems i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g res_I [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress resources i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g res_I [pweight = ykor], vce(cluster my_clust)
eststo
esttab, b(%7.3f) se(%7.3f) keep(_IFE2_1 _IFE2_3 _IFE2_4) nonumbers mtitles("Model 5B1" "Model 5B2" "Model 5B3" "Model 5B4") stats(N r2) nogaps nolines
eststo clear

*Logit

```

```

char FE2[omit] 2

eststo clear
xi: quietly logit repayment i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
estadd margins [pweight = ykor], dydx(_IFE2_1 _IFE2_3 _IFE2_4)
eststo

xi: quietly logit bills i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust) iter(100) /* convergence */
estadd margins [pweight = ykor], dydx(_IFE2_1 _IFE2_3 _IFE2_4)
eststo

xi: quietly logit problems i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust) iter(100) /* convergence */
estadd margins [pweight = ykor], dydx(_IFE2_1 _IFE2_3 _IFE2_4)
eststo

xi: quietly logit resources i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g l_lag [pweight = ykor], vce(cluster my_clust)
estadd margins [pweight = ykor], dydx(_IFE2_1 _IFE2_3 _IFE2_4)
eststo

esttab, cells("margins_b(star fmt(%7.3f))" "margins_se(par fmt(%7.3f))") keep(_IFE2_1 _IFE2_3 _IFE2_4) stats(N)
nonumbers mtitles("Model 1" "Model 2" "Model 3" "Model 4") nogaps nolines
eststo clear

/* TABLE 5, PANEL C */

/* lagged dependent variable as an extra explanatory variable */

char FE1[omit] 3
eststo clear
xi: regress repayment i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g l_lag lag_repayment [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress bills i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g l_lag lag_bills [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress problems i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g l_lag lag_problems [pweight = ykor], vce(cluster my_clust)
eststo
xi: regress resources i.FE1 $rhs_macro $rhs_control i.cohorts i.age_g l_lag lag_resources [pweight = ykor], vce(cluster my_clust)
eststo
esttab, b(%7.3f) se(%7.3f) keep(_IFE1_1 _IFE1_2 _IFE1_4 _IFE1_5 lag_repayment lag_bills lag_problems lag_resources) nonumbers mtitles("Model 5C1" "Model 5C2" "Model 5C3" "Model 5C4") stats(N r2) nogaps nolines
eststo clear

* TABLE 5, PANEL D *

/* lagged dependent variable as an extra explanatory variable */

```

```
char FE2[omit] 2
eststo clear
xi: regress repayment i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g l_lag lag_repayment [pweight = ykor],
vce(cluster my_clust)
eststo
xi: regress bills i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g l_lag lag_bills [pweight = ykor], vce(cluster
my_clust)
eststo
xi: regress problems i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g l_lag lag_problems [pweight = ykor],
vce(cluster my_clust)
eststo
xi: regress resources i.FE2 $rhs_macro $rhs_control i.cohorts i.age_g l_lag lag_resources [pweight = ykor],
vce(cluster my_clust)
eststo
esttab, b(%7.3f) se(%7.3f) keep(_IFE2_1 _IFE2_3 _IFE2_4 lag_repayment lag_bills lag_problems lag_resources)
nonumbers mtitles("Model 5D1" "Model 5D2" "Model 5D3" "Model 5D4") stats(N r2) nogaps nolines
eststo clear
```

```
/* --- End of file --- */
```

```
* * * * *
```

**End of code**

```
* * * * *
```