
```

        name: <unnamed>
        log: /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Tables/impac
> t_regs.smcl
    log type: smcl
    opened on: 25 Jul 2020, 13:33:41

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 sftnom sftsyn sftrho sftphi // nom syn
> dyp dtp sftdyp sftdtp
    10.             }
    11.             else {
    12.                 local grp "EM"
    13.                 local vars sftnom sftsyn sftrho sftphi // nom 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 l11_`v'`t'm = .
    21.                     gen ul1_`v'`t'm = .
    22.                     gen l12_`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 - 1.`v'`t'm)
    28.
13 .                                    // conditions
14 .                                    local condition em == `group' & date
    > > td(1jan2004) & date < td(1jan2016) // !inlist(cty,"AUD","NZD") // & regio
    > n == 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($id)
    > // report on-impact effect
    30. //                                if `i' == 0 xtscd `v'`t'm`i' `sho
    > ck' `ctrl`v'`t'm' if `condition', fe level(95) lag(4)
23 .                                quiet xtreg `v'`t'm`i' `shock' `ctrl
    > `v'`t'm' if `condition', fe level(95) cluster($id)
    31. //                                quiet xtscd `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 l11_`v'`t'm = el(matrix(R
> ),rownumb(matrix(R),"l1"),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 xtsc, level(90) // to get
> 90% CI
27 .                                matrix R = r(table)
    39.                                replace l12_`v'`t'm = el(matrix(R
> ),rownumb(matrix(R),"l1"),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 l11_`v'`t'm ul1_`v'`t'm days,
> fcolor(gs12) lcolor(white) lpattern(solid)) ///
>                                (rarea l12_`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   =      1,030
Group variable: imf                   Number of groups =       10

```

```

R-sq:                                Obs per group:
    within = 0.0590                      min =      103
    between = 0.1734                     avg  =     103.0
    overall = 0.0558                     max  =      103

```

```

                                F(3,9)      =      19.79
corr(u_i, Xb) = -0.0990           Prob > F      =      0.0003

```

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

sftnom24m0	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
mp1	.1942655	.0419131	4.63	0.001	.0994513	.2890796
dsftnom24m						
L1.	.074482	.0528761	1.41	0.193	-.045132	.1940959
fx						
L1.	-.0058693	.001678	-3.50	0.007	-.0096652	-.0020734
_cons	-.3082439	.034726	-8.88	0.000	-.3867995	-.2296883
sigma_u	.46258238					
sigma_e	4.9641876					
rho	.00860849	(fraction of variance due to u_i)				

```

(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Target/
> AE/sftnom24m.eps written in EPS format)

```

```

Fixed-effects (within) regression               Number of obs   =       1,030
Group variable: imf                          Number of groups =        10

R-sq:                                         Obs per group:
    within = 0.4284                             min =          103
    between = 0.2051                            avg =       103.0
    overall = 0.4277                             max =          103

                                         F(3,9)          =       305.44
corr(u_i, Xb) = -0.0159                      Prob > F         =       0.0000

```

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

sftsyn24m0	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
mp1	.5764511	.0397352	14.51	0.000	.4865638	.6663384
dsftsyn24m L1.	-.4982708	.0212505	-23.45	0.000	-.5463428	-.4501989
fx L1.	.0144628	.0129491	1.12	0.293	-.0148301	.0437556
_cons	-.5209092	.1668507	-3.12	0.012	-.8983517	-.1434667
sigma_u	.55150915					
sigma_e	9.0962296					
rho	.0036626	(fraction of variance due to u_i)				

(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Target/
> AE/sftsyn24m.eps written in EPS format)

```

Fixed-effects (within) regression               Number of obs   =       1,030
Group variable: imf                          Number of groups =        10

R-sq:                                         Obs per group:
    within = 0.1271                             min =          103
    between = 0.1406                            avg =       103.0
    overall = 0.1254                             max =          103

                                         F(3,9)          =       26.07
corr(u_i, Xb) = -0.1000                      Prob > F         =       0.0001

```

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

sftrho24m0	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
mpl	.2799321	.0453065	6.18	0.000	.1774416	.3824225
dsftrho24m L1.	-.1565159	.035783	-4.37	0.002	-.2374626	-.0755693
fx L1.	.0175663	.0049638	3.54	0.006	.0063375	.0287951
_cons	-.5613288	.1010324	-5.56	0.000	-.7898799	-.3327777
sigma_u	.63087462					
sigma_e	6.5737321					
rho	.009126	(fraction of variance due to u_i)				

```
(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Target/
> AE/sftrho24m.eps written in EPS format)
```

Fixed-effects (within) regression	Number of obs	=	1,030
Group variable: imf	Number of groups	=	10

R-sq:		Obs per group:	
within	= 0.4505	min	= 103
between	= 0.0486	avg	= 103.0
overall	= 0.4485	max	= 103

corr(u i, Xb)	= -0.0436	F(3,9)	= 287.34
		Prob > F	= 0.0000

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

sftphi24m0	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
mp1	-.2498459	.0589372	-4.24	0.002	-.3831712	-.1165207
dsftphi24m						
l1.	-.601869	.0316847	-19.00	0.000	-.6735447	-.5301933
fx						
l1.	-.0172842	.0111938	-1.54	0.157	-.0426063	.0080379
_cons	.1360908	.1222221	1.11	0.294	-.1403949	.4125764
sigma u	.6591753					

```
(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Target/
> AE/sftphi24m.eps written in EPS format)
(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Target/
> AE/TargetAE24m.eps written in EPS format)
```

R-sq:		Obs per group:	
within	= 0.0201	min	= 103
between	= 0.0271	avg	= 103.0
overall	= 0.0189	max	= 103

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

```
(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Target/
> AE/sftnoml20m.eps written in EPS format)
```

R-sq:		Obs per group:	
within	= 0.3898	min	= 103
between	= 0.0939	avg	= 103.0
overall	= 0.3879	max	= 103

corr(u_i, Xb)	=	-0.0642	F(3,9)	=	338.65
			Prob > F	=	0.0000

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

sftsynl20m0	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
mpl	.1723119	.023579	7.31	0.000	.1189724	.2256514
dsftsynl20m						
L1.	-.6768955	.0247782	-27.32	0.000	-.7329477	-.6208434
fx						
L1.	.0173796	.012462	1.39	0.197	-.0108114	.0455706
_cons	-.7808841	.1491305	-5.24	0.001	-1.118241	-.4435276
sigma_u	.68110154					
sigma_e	9.9566713					
rho	.00465766	(fraction of variance due to u_i)				

```
(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Target/
> AE/sftsyn120m.eps written in EPS format)
```

Fixed-effects (within) regression	Number of obs	=	1,030
Group variable: imf	Number of groups	=	10

R-sq:		Obs per group:	
within	= 0.1818	min	= 103
between	= 0.1638	avg	= 103.0
overall	= 0.1575	max	= 103

corr(u_i, Xb)	= -0.2985	F(3,9)	= 59.40
		Prob > F	= 0.0000

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

sftrhol20m0	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
mpl	.3740431	.034377	10.88	0.000	.2962769	.4518092
dsftrhol20m						
L1.	-.170477	.0433102	-3.94	0.003	-.2684514	-.0725025
fx						
L1.	-.0341339	.0077608	-4.40	0.002	-.0516901	-.0165777

_cons	.6313981	.1310373	4.82	0.001	.3349712	.927825
sigma_u	1.2891608					
sigma_e	6.4467072					
rho	.03845118	(fraction of variance due to u_i)				

(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Target/
> AE/sftrhol20m.eps written in EPS format)

Fixed-effects (within) regression Number of obs = 1,030
Group variable: **imf** Number of groups = 10

R-sq: Obs per group:

within = 0.3779	min = 103
between = 0.3611	avg = 103.0
overall = 0.3751	max = 103

corr(u_i, Xb) = -0.1046 F(3,9) = 629.93
 Prob > F = 0.0000

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

sftphil20m0	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
mp1	-.1050888	.0279646	-3.76	0.004	-.1683492	-.0418284
dsftphil20m L1.	-.6074222	.0158512	-38.32	0.000	-.64328	-.5715644
fx L1.	-.0258351	.0117609	-2.20	0.056	-.0524401	.0007699
_cons	.4014389	.1440364	2.79	0.021	.0756059	.7272719
sigma_u	.7190572					
sigma_e	9.2393239					
rho	.00602038	(fraction of variance due to u_i)				

(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Target/
> AE/sftphil20m.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 = 1,400
Group variable: **imf** Number of groups = 15

$$\text{corr}(u_i, Xb) = -0.9270$$

	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
sftnom24m0						
mpl	.2094668	.0439058	4.77	0.000	.1152982	.3036353
dsftnom24m						
L1.	-.0996548	.1333481	-0.75	0.467	-.3856581	.1863486
fx						
L1.	-.0023422	.0000868	-26.99	0.000	-.0025283	-.002156
_cons	2.390572	.0985374	24.26	0.000	2.179231	2.601914
sigma_u	5.1960607					
sigma_e	12.824348					
rho	.14101448	(fraction of variance due to u_i)				

Fixed-effects (within) regression	Number of obs	=	1,385
Group variable: imf	Number of groups	=	15

$$\text{corr}(u_i, Xb) = -0.9413$$

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

sftsyn24m0	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
mpl	1.300213	.3729514	3.49	0.004	.500312	2.100114
dsftsyn24m						
l1.	.3058934	.3920822	0.78	0.448	-.5350393	1.146826
fx						
l1.	-.0111579	.0005753	-19.40	0.000	-.0123917	-.0099241
_cons	10.72753	.4389524	24.44	0.000	9.786074	11.66899
sigma_u	26.391754					
sigma_e	28.935922					
rho	.45411338	(fraction of variance due to u_i)				

```
(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Target/
> EM/sftsyn24m.eps written in EPS format)
```

Fixed-effects (within) regression	Number of obs	=	1,385
Group variable: imf	Number of groups	=	15

R-sq:		Obs per group:	
within	= 0.1451	min	= 77
between	= 0.6010	avg	= 92.3
overall	= 0.0573	max	= 103

corr(u_i, Xb)	= -0.9174	F(3, 14)	= 2575.31
		Prob > F	= 0.0000

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

	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
sftrho24m0						
mp1	.7306942	.2845785	2.57	0.022	.120334	1.341054
dsftrho24m						
l1.	.4787077	.397512	1.20	0.248	-.3738708	1.331286
fx						
l1.	-.0095365	.0006974	-13.68	0.000	-.0110322	-.0080408
_cons	8.24345	.4108771	20.06	0.000	7.362206	9.124694
sigma u	22.253171					

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

```
(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Target/
> EM/sftnoml20m.eps written in EPS format)
```

R-sq:		Obs per group:	
within	= 0.2230	min	= 77
between	= 0.4637	avg	= 92.3
overall	= 0.1299	max	= 103

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

Saturday, July 25, 2020 at 1:50 PM Page 13

<code>_cons</code>	5.092031	1.236778	4.12	0.001	2.439405	7.744657
<code>sigma_u</code>	12.452987					
<code>sigma_e</code>	23.145015					
<code>rho</code>	.22449904	(fraction of variance due to <code>u_i</code>)				

Fixed-effects (within) regression	Number of obs	=	1,385
Group variable: imf	Number of groups	=	15

		F(3,14)	=	137.71
corr(u i, Xb)	= -0.8215	Prob > F	=	0.0000

sftrhol20m0	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
mp1	.4603953	.0925078	4.98	0.000	.2619859	.6588047
dsftrhol20m L1.	-.3615389	.1685074	-2.15	0.050	-.7229512	-.0001265
fx L1.	-.0048779	.0008079	-6.04	0.000	-.0066106	-.0031451
_cons	5.519816	.8276336	6.67	0.000	3.744719	7.294914
sigma_u	11.017143					
sigma_e	20.975075					
rho	.2162314	(fraction of variance due to u_i)				

```
Fixed-effects (within) regression      Number of obs   =      1,327
Group variable: imf                   Number of groups =       15
```

R-sq:		Obs per group:	
within	= 0.1941	min	= 44
between	= 0.7000	avg	= 88.5
overall	= 0.1223	max	= 103
		F(3, 14)	= 262.41
corr(u_i, Xb)	= -0.8041	Prob > F	= 0.0000

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

sftphil20m0	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
mpl	-.3798348	.0797458	-4.76	0.000	-.5508726	-.208797
dsftphil20m L1.	-.3803533	.0835022	-4.56	0.000	-.5594477	-.2012589
fx L1.	.0057053	.0009951	5.73	0.000	.0035711	.0078395
_cons	-6.316187	1.086368	-5.81	0.000	-8.646214	-3.98616
sigma_u	12.176042					
sigma_e	22.653229					
rho	.22414642	(fraction of variance due to u_i)				

```
(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Target/
> EM/sftphil20m.eps written in EPS format)
(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Target/
> 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: 25 Jul 2020, 13:50:54
```