```
      name:  <unnamed>
       log:  /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Tables/impac
> t_regs.smcl
  log type:  smcl
 opened on:  16 Jul 2020, 21:44:37

1 .
2 . * LPs
3 . local j = 0

4 . foreach shock in mp1 { // path lsap {
    2.         local ++j
    3.         if `j' == 1 local shk "Target"
    4.         if `j' == 2 local shk "Path"
    5.         if `j' == 3 local shk "LSAP"
    6.
5 .         foreach group in 0 1 {
    7.                 if `group' == 0 {
    8.                         local grp "AE"
    9.                         local vars nom sftsyn // dyp dtp
   10.                 }
   11.                 else {
   12.                         local grp "EM"
   13.                         local vars nom sftsyn // dyp dtp usyc syn rho phi
   14.                 }
   15.
6 .                 foreach t in 24 120 { // 3 6 12 24 60 120  {
   16.                         foreach v in `vars' {
   17.
7 .                                 // variables to store the betas, standard er
> rors and confidence intervals
8 .                                 capture {
   18.                                    gen b_`v'`t'm   = .
   19.                                    gen se_`v'`t'm  = .
   20.                                    gen ll1_`v'`t'm = .
   21.                                    gen ul1_`v'`t'm = .
   22.                                    gen ll2_`v'`t'm = .
   23.                                    gen ul2_`v'`t'm = .
   24.                                    }
   25.
```

```
 9 .                                  // controls
10 .                                  local ctrl`v'`t'm l(1/`maxlag').d`v'`t'm l(1
   > /`maxlag').fx
    26.
11 .                                  forvalues i = 0/`horizon' {
    27.                                     // response variables
12 .                                    capture gen `v'`t'm`i' = (f`i'.`v'`t
   > 'm - l.`v'`t'm)
    28.
13 .                                    // conditions
14 .                                    local condition em == `group' // !in
   > list(cty,"AUD","NZD") // & region == 3
    29.
15 . //                                 // test for cross-sectional independ
   > ence
16 . //                                 if inlist(`i',0,30,60,90) {
17 . //                                         quiet xtreg `v'`t'm`i' `shoc
   > k' `ctrl`v'`t'm' if `condition', fe // exclude meeting after 9/11
18 . //                                         xtcsd, pesaran abs
19 . //                                 }
20 .
21 .                                    // one regression for each horizon
22 .                                    if `i' == 0 xtreg `v'`t'm`i' `shock'
   >  `ctrl`v'`t'm' if `condition', fe level(95) cluster($id)
   > // report on-impact effect
    30. //                                 if `i' == 0 xtscc `v'`t'm`i' `sho
   > ck' `ctrl`v'`t'm' if `condition', fe level(95) lag(4)
23 .                                    quiet xtreg `v'`t'm`i' `shock' `ctrl
   > `v'`t'm' if `condition', fe level(95) cluster($id)
    31. //                                 quiet xtscc `v'`t'm`i' `shock' `c
   > trl`v'`t'm' if `condition', fe level(95)  lag(4)
24 .                                    capture {
    32.                                    replace b_`v'`t'm  = _b[`shock']
   > if _n == `i'+1
    33.                                    replace se_`v'`t'm = _se[`shock']
   >  if _n == `i'+1
    34.
```

```
25 .                                        // confidence intervals
26 .                                        matrix R = r(table)
    35.                                        replace ll1_`v'`t'm = el(matrix(R
   > ),rownumb(matrix(R),"ll"),colnumb(matrix(R),"`shock'")) if _n == `i'+1
    36.                                        replace ul1_`v'`t'm = el(matrix(R
   > ),rownumb(matrix(R),"ul"),colnumb(matrix(R),"`shock'")) if _n == `i'+1
    37.                                        quiet xtreg, level(90)  // to get
   >  90% CI
    38. //                                     quiet xtscc, level(90)  // to get
   >  90% CI
27 .                                        matrix R = r(table)
    39.                                        replace ll2_`v'`t'm = el(matrix(R
   > ),rownumb(matrix(R),"ll"),colnumb(matrix(R),"`shock'")) if _n == `i'+1
    40.                                        replace ul2_`v'`t'm = el(matrix(R
   > ),rownumb(matrix(R),"ul"),colnumb(matrix(R),"`shock'")) if _n == `i'+1
    41.
28 .                                        drop `v'`t'm`i'
    42.                                        }
    43.                                  }                     // horizon
    44.
29 .                                  // graph
30 .                                  twoway  (rarea ll1_`v'`t'm ul1_`v'`t'm days,
   >  fcolor(gs12) lcolor(white) lpattern(solid)) ///
   >                                                 (rarea ll2_`v'`t'm ul2_`v'`t
   > 'm days, fcolor(gs10) lcolor(white) lpattern(solid)) ///
   >                                                 (line b_`v'`t'm days, lcolor
   > (black) lpattern(solid) lwidth(thick)) ///
   >                                                 (line zero days, lcolor(blac
   > k)), ///
   >                                  title(`: variable label `v'`t'm', color(blac
   > k) size(medium)) ///
   >                                  ytitle("Basis Points", size(medsmall)) xtitl
   > e("Days", size(medsmall)) ylabel(-1(1)5) xlabel(10(20)90) ///
   >                                  graphregion(color(white)) plotregion(color(w
   > hite)) ///
   >                                  legend(off) name(`v'`t'm, replace)
    45.                                  graph export $pathfigs/`shk'/`grp'/`v'`t'
   > m.eps, replace
    46.
```

```
31 .                                local graphs`shock'`grp'`t' `graphs`shock'`g
   > rp'`t'' `v'`t'm
    47.                                drop *_`v'`t'm                          /
   > / b_, se_ and confidence intervals
    48.                           }                       // yield component
    49.
32 .                graph combine `graphs`shock'`grp'`t'', rows(1) ycommon ///
   >                title("`shock' `grp' `t'm")
    50.                   graph export $pathfigs/`shk'/`grp'/`shk'`grp'`v'`t'm.eps,
   >  replace
    51.
33 .                graph drop _all
    52.                   }                                 // tenor
    53.         }                                           // AE or EM
    54. }                                                   // shock

Fixed-effects (within) regression               Number of obs     =      1,620
Group variable: imf                             Number of groups  =         10

R-sq:                                           Obs per group:
     within  = 0.0360                                         min =        162
     between = 0.0810                                         avg =      162.0
     overall = 0.0332                                         max =        162

                                                F(3,9)            =      12.99
corr(u_i, Xb)  = -0.2523                        Prob > F          =     0.0013

                                    (Std. Err. adjusted for 10 clusters in imf)
------------------------------------------------------------------------------
             |               Robust
     nom24m0 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         mp1 |   .1327461   .0237721     5.58   0.000     .0789699    .1865223

     dnom24m |
         L1. |  -.014274   .0532617    -0.27   0.795    -.1347604    .1062124

          fx |
         L1. |   .012997   .0035739     3.64   0.005     .0049122    .0210818

       _cons |  -.4462629   .0402733   -11.08   0.000    -.5373675   -.3551582
-------------+----------------------------------------------------------------
     sigma_u |  .49099224
     sigma_e |  4.8910133
         rho |  .00997693   (fraction of variance due to u_i)
------------------------------------------------------------------------------

(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Target/
> AE/nom24m.eps written in EPS format)
```

```
Fixed-effects (within) regression               Number of obs      =       1,507
Group variable: imf                             Number of groups   =          10

R-sq:                                           Obs per group:
     within  = 0.3407                                         min =         145
     between = 0.1046                                         avg =       150.7
     overall = 0.2647                                         max =         159

                                                F(3,9)             =      237.95
corr(u_i, Xb)  = -0.4508                        Prob > F           =      0.0000

                                         (Std. Err. adjusted for 10 clusters in imf)
```

sftsyn24m0	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
mp1	.2679217	.0655859	4.09	0.003	.1195561	.4162874
dsftsyn24m L1.	-.5421116	.0246405	-22.00	0.000	-.5978524	-.4863708
fx L1.	-.097033	.0390755	-2.48	0.035	-.1854279	-.008638
_cons	.4854045	.5538978	0.88	0.404	-.7675994	1.738408
sigma_u	3.4528349					
sigma_e	8.7870389					
rho	.13375426	(fraction of variance due to u_i)				

```
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> arget/AE/sftsyn24m.eps not found)
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> AE/sftsyn24m.eps written in EPS format)
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> AE/TargetAE24m.eps written in EPS format)

Fixed-effects (within) regression               Number of obs      =       1,620
Group variable: imf                             Number of groups   =          10

R-sq:                                           Obs per group:
     within  = 0.0081                                         min =         162
     between = 0.1344                                         avg =       162.0
     overall = 0.0084                                         max =         162

                                                F(3,9)             =        4.47
corr(u_i, Xb)  = 0.0212                         Prob > F           =      0.0349
```

(Std. Err. adjusted for **10** clusters in imf)

nom120m0	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
mp1	**.0321152**	**.019815**	**1.62**	**0.140**	**-.0127095**	**.07694**
dnom120m L1.	**-.1060021**	**.0429891**	**-2.47**	**0.036**	**-.2032501**	**-.0087541**
fx L1.	**.0010265**	**.0040411**	**0.25**	**0.805**	**-.008115**	**.010168**
_cons	**-.3600318**	**.044057**	**-8.17**	**0.000**	**-.4596956**	**-.260368**
sigma_u	**.31601234**					
sigma_e	**5.6626867**					
rho	**.00310465**	(fraction of variance due to u_i)				

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> AE/nom120m.eps written in EPS format)

Fixed-effects (within) regression — Number of obs = **1,507**
Group variable: **imf** — Number of groups = **10**

R-sq: — Obs per group:
within = **0.3191** — min = **145**
between = **0.1196** — avg = **150.7**
overall = **0.2882** — max = **159**

F(**3,9**) = **532.90**
corr(u_i, Xb) = **-0.2945** — Prob > F = **0.0000**

(Std. Err. adjusted for **10** clusters in imf)

sftsyn120m0	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
mp1	**-.0801234**	**.0565955**	**-1.42**	**0.191**	**-.2081513**	**.0479044**
dsftsyn120m L1.	**-.6285277**	**.0278667**	**-22.55**	**0.000**	**-.6915665**	**-.5654888**
fx L1.	**-.0595275**	**.0298827**	**-1.99**	**0.078**	**-.1271268**	**.0080718**
_cons	**.1501039**	**.4097593**	**0.37**	**0.723**	**-.7768361**	**1.077044**
sigma_u	**2.0787032**					

```
     sigma_e |  9.0259637
         rho |  .05036783   (fraction of variance due to u_i)
------------------------------------------------------------------------------

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> arget/AE/sftsyn120m.eps not found)
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> AE/sftsyn120m.eps written in EPS format)
(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Target/
> AE/TargetAE120m.eps written in EPS format)

Fixed-effects (within) regression               Number of obs     =      1,997
Group variable: imf                             Number of groups  =         15

R-sq:                                           Obs per group:
     within  = 0.0142                                         min =         69
     between = 0.2869                                         avg =      133.1
     overall = 0.0132                                         max =        162

                                                F(3,14)           =      69.46
corr(u_i, Xb)  = -0.6870                        Prob > F          =     0.0000

                                    (Std. Err. adjusted for 15 clusters in imf)
------------------------------------------------------------------------------
             |               Robust
     nom24m0 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         mp1 |   .1604417   .0402129     3.99   0.001     .0741936    .2466897

     dnom24m |
         L1. |   -.097411   .1627771    -0.60   0.559    -.4465332    .2517113

          fx |
         L1. |  -.0008349   .0000938    -8.90   0.000    -.0010359   -.0006338

       _cons |   .4309796   .0731784     5.89   0.000     .2740275    .5879316
-------------+----------------------------------------------------------------
     sigma_u |  1.9457594
     sigma_e |   11.85006
         rho |  .02625326   (fraction of variance due to u_i)
------------------------------------------------------------------------------

(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Target/
> EM/nom24m.eps written in EPS format)

Fixed-effects (within) regression               Number of obs     =      1,835
Group variable: imf                             Number of groups  =         15
```

```
R-sq:                                           Obs per group:
     within  = 0.0573                                         min =       100
     between = 0.4499                                         avg =     122.3
     overall = 0.0415                                         max =       159

                                                F(3,14)           =     85.61
corr(u_i, Xb)  = -0.7627                        Prob > F          =    0.0000

                                    (Std. Err. adjusted for 15 clusters in imf)
------------------------------------------------------------------------------
             |               Robust
  sftsyn24m0 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         mp1 |      1.2814   .4299004     2.98   0.010     .3593557    2.203445
             |
  dsftsyn24m |
         L1. |    .2468658   .3445629     0.72   0.485    -.4921481    .9858797
             |
          fx |
         L1. |   -.0031815   .0004718    -6.74   0.000    -.0041934   -.0021697
             |
       _cons |    2.166712   .3251273     6.66   0.000     1.469383     2.86404
-------------+----------------------------------------------------------------
     sigma_u |   6.9634209
     sigma_e |   26.678738
         rho |   .06378112   (fraction of variance due to u_i)
------------------------------------------------------------------------------
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> arget/EM/sftsyn24m.eps not found)
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> EM/sftsyn24m.eps written in EPS format)
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> EM/TargetEM24m.eps written in EPS format)

Fixed-effects (within) regression               Number of obs     =      1,997
Group variable: imf                             Number of groups  =         15

R-sq:                                           Obs per group:
     within  = 0.0462                                         min =         69
     between = 0.2449                                         avg =     133.1
     overall = 0.0412                                         max =       162

                                                F(3,14)           =      3.04
corr(u_i, Xb)  = -0.1468                        Prob > F          =    0.0641
```

(Std. Err. adjusted for **15** clusters in imf)

nom120m0	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
mp1	**.1317189**	**.0637456**	**2.07**	**0.058**	**-.0050018**	**.2684396**
dnom120m L1.	**-.1909708**	**.1374183**	**-1.39**	**0.186**	**-.4857038**	**.1037621**
fx L1.	**-.0002284**	**.0000958**	**-2.39**	**0.032**	**-.0004338**	**-.0000231**
_cons	**-.447046**	**.111474**	**-4.01**	**0.001**	**-.6861339**	**-.2079581**
sigma_u	**1.707649**					
sigma_e	**14.601305**					
rho	**.01349317**	(fraction of variance due to u_i)				

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> EM/nom120m.eps written in EPS format)

Fixed-effects (within) regression — Number of obs = **1,835**
Group variable: **imf** — Number of groups = **15**

R-sq: — Obs per group:
within = **0.1814** — min = **100**
between = **0.4284** — avg = **122.3**
overall = **0.1489** — max = **159**

F(**3,14**) = **59.50**
corr(u_i, Xb) = **-0.5241** — Prob > F = **0.0000**

(Std. Err. adjusted for **15** clusters in imf)

sftsyn120m0	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
mp1	**.2056001**	**.1278822**	**1.61**	**0.130**	**-.0686798**	**.4798801**
dsftsyn120m L1.	**-.5046432**	**.1397231**	**-3.61**	**0.003**	**-.8043195**	**-.2049668**
fx L1.	**-.0022422**	**.0005896**	**-3.80**	**0.002**	**-.0035067**	**-.0009776**
_cons	**1.620998**	**.8048751**	**2.01**	**0.064**	**-.1052876**	**3.347283**
sigma_u	**5.1650724**					

```
     sigma_e │  21.288134
         rho │  .05559502   (fraction of variance due to u_i)
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> arget/EM/sftsyn120m.eps not found)
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> EM/sftsyn120m.eps written in EPS format)
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> EM/TargetEM120m.eps written in EPS format)

34 .
35 . log close
       name:  <unnamed>
        log:  /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Tables/impac
> t_regs.smcl
  log type:  smcl
 closed on:  16 Jul 2020, 21:53:37
──────────────────────────────────────────────────────────────────────────────
```